CBSE-*i*

MIDDLE
Curriculum

नया आगाज़

आज समय की माँग पर
आगाज़ नया इक होगा
निरंतर योग्यता के निर्णय से
परिणाम आकलन होगा।

परिवर्तन नियम जीवन का
नियम अब नया बनेगा
अब परिणामों के भय से
नहीं बालक कोई डरेगा

निरंतर योग्यता के निर्णय से
परिणाम आकलन होगा।

बदले शिक्षा का स्वरूप
नई खिले आशा की धूप
अब किसी कोमल-से मन पर
कोई बोझ न होगा

निरंतर योग्यता के निर्णय से
परिणाम आकलन होगा।
नई राह पर चलकर मंज़िल को हमें पाना है
इस नए प्रयास को हमने सफल बनाना है
बेहतर शिक्षा से बदले देश, ऐसे इसे अपनाए
शिक्षक, शिक्षा और शिक्षित
बस आगे बढते जाएँ
बस आगे बढते जाएँ
बस आगे बढते जाएँ.........
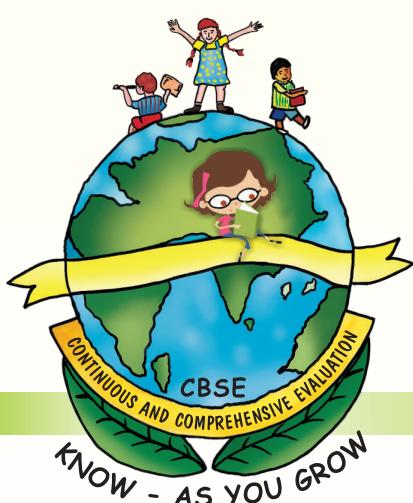
CBSE-*i*

CURRICULUM

Middle

CLASSES VI - VIII

Preface

Education plays the most important role in acquiring professional and social skills and a positive attitude to face the challenges of life. Curriculum is a comprehensive plan of any educational programme. It is also one of the means of bringing about qualitative improvement in an educational system. The Curriculum initiated by Central Board of Secondary Education-International (CBSE-*i*) is a progressive step in making the educational content responsive to global needs. It signifies the emergence of a fresh thought process in imparting a curriculum which would restore the independence of the learner to pursue the learning process in harmony with the existing personal, social and cultural ethos.

The CBSE introduced the CBSE-*i* curriculum as a pilot project in few schools situated outside India in 2010 in classes I and IX and extended the programme to classes II, VI and X in the session 2011-12. It is going to be introduced in classes III, VII and for Senior Secondary classes with class XI in the session 2012-13.

The Senior Secondary stage of education decides the course of life of any student. At this stage it becomes extremely important for students to develop the right attitude, a willingness to learn and an understanding of the world around them to be able to take right decisions for their future. The senior secondary curriculum is expected to provide necessary base for the growth of knowledge and skills and thereby enhance a student's potential to face the challenges of global competitiveness. The CBSE-*i* Senior Secondary Curriculum aims at developing desired professional, managerial and communication skills as per the requirement of the world of work. CBSE-*i* is for the current session offering curriculum in ten subjects i.e. Physics Chemistry, Biology, Accountancy, Business-Studies, Economics, Geography, ICT, English, Mathematics I and Mathematics II. Mathematics at two levels caters to the differing needs of students of pure sciences or commerce.

The Curriculum has been designed to nurture multiple intelligences like linguistic or verbal intelligence, logical mathematical intelligence, spatial intelligence, sports intelligence, musical intelligence, inter-personal intelligence and intra-personal intelligence.

The Core skills are the most significant aspects of a learner's holistic growth and learning curve. The objective of this part of the core of curriculum is to scaffold the learning experiences and to relate tacit knowledge with formal knowledge. This involves trans-disciplinary linkages that would form the core of the learning process. Perspectives, SEWA (Social Empowerment through Work and Action), Life Skills and Research would be the constituents of this 'Core'. The CBSE-*i* Curriculum evolves by building on learning experiences inside the classroom over a period of time. The Board while addressing the issues of empowerment with the help of the schools' administering this system strongly recommends that practicing teachers become skilful and lifelong learners and also transfer their learning experiences to their peers through the interactive platforms provided by the Board.

The success of this curriculum depends upon its effective implementation and it is expected that the teachers will make efforts to create better facilities, develop linkages with the world of work and foster conducive environment as per recommendations made in the curriculum document.

I appreciate the effort of Dr. Sadhana Parashar, Director (Training), CBSE and her team involved in the development of this document. I specially appreciate the efforts of (Late) Dr. Srijata Das for working tirelessly towards meeting deadlines.

The CBSE-*i* website enables all stakeholders to participate in this initiative through the discussion forums. Any further suggestions on improving the portal are always welcome.

Vineet Joshi

Chairman, CBSE

Acknowledgements

THE CONSTITUTION OF INDIA

PREAMBLE

WE, THE PEOPLE OF INDIA, having solemnly resolved to constitute India into a [1] **SOVEREIGN SOCIALIST SECULAR DEMOCRATIC REPUBLIC** and to secure to all its citizens :

JUSTICE, social, economic and political;

LIBERTY of thought, expression, belief, faith and worship;

EQUALITY of status and of opportunity; and to promote among them all;

FRATERNITY assuring the dignity of the individual and the [2] [unity and integrity of the Nation];

IN OUR CONSTITUENT ASSEMBLY this twenty-sixth day of November, 1949, do **HEREBY ADOPT, ENACT AND GIVE TO OURSELVES THIS CONSTITUTION.**

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1. Subs, by the Constitution (Forty-Second Amendment) Act. 1976, sec. 2, for "Sovereign Democratic Republic (w.e.f. 3.1.1977)
2. Subs, by the Constitution (Forty-Second Amendment) Act. 1976, sec. 2, for "unity of the Nation (w.e.f. 3.1.1977)

THE CONSTITUTION OF INDIA

Chapter IV A

Fundamental Duties

ARTICLE 51A

Fundamental Duties - It shall be the duty of every citizen of India-

(a) to abide by the Constitution and respect its ideals and institutions, the National Flag and the National Anthem;

(b) to cherish and follow the noble ideals which inspired our national struggle for freedom;

(c) to uphold and protect the sovereignty, unity and integrity of India;

(d) to defend the country and render national service when called upon to do so;

(e) to promote harmony and the spirit of common brotherhood amongst all the people of India transcending religious, linguistic and regional or sectional diversities; to renounce practices derogatory to the dignity of women;

(f) to value and preserve the rich heritage of our composite culture;

(g) to protect and improve the natural environment including forests, lakes, rivers, wild life and to have compassion for living creatures;

(h) to develop the scientific temper, humanism and the spirit of inquiry and reform;

(i) to safeguard public property and to abjure violence;

(j) to strive towards excellence in all spheres of individual and collective activity so that the nation constantly rises to higher levels of endeavour and achievement.

भारत का संविधान

उद्देशिका

हम, भारत के लोग, भारत को एक '[सम्पूर्ण प्रभुत्व-संपन्न समाजवादी पंथनिरपेक्ष लोकतंत्रात्मक गणराज्य] बनाने के लिए, तथा उसके समस्त नागरिकों को:

सामाजिक, आर्थिक और राजनैतिक न्याय,

विचार, अभिव्यक्ति, विश्वास, धर्म

और उपासना की स्वतंत्रता,

प्रतिष्ठा और अवसर की समता

प्राप्त कराने के लिए, तथा उन सब में, व्यक्ति की गरिमा और ² [राष्ट्र की एकता और अखण्डता] सुनिश्चित करने वाली बंधुता बढ़ाने के लिए दृढ़संकल्प होकर अपनी इस संविधान सभा में आज तारीख 26 नवम्बर, 1949 ई॰ को एतद्द्वारा इस संविधान को अंगीकृत, अधिनियमित और आत्मार्पित करते हैं।

1.   संविधान (बयालीसवां संशोधन) अधिनियम, 1976 की धारा 2 द्वारा (3.1.1977) से "प्रभुत्व-संपन्न लोकतंत्रात्मक गणराज्य" के स्थान पर प्रतिस्थापित।

2.   संविधान (बयालीसवां संशोधन) अधिनियम, 1976 की धारा 2 द्वारा (3.1.1977 से), "राष्ट्र की एकता" के स्थान पर प्रतिस्थापित।

भाग 4 क

मूल कर्त्तव्य

51 क. मूल कर्त्तव्य – भारत के प्रत्येक नागरिक का यह कर्त्तव्य होगा कि वह –

(क)   संविधान का पालन करे और उसके आदर्शों, संस्थाओं, राष्ट्रध्वज और राष्ट्रगान का आदर करे;

(ख)   स्वतंत्रता के लिए हमारे राष्ट्रीय आंदोलन को प्रेरित करने वाले उच्च आदर्शों को हृदय में संजोए रखे और उनका पालन करे;

(ग)   भारत की प्रभुता, एकता और अखंडता की रक्षा करे और उसे अक्षुण्ण रखे;

(घ)   देश की रक्षा करे और आह्वान किए जाने पर राष्ट्र की सेवा करे;

(ङ)   भारत के सभी लोगों में समरसता और समान भ्रातृत्व की भावना का निर्माण करे जो धर्म, भाषा और प्रदेश या वर्ग पर आधारित सभी भेदभाव से परे हों, ऐसी प्रथाओं का त्याग करे जो स्त्रियों के सम्मान के विरुद्ध हैं;

(च)   हमारी सामासिक संस्कृति की गौरवशाली परंपरा का महत्त्व समझे और उसका परीक्षण करे;

(छ)   प्राकृतिक पर्यावरण की जिसके अंतर्गत वन, झील, नदी, और वन्य जीव हैं, रक्षा करे और उसका संवर्धन करे तथा प्राणिमात्र के प्रति दयाभाव रखे;

(ज)   वैज्ञानिक दृष्टिकोण, मानववाद और ज्ञानार्जन तथा सुधार की भावना का विकास करे;

(झ)   सार्वजनिक संपत्ति को सुरक्षित रखे और हिंसा से दूर रहे;

(ञ)   व्यक्तिगत और सामूहिक गतिविधियों के सभी क्षेत्रों में उत्कर्ष की ओर बढ़ने का सतत प्रयास करे जिससे राष्ट्र निरंतर बढ़ते हुए प्रयत्न और उपलब्धि की नई उंचाइयों को छू ले।

Contents

CBSE-*i* : Curriculum

Introduction

Aims of CBSE-*i*

Education is a powerful instrument of change and the key to preparing learners for global challenges. Global citizens must essentially be lifelong learners equipped with willingness to learn constantly while engaging in collaborative teamwork replete with positive attitude.

The CBSE international (CBSE-*i*) aims to

- ❖ Build learners with a positive attitude
- ❖ Create lifelong learners who enjoy learning to learn
- ❖ Craft confident individuals who are able to live healthy and productive lives
- ❖ Empower individuals with good citizenship values
- ❖ Strengthen the learner with Life Skills Education
- ❖ Equip learners to face challenges of the present world
- ❖ Prepare confident individuals with strong physical and emotional health

Mission and Vision of CBSE-*i*

The CBSE-*i* has formulated an internationally benchmarked global curriculum. This curriculum is enquiry and skill based. This International curriculum caters to individual learning styles in terms of pedagogy and assessment. It addresses global needs as well as relates to local issues and local culture. It carries forward the basic strength of the Indian system of education. It aims to promote critical and creative thinking skills, effective communication skills, interpersonal and collaborative skills and information and media skills. There is an inbuilt flexibility as it provides a foundation and an extension curriculum in subject areas to cater to the different pace of learners. Through the CBSE-*i* curriculum the Board hopes to provide quality which is equitable and accessible.

Initiation of CBSE-*i*

The Central Board of Secondary Education is a national board with more than 12500 schools affiliated to it within the country and abroad. CBSE has schools spread all over the world catering to the needs of the Indian diaspora settled in different countries. The students in these schools need a curriculum that is in line with global trends and current pedagogical patterns.

CBSE with a rich experience to its credit in handling the educational needs of millions of learners over the last several decades has to respond to these challenges. It must provide a globally sensitive curriculum that would help Indian learners either to pursue their higher studies in countries abroad or interact meaningfully with global markets for ensuring active participation in the development process.

It is in this context that the CBSE has initiated an International Curriculum or CBSE-*i*. The Board launched CBSE International - CBSE-*i* as a Pilot project in a group of about 20-25 schools initially in the session 2010-2011. This curriculum was implemented in these schools in Middle East and South-Asia as a Pilot Project for Classes I and IX. The Board continued to review and extend it to other schools abroad in the session 2011-2012 by extending it to classes II, VI and X. The Board is initiating classes III, VII and XI in the session 2012-2013.

Curriculum Design of CBSE-*i*

Five learning areas are represented as the five petals which intersect in a trans-disciplinary approach across various dimensions.

The **first area of learning is Languages;** and students will study two languages upto class-V English and one other language, which could be Hindi or the student's mother tongue or any other international language. In classes VI - VIII they will study three languages and two languages again at classes IX and X. However they do have the opportunity to opt for an additional language from the languages offered by CBSE in classes IX and X.

Languages
English, Mother tongue / Hindi / Local Language / any other foreign languages

Performing Arts
Music, Drama, Dance
Visual Arts
Fine Arts, Pottery, Sculpture
Physical Education

Social Science
History, Political and Social Structures Geography, Economics
Environment Education

- Perspectives
- Life Skills
- SEWA
- Research

Mathematics ICT

Sciences
Physics, Chemistry, Biology, Breakthroughs
Environment Education

The language curriculum aims to develop the skills of listening, speaking, reading and writing in a variety of contexts and train students to be able to adapt language to suit different tasks, audiences and purposes. It aims to develop confidence in the students so that they can use their skills and abilities effectively. It helps to develop students' critical abilities - to analyze and critically evaluate diverse texts and to equip learners with the language to question ideas and articulate their point of view.

The second area of learning is Social Science. This is called Environmental Education for classes I and II where it is a combination of four dimensions of environment. These are **Physical Environment, Geographical Environment, Cultural Environment and Social Environment**. In classes III to V, students study **Social Science** which reflects components of History, Geography, Social and Political Structures. In classes VI to X, Social Science crystallizes into various disciplines of learning such as the study of History which focuses largely on world history along with provision of learning local / native history, Social and Political Structures, Geography and Economics.

The **Social Science curriculum** aims to develop in students an understanding and evaluation of the social, political, economic and environmental dimensions of the world, and helps them formulate and justify arguments in response to a diverse range of issues.

The third area of learning is Mathematics and Technology. All students study Mathematics till class X. For classes I -VIII, the focus is on developing core mathematical skills in all learners. For classes IX-X, Mathematics is being offered at two levels - Core and Elective. A student can opt for either Mathematics (core) or Mathematics (elective). The Curriculum helps students develop strategies that improve their logical thinking and analytical ability. It helps to develop the ability to approximate and estimate, to use trial and improvement techniques, look for patterns and make hypothesis. It helps in development of computational skills and spatial intelligences. The Mathematics Lab activities will be an integral and a compulsory part of the Mathematics curriculum and will be examinable from classes VI to X under Formative Assessments.

Information and Communication Technology is a compulsory component of the curriculum which will help students assess the impact of new technologies on society and train them to use these productively. The focus of the program is to help the students to understand the use of common software applications and use technology to enhance their ability to access, evaluate and research information.

The fourth area of learning is Science which in classes I and II is covered as Environmental Education where it is a combination of four dimensions of environment namely: Physical Environment, Geographical Environment, Cultural Environment and Social Environment.

From classes III to V, it is treated as **General Science**. In classes VI to X, Science is studied as individual disciplines of Physics, Chemistry and Biology. The units that will be devloped for classes VI-VIII will reflect components of Physics, Chemistry and Biology which will be dealt by teachers in an integrated manner.

The Science curriculum offers students the opportunity to be curious, to question, to investigate, to formulate hypothesis, design and carry out experiments, make critical observations and record results. **In addition to each of the Sciences there is an extension programme** called *Breakthroughs* which will familiarize students to stay familiar with current trends of scientific thinking and developmental processes. This will cover current developments such as *Telecommunications*, the *Genome project*, and new age materials like *recyclable plastics,* etc.

The fifth area of learning combines the areas of **Physical Education, Performing Arts and Visual Arts.** These offer opportunities for the development of imagination, sense of aesthetics, sensitivity and inventiveness - all of which are the requirements of a balanced curriculum.

The Physical Education (PE) curriculum contributes to the physical fitness aspect and all-round development of students. The subject is unique in the sense that it seeks to promote basic body management developing into the mastery of coordinated and skillful movements. Physical Education will be a compulsory element of the curriculum for every class, from I to XII. This element of the curriculum will not be formally examined at the end of the year but will be graded for students of classes III - X across the year based on student's participation and teacher's observations.

The Performing Arts Curriculum provides a means for personal expression and the articulation of ideas. This will lead to inspiring and confident participation thus developing social skills through creative teamwork as well as enhancing communication skills.

The Visual Arts program is aimed at promoting cognitive, aesthetic and emotional growth. Students realize the joy of expression through various media. They learn to appreciate art from different cultures as well as the native arts of the country against the backdrop of the cultural context in which they exist. Students of classes I-V will experience both Performing Arts and Visual Arts. *Students of classes VI-X can opt for one learning area from the* **Performing Arts** *and one from the* **Visual Arts.** This element of the curriculum will not be formally examined at the end of the year but will be *graded for all students of classes III-X across the year based on student's participation and teacher's observations.*

At the heart of the Curriculum or the Core of the CBSE-*i* curriculum are innovative programmes called *Perspectives, Life Skills, SEWA (Social Empowerment through Work and Action) and Research.*

The **Life Skills** Programme will be able to help students lead balanced, happy and successful lives. The program covers Creative and Critical Thinking Skills, Interpersonal Skills, Effective Communication Skills, Problem-Solving and Decision Making Skills, Conflict Resolution Skills, Collaborative Skills, Leadership Skills, Self Esteem, Empathy and Dealing with Emotions as well as Coping with Stress. These skills are dealt in an age appropriate manner.

Perspectives introduces students to both global and local issues through research, discussion and debate, and encourages students to arrive at informed positions about contemporary issues that affect us all. Critical thinking helps to develop logic and reasoning which will build the higher order thinking skills of students.

All students will be part of a program of community service every year with an NGO/agency/organization of their choice. Students will keep a journal of their association and a log of their hours spent meaningfully in *Social Empowerment through Work and Action* (SEWA).

Research includes research or extended writing on a programme/topic chosen by the students. This will be trans-disciplinary in nature and will provide the opportunity to use experiences from Perspectives. This will be initiated from class VI onwards.

All the elements of the Core except Life Skills will be commented upon and are not examinable. The main highlights of the CBSE-*i* curriculum particularly in the areas of pedagogy and assessment are:

- ❖ The CBSE International (CBSE-*i*) provides opportunities for extended learning, development of **Perspectives, Research orientation, SEWA** *(Social Empowerment through Work and Action)* and a more liberal approach towards **Arts Education** *(both Visual and Performing Arts)*.

- ❖ It also provides an extended approach to *Mathematics* learning by providing for its study at two levels - *Core and Elective*.

- ❖ *Social Sciences* with valuable historical perspectives and components of the countries in which schools are situated is an added feature.

- ❖ *Science* has an enrichment component called `Breakthroughs'.

The National Curriculum Framework of the Government of India clearly spells the basic core objectives of the learning process at the school level. The international curriculum, however, takes cognizance of the knowledge dynamics at the global level and the need for facilitating content for meaningful and productive skills. Therefore, the essential focus of this curriculum would be centered on development of skills - cognitive, emotional and psycho-motor.

Some of the important principles and features that underline the curriculum design and structure are as follows :

Framework of Learning

The curriculum framework symbolized by the five components and a Core is essential learning for every student from classes I to X. They need to know, understand and develop the ability to experiment, explore and discover as part of their schooling across all the areas of learning.

Every learner can learn is the underlying principle

CBSE-*i* believes in the potential possibilities of every learner to learn and engage in activities in their chosen field. It would help them to benchmark themselves in their own context.

Curriculum is focused on *maximizing* opportunities to learn

Curriculum in various disciplines as well as the Core areas builds on the learners' previous knowledge, attitudes, values and beliefs. This helps to create an environment for them wherein they can maximize their learning outcomes.

Curriculum is learner and learning centric

The curriculum has been designed in such a way that effective learning happens in an interactive classroom. This would really mean that the learning inputs as well as the pedagogy should yield themselves with opportunities for effective learning, as every learner is unique and the process of learning is individual specific. The curriculum is intended to meet this objective and enable the spectrum of learners - visual, auditory and kinesthetic - with specific inputs that would trigger their attention and fire their curiosity. The curriculum also provides opportunities for learning through experiences both hands-on and otherwise.

Curriculum supports experiential learning

The focus of the curriculum is to offer localized experiences and enable a thought process on matters and materials embedded in the learning content. The learning inputs at the primary level are general in nature and are based on the sound concept of **"from near to far".** The various disciplines offer unlimited opportunities for relating the concepts with real life experiences and for scaffolding the learning constructs through extended activities such as project work, development of *Perspectives* and *Research*.

CBSE-*i* curriculum provides every learner with sustained opportunities to learn

At every stage the curriculum design and pedagogy make provisions for opportunities and experiences within and beyond the classroom to ensure that learning occurs. Curriculum decisions need to be made about the best ways to organize sustained learning opportunities

for all learners. CBSE-*i* helps learners develop the fundamental concepts and ideas that underline topics, subjects or disciplines and the relationships among them. The knowledge that focuses on key concepts and the learning outcomes related to them would need to be built by integrating it through themes.

Curriculum is coherent and organized

The CBSE-*i* is represented by the five petals of the flower with a core at the centre. This is a visual representation of the co-curricular strengths to reinforce that they mutually empower each other through trans-disciplinary learning. The connections between essential learning in the scholastic domain and the core which includes *Perspectives, Life Skills* and *Research* and *SEWA (Social Empowerment through Work and Action)* would help in coherent organization of knowledge. Content selection across all areas of pedagogy and assessment practices would be interconnected and aligned. Learning in this way will add value and meaning to students much beyond the classroom and the boundaries of the school.

Dynamic and Flexible Approach

The CBSE-*i* curriculum offers flexibility in learning at the secondary stage in the subject of Mathematics so that the learners can exercise their options for pursuing mathematics either at the core level or at an elective level. Further, the learners would have the option of studying Social Science with about seventy per cent of the learning content focused on world history and the rest with provision to learn about the local history so that there is an optimal balance in the knowledge about local and the global events. The subjects of *Visual Arts* and *Performing Arts* also provide opportunity for learners to take up an area where they may exhibit a greater aptitude.

Focus on developing thinking skills

The content development and pedagogical inputs provide for triggering and empowering the thinking skills of the learners. The content is designed to provide teachers with adequate situations wherein problems can be placed in the learning situations and the students may be asked to reflect on them and arrive at possible solutions through objective assessments. The subject of *Perspectives* would help schools to enable learners to constructively and critically evaluate events, materials, situations, ideas and other real life experiences and take their own positions.

Holistic Curriculum

The curriculum advocates paradigm shift from certain selected disciplines of learning to a

wide variety of subjects with a greater focus on Arts and Humanities at the primary and middle level. The subjects of *Visual Arts* and *Performing Arts* get a significant place in the curricular design. The learners have the option of pursuing their own choice of discipline under the arts subjects. The curriculum has components which will help in incorporating basic life skills to the learners self-awareness, self esteem, inter-personal relationships, communications skills and emotional intelligence. This brings into focus the effort of nurturing the affective domain of learners.

Synergy of formal with informal learning

In the emerging knowledge society, the impact of the informal learning tools and processes on the formal learning curve is quite significant. These impacts vary from place to place, school to school and community to community. Further the emergence of e-tools as information carriers has facilitated the diffusion of information to a wider audience. There is evidence of decreasing information gap between the rural and the urban, semi-urban and the metros. The scope and availability of informal knowledge has made the learners ask more pertinent questions and to see, relate and reflect on the parameters of knowledge obtained both through the formal and informal modes. The CBSE -International (CBSE-*i*) curriculum provides ample opportunities for synergizing the knowledge inputs from both the sources to help the learner construct his/her own learning experience.

Curriculum is Skill Centric

All disciplines of learning under the international curriculum are designed to impart the relevant skills related to the subjects and topics; further it would help in building these skills through personal experiences, teamwork and other interventions. The range of skills would include - *Thinking Skills, Communication Skills, Sense of Enterprise, Inter-personal skills, IT-Skills, Leadership and Managerial Skills.* The curriculum would also focus on developing basic Vocational skills related to the disciplines of learning so that the learners are able to apply these skills in their own context.

Values underlying Curricular framework

Education needs to reflect the values, structure and beliefs that contribute to equipping young people with a holistic personality and Life Skills. These include values relating to the self, to the community and to the nation. The Value Framework may include Values such as *Universal Peace, Tolerance, Service, Pro-active and Responsible citizenship, Respect towards opposite gender, Harmony and Spirit of unity, Transcending bias based on Religious, Linguistic and Regional or Sectional diversities.* Preserving the rich heritage of the local culture, Protecting and

contributing towards preservation of the national environment, Developing scientific temper and the spirit of enquiry, Safeguarding public property and abjuring violence, Striving towards excellence in all spheres of individual and collective activities are other values which will lead to higher levels of performance.

Pedagogy

Pedagogy is basically non-prescriptive. The schools and the teachers in the classrooms need to make appropriate selection of tools they would employ to facilitate effective learning. It would largely depend on various factors like the geographical location of the school, its social ambience and the heritage, and economic and cultural conditions in which the school populace is placed. Though several concepts have emerged over decades to suggest the right pedagogy that can be employed by a teacher in the classroom, all of them would basically agree on the relevance of the teacher in the classroom.

It is inappropriate to introduce any specific module of pedagogy or prescribe one learning theory as it would defeat the very objective and the philosophy of this model. It is important to understand that learning is multi-dimensional and multi-layered. Research indicates the significant impact of informal learning on formal learning. Further, the researches of neuro-cognitive psychologists on the way how brain functions and how learning takes place indicate that "*learning can be facilitated*". This really redefines the role of a teacher in the classroom as an effective facilitator.

The progression in transaction strategies of units and lessons could be from **structured enquiry to supported enquiry leading to open enquiry.** *This is to suggest that the Units which have been prepared for teachers have numerous activities and tasks as well as a lot of support material. The teachers are at the liberty to decide to pick and choose the activities and tasks to be done.* In case of languages, teachers can choose a few Units based on the themes which are relevant, interesting and appropriate for their learners. However they need to do grammar items and writing tasks mentioned in the Matrix against these units in various ways.

Structured enquiry can include focused enquiries where the processes of enquiry are clearly defined for students. The methods given to them while addressing a problem or a concern should provide room for developing appropriate skills in information gathering, data collection and management as well as analyzing the data. A teacher needs to be continuously involved in guiding students and supervising their progress. This could be done through conversation with students and giving them constructive feedback and advice. Once students are confident of developing research skills they will be able to create knowledge and support their ideas with evidence.

Focus on discovery approach

The teachers need to understand that discovery of knowledge is exciting and enhances the self-esteem and the confidence profile of the learner. To add, during the process of discovery the learner is able to create meaningful neutral networks which empowers not only the memory of the learning content but helps in improving their thinking skills. Therefore, it is recommended that teachers adopt such strategies which would help the learners to discover knowledge in their own way and more so in a self-paced manner. Any external force is likely to discourage the spirit of discovery. The teacher would act more as a resource manager for providing resources and help in meaningful ways.

The teachers would also be encouraged to ensure that there is adequate scope and time for meaningful questions in the classroom. Questioning promotes curiosity and enables the learner to find a rationale for the concept with which one is getting familiarized. It will also help in contextualizing the external experiences in classroom situations and developing a mind equipped to research.

Thrust on developing Multiple Intelligences

There are convincing arguments world over about the existence of multiple intelligences in human beings. Researches by *Howard Gardner* and others have given powerful arguments on what the different types of intelligences are and how they manifest in human development. The role of education in identifying, nurturing and nursing these intelligences through supportive pedagogy has been illustrated well. It is essential that the curriculum encourages teachers to create adequate opportunities in the classroom for the learners to develop these intelligences. The pedagogical instruments are varied for the development of diverse intelligences. Further the methods of assessment take cognizance of these instruments and the typology of questions is structured to facilitate the identification and nurturing of multiple intelligences.

Schools are responsible for the learning which takes place in their institutions

Individual schools, their managements and the community around them are important stakeholders and can take positions and make informed decisions about curriculum for the students. Schools can maximize the learning opportunities for the students by bringing out each activity into the larger curriculum.

Role of Life Skills

The social dynamics in the recent past has ushered in fast life and there is strong evidence of consumerist tendencies the world over. These have strongly impacted the life styles, attitudes

and life skills of learners. The younger generation is seen to be more active, responsive, restless and aggressive. Inability to cope with changing life patterns, unrealistic comparisons with peers in the society, destabilizing family structures and excessive exposure to irrelevant information have made them restless, and at times aggressive. Tolerance is giving way to violence. The global bodies are finding the need and place for Peace education in the curriculum. It really means that the learners have to be equipped with relevant emotional skills and competencies so that they are able to understand their role in a more pragmatic manner. Emphasis on teaching of emotional skills and life skills is given priority everywhere in the curriculum. The CBSE International curriculum gives enormous opportunities for empowering learners with emotional skills and competencies. Schools and teachers will be encouraged to find suitable methods of successfully incorporating this vital component of the curriculum among the learners.

Teaching of Languages

The approach to language teaching is essentially based on the development of communicative skills. At the same time there is a strong focus on using language as an instrument for developing creative faculties including creative writing, poetry, theatre and the like. Effective language skills have become vital for learners in life. The language curriculum imports varied experiences from the real world to facilitate the learners to contextualize the knowledge of the language and gain meaningful experiences. Being an active instrument for dealing with the affective domains of the curriculum, the language curriculum also integrates much needed emotional components from a variety of literatures. The language curriculum is also aimed at promoting extended learning and understanding of media skills.

Teaching of foreign languages

The foreign languages occupy an important status in the curriculum keeping in view the fact that the international curriculum is aimed at reaching a worldwide audience situated in countries which can offer their own languages. The Board will also examine the possibility of introducing other foreign languages depending on the need and relevance as and when the international curriculum **gains credit in other countries.**

Environmental Education

At the primary level, the focus is on imparting Environmental Education in classes I and II. This approach will encourage the young learners to look at the environment in a holistic manner and see the underlying unity in the physical and social context in which they live. In order to realize the above objective, the curriculum envisages the need for integrating four

essential dimensions of the environment viz., physical, geographical, social and cultural. Concepts of science fall in place within the parameters of the above environments which form the universe of their learning and understanding. The Board envisages a pedagogy which would promote the much needed ownership of the environment by the learners so that they take responsibility for environmental concerns and related issues.

Focus of Science

From class III onwards, science is studied as **General Science** which integrates different disciplines of learning. The curriculum realizes the need for providing an optimal balance between the basic sciences and the applied sciences. At the primary level, the balance would remain with the basic sciences and the applied sciences would gain increased relevance with the higher stages of learning. Science is essentially conveyed as a set of ideas and processes. The objective is to convey the message that science is not the exclusive domain of a selected few but is equally a matter of consideration for every human being. This would help in imparting a scientific attitude; it is likely to impact the way they think, analyze and approach various issues in life. Further the curriculum is focused on promoting various concerns of science including health care, sanitation, eco-sensitivity, sustainable development, technology in society, and the like.

The focus of various disciplines of science from classes VI onwards would shift to learning and appreciation of physical and natural sciences - their history, evolution and dynamics. However the pedagogy would essentially address the discovery of knowledge and understanding of systems rather than reproduction of information available in the textual materials or on the web. The science curriculum would promote basic approaches to research - observation, identification of problems, collection of data, data management and interpretation, analysis, inference and decision making. Taking cognizance of decline in the pursuit of study of basic sciences among the learners, the curriculum would help in promoting interest and curiosity in the basic sciences for higher levels of learning.

The middle school level is the appropriate age for promoting innovation and discovery. The right attitudes for the pursuit of unknown as an academic adventure, ability to find the relationship between the known and the unknown, skills of scientific and technological enterprise, innovation as a practice are some of the implied objectives of the curricular design at the middle level. It is equally important to pitch scientific pursuits not as the prerogative of established research structures, but as a simple pursuit of any human mind in the natural environment. The middle and the secondary school curriculum would address these objectives as a part of learning. The science curriculum would also attract the attention of the learners through direct and indirect inputs about common concerns of the present world such

as - depleting sources of energy, increasing consumption of minerals and natural products, global warming issues, potential disasters **consequent to nuclear wastes**, etc.

The Mathematics curriculum

The mathematics curriculum has quite often been a matter of debate with regard to its content, delivery processes, level of conceptual difficulties and its positioning proximate to more logistic minds. The effort in this curriculum is to position mathematics as an enjoyable content of learning much akin to the routine activities of life. This would not only diffuse the fear for the subject but would enhance their appreciation of the subject of mathematics as a part of their regular activities of life. At the primary level, the pedagogy is to promote logical thinking, reasoning, correlation, skills of numeracy, ability to see relationship patterns, development of spatial intelligences, etc. The role of mathematics laboratory is being re-emphasized to facilitate activity centered learning.

In classes IX and X, Mathematics is being offered at two levels i.e., the core level and the elective level. A student can opt for either core or elective. It has to be clearly understood that the core level is non-exclusive and is not aimed at pitching the difficulty level low. The objective is to provide necessary content and skills that would help them to understand and appreciate mathematics in its different perspectives and also to learn mathematics as a subject of study at the senior level, if desirable. The elective level will help those learners who have special interest and aptitude in mathematics. Both the modules would help in imparting skills of analysis, problem solving and critical thinking.

Teaching of Social Science

The subject of Social Science has a critical role in the learning process. This helps in formulating social attitudes, building patriotism, internationalism, brotherhood, understanding of social dynamics, role and responsibilities of social institutions and the process of governance. Geography as an integral component of this subject provides an insight to geo-structures, climatic conditions, resources and their availability, natural products apart from patterns of cultivation, food products and the sources of economy of countries worldwide. Further, it provides the undercurrent of relationships between nations. Political Science and Economics also form an integral component of Social Science.

The CBSE-*i* curriculum has integrated the basic concepts of social institutions and their interdependence into the fabric of the syllabus at the primary level in the subject of Environmental Education. Social and cultural environment find a significant place in this curriculum. The focus for classes III to V is to learn Social Science as an integrated subject

understanding the cross-links between its various components and seeing social orders in a unified manner. However from class VI onwards there is a greater thrust on studying History, Geography, Political Structures and Economics as individual components under the umbrella of Social Science. The cross curricular linkages will however be maintained. The focus in history is largely on the trends in world history. The weightage of the world history would be extended to seventy per cent of the total value of the history curriculum while the rest would focus on the local/native history of the countries/states in which the schools adopting this international curriculum are situated.

Significance of Visual and Performing Arts

Visual and Performing Arts is given a place of pride in the CBSE-*i* curricular architecture. The role of Arts as an expression of human ingenuity, creativity and innovation can hardly be debated. The last few decades have witnessed an over-emphasis on science and technology, marginalizing the role of Arts especially at the school curriculum. The utilitarian demands of existence have underplayed the role of aesthetics, appreciation and expression. It is in this context the curriculum envisages a more meaningful role of Visual and Performing Arts in the classrooms so that the future generation is able to create balance between tacit knowledge and external knowledge. The schools need to liaison with institutions of Visual and Performing Arts and bring home the nuances of the subjects right from the primary level. The classrooms for these subjects should not be deemed as add-ons to CBSE-*i*, but as centers which appeal to the inner spirit of every learner yearning for an expression.

It is important that schools do not restrict themselves to some routine types like painting, graphics, music and dance, but explore the possibility of introducing a spectrum of artistic talents and inputs so that the learners are able to get exposure to perceptions both local and global level. The role of theatre as a vital component of Performing Arts has to be understood and the institutions would provide expert guidance on wide-ranging skills associated with the concept of theatre and its management. The schools should also note that while specialization of certain arts could be pursued, it is equally important to bring to the forefront a large number of folk arts and skills so that they don't get extinct over a period of time. Some examples of Folk Art have been provided in the form of Self Learning Modules. It is further suggested that the schools could think of providing amphitheater in their infrastructure especially to the primary section.

Physical and Health Education

Physical and Health Education is a very vital part of the curricular architecture. The development of mental faculties cannot happen if the health status of the individual is not

adequately sound. Researches worldwide have indicated the role of physical exercises in nurturing the strength of the mental faculties. In addition to the regular physical exercises and games in schools it is important to give a thrust on the mental health of the learners. Concepts of preventive health care, role of nutrition in the management of the energy profile of people, management of emotions to have a stress-free living, role of sanitation, etc., need to be reinforced through the curriculum. Further, school going children sometimes become victims of drug abuse, alcoholism in addition to some specific types of food fads. Psychological well being of the learners is as important as their physical well being if they have to progress as holistic personalities. The CBSE-*i* provides ample opportunities to schools for this integrated approach to health. Physical Education Cards (PEC) have been developed for the Primary level. The curriculum has been mapped through links at the bottom of each card. These will help the leaner to explore concepts in language and mathematics through games.

SEWA *(Social Empowerment through Work and Action)*

CBSE-*i* has introduced another component in the curriculum which is not to be evaluated but only commented upon - SEWA. The word "Seva" in Indian environment refers to the concept of service to the community. A similiar thought forms the acronym SEWA which refers to *Social Empowerment through Work and Action*. The object of this subject to re-emphasize the idea that in the emerging global context every human being is interdependent and hence social empowerment directly as well as indirectly leads to the empowerment of every human being. The benefits of this empowerment program actually return to every individual of the society.

It is important to clarify the constituent terms. Social empowerment can be done through a large number of ways. Community Awareness on sanitation, health, civic habits, rule of law, social justice, truthful living, along with creating respect for social institutions are a few indicators of the way how this could be achieved. Promoting Consumer Awareness, facilitating inclusivity, care for senior citizens, ensuring eco-sensitive social responses and the like would go a long way as instruments of social empowerment leading to social change. This could be done by every single learner as a contributive citizen in a micro manner and can also be achieved through focused actions as teams or social groups. The school can identify the avenues for social empowerment depending on the local social needs and the cultural climate. At the international level, the schools should ensure that such activities are completely within the provisions of the existing laws of the land.

Perspectives

An entirely new dimension has been added to the CBSE-*i* by the introduction of the subject **Perspectives** - which again is to be commented upon and not evaluated. The objective of this

subject is to enable every learner to develop competencies of independent judgement and take meaningful positions in dealing with various subjects. Development of *Perspectives* would require a deep insight into the subject matter under consideration, the ambience and environment in which it exists, several inter-connected issues and a critical analysis or appreciation or review of the subject matter in that environment, and taking a well-informed and well- considered position at the individual level. This can be done both individually as well as collectively in a classroom. It is important that teachers select such subjects/concepts for discussion which bear a relevance to the learner and are age appropriate. Issues related to environment, corruption, social order, impact of technology, peace education, tolerance for different views and practices are some examples which could be considered in the classrooms. It is important that the schools identify such talented teachers who have both passion and skills for handling such subjects in the classrooms. A few suggested examples have been provided for each stage.

Role of Research

The introduction of Research as a discipline of learning in the core of the curricular architecture shows the need for a research oriented mind. The term **Research** has to be understood in a limited sense for a school environment. Its objective is to provoke the curiosity of learners in any subject matter/concept/product/ activity of their liking and pursue an insightful study of the same. Such a study would involve collection of relevant information, organization of the information, analysis and making critical observations. It has to be understood that this term is not to be related to the discipline of science or technology alone but all disciplines of learning. Further, the Board does not expect material production as an outcome of such a study but as an exercise in opening the vistas of human mind to enquiry and problem solving. Also it would help to examine issues critically, examine opportunities and develop an enterprising attitude among the learners. However, the students would be required to record their observations and document them in the format provided.

Technology interventions in classrooms

The CBSE-*i* curriculum provides adequate scope for effective integration of technology in the classrooms. The purpose of integrating the use of technology in pedagogy is to ensure that the learners of CBSE-*i* are at par with the learners at the global level, especially in countries where advanced strategies have led to personalised learning through integration of technology in the learning process. It is important to understand that this does not really mean only use of electronic boards in the classrooms or pedagogical interventions through customized power point presentations, but using various tools of technology for assimilation of knowledge, its

management, processing, study, research and interpretation. Further this would help learners to examine the concepts and problems through graphical and visual representations rather than as mere verbal exercises.

The teachers would be required to pre-plan their methods and instruments of pedagogy in advance so that each classroom becomes an interactive platform for multi-layered learning as against the classical pedagogical models wherein essentially one-way delivery of the content takes place. The teachers need to use the appliances of technology not only for clarification or interpretation, but to motivate and inspire the learners to facilitate them to open vistas of their imagination. This could help in promoting lateral thinking, analytical thinking as well as critical review of concepts and its impact.

The teachers should encourage learners to seek knowledge inputs from digital platforms and use them not merely for reproduction or display in the classrooms but to synthesize them with their classroom learning inputs. Care needs to be taken to examine the appropriateness of the content to the age group as well as social and emotional background in which the schools are situated. Use of technology as an isolated tool for generation and transmission of information alone would defeat the very purpose of introducing technology in classrooms.

Technology can also find effective place in management of evaluation of the learners both in classrooms as well as outside. Schools can introduce on-line testing, ensuring that the feedback from the learner is original and is representative of the individual's learning and is a testimony to their thought patterns. Technology would also help in generating questions of varied types so that they are challenging for the learner to think and respond.

Curriculum should be inclusive

The CBSE-*i* believes that all students must have access to learning with equal opportunity irrespective of their class, gender, race, ability, disability, language and culture and social or economic conditions. The decisions taken in the classroom should include the perspectives, knowledge and culture and value language experiences which students bring to the classroom. The school curriculum should advocate and celebrate diversity in terms of culture and other differences. It should include all learners to realize the full potential that he/she is capable of. The CBSE-*i* includes creative strategies to encourage and promote inclusive learning environment. The diversity among the students should be addressed through appropriate mechanisms to pacilitate learning e.g., need based teaching methods.

CBSE - i : Middle

Introduction

The CBSE-i for classes VI-VIII at the middle school recommends the study of five learning areas as well as the core.
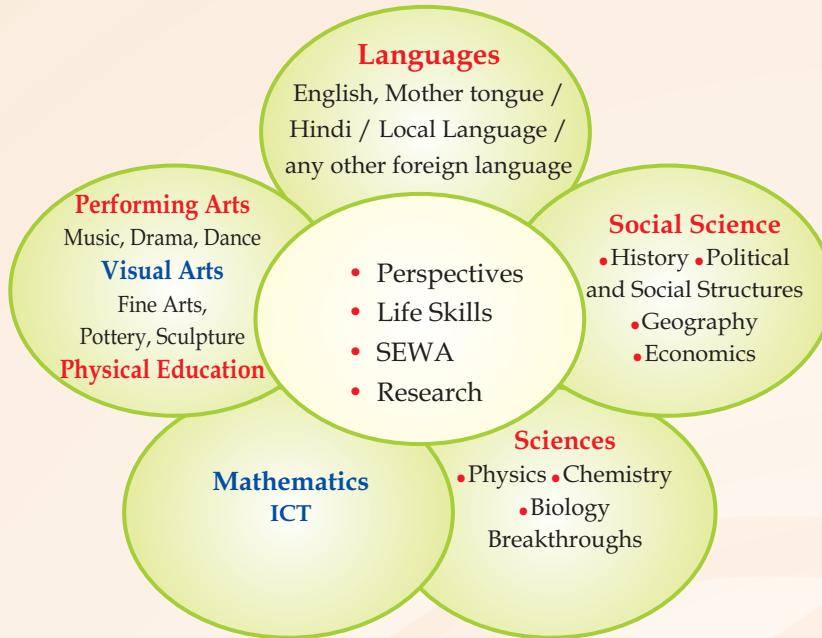
The **first area of learning is Languages** where it is recommended that the students should study three languages. English is compulsory. There is a choice between Indian languages or Hindi or Mother Tongue or Local language or foreign language. The third language can be any other language offered by CBSE-i. The aims of the teaching and learning of languages are to enhance the linguistic proficiency, communicative competence and thinking skills of students. Communicating through learning, reading, speaking and writing in meaningful ways remains the basis of planning for the theme based Units.

The second area of learning is Social Science. at classes VI-VIII, in students will study the disciplines of History, Social and Political Structures, Geography and Economics. History will focus largely on world history with a provision of learning local/ native history. The weightage to world history is extended to seventy per cent while the rest would focus on local/native history of the country in which the schools are situated. A theme based approach is recommended for transaction of the syllabus given in this document.

The third area of learning is Mathematics and Technology. In classes VI-VIII, the focus is on developing core Mathematical skills in all learners. The Mathematics Curriculum helps students develop strategies that improve their logical thinking and analytical ability. These include the ability to approximate and estimate, to use trial and improvement techniques, look

for patterns and make hypothesis. They will acquire computational Skills of approximation, estimation and measurement and ability to identify patterns which facilitate logical and spatial intelligences. The *Mathematics Lab* activities will be an integral and a compulsory part of the Mathematics curriculum and will be examinable from classes VI-VIII. Information and Communication Technology is a compulsory component of the curriculum which will help students assess the impact of new technologies on society and train them to use these productively. The focus of the program is to help students understand and use common software applications and use technology to enhance their ability to access, evaluate and research information.

The fourth area of learning is Science which in classes VI-VIII is studied as individual disciplines of Physics, Chemistry and Biology. The units developed for classes VI-VIII reflect components of Physics, Chemistry and Biology which will be dealt in an integrated way by the teachers. The Science curriculum offers students the opportunity to be curious, to question, to investigate, to formulate hypotheses, design and carry out experiments, make critical observations and record results. An addition to each of the Sciences is an extension programme called **Breakthroughs** which will familiarize students to stay familiar with current trends of scientific thinking and developmental processes.

The fifth area of learning combines the areas of Physical Education, Performing Arts and Visual Arts. These offer opportunities for the development of imagination, sense of aesthetics, sensitivity and inventiveness all of which are requirements of a balanced curriculum. The Physical Education (PE) curriculum contributes to the physical fitness aspect and all round development of students. The subject is unique in that it seeks to promote basic body management, developing into a mastery of coordinated and skillful movement. Physical education is a compulsory element of the curriculum for every class, from I to XII. This element of the curriculum is not going to be formally examined at the end of the year but will be graded across the year based on student's participation and teacher's, observation.

Physical Education cards at the Primary, Middle and Secondary are added feature.

The *Performing Arts Curriculum* provides a means for personal expression, and the articulation of ideas. This will lead to inspiring and confident participation thus developing social skills through creative teamwork as well as enhancing communication skills.

The *Visual Arts* program is aimed at promoting intellectual, aesthetic and emotional growth. Students realize the joy of expression through various mediums. They learn to appreciate Art from different cultures as well as the native arts of the country against the backdrop of the cultural context in which they exist. In Elementary school from classes VI-VIII, each student opts for one learning area from the *Performing Arts* and one from the *Visual Arts*. This element of the curriculum will not be formally examined at the end of the year but will be graded across the year based on student's participation and teacher's observation.

At the heart of the Curriculum or the Core lie innovative programmes called *Perspectives, Life Skills, SEWA (Social Empowerment through Work and Action)*, and *Research*. The Life

Skills Programme helps students lead balanced, happy and successful lives. The program covers *Creative* and *Critical Thinking Skills, Interpersonal Skills, Effective Communication Skills, Problem-Solving* and *Decision Making Skills, Conflict Resolution Skills, Cooperation Skills, Leadership Skills* and *Adolescent Education.*

Perspectives introduces students to both global and local issues through research, discussion and debates and encourages students to arrive at informed positions about contemporary issues that affect us all. *Critical thinking* helps to develop logic and reasoning which will build their higher order thinking skills.

Under SEWA, a student will be a part of a program of community service every year with an NGO/development organization of their choice. Students will keep a journal of their association and a log of their hours spent meaningfully in a *Social Empowerment through Work and Action* (SEWA).

Research will include research or extended writing on a programme topic chosen by the student. This will be trans-disciplinary in nature and will provide the opportunity to use experiences from *Perspectives*. This will be initiated from class VI onwards. All the elements of the Core except *Life Skills* will be commented upon and are not examinable.

Eligibility of Candidates

I. ADMISSION-GENERAL CONDITIONS

1.1 A student seeking admission to any class in a '*School**' will be eligible for admission to that class only if he :

(i) has been studying in a school recognized by or affiliated to this Board or any other recognized Board of Secondary Education in India or other parts of the world;

(ii) has passed qualifying or equivalent qualifying assessment/examination making him eligible for admission to that Class;

(iii) satisfies the requirements of age limits (*minimum and maximum*) as determined by the local authorities/Country and applicable to the place where the School is located;

(iv) produces :

    a) the School Leaving Certificate/Transfer Certificate signed by the Head of the institution last attended and countersigned, if required by the local authorities designed for the purpose.

    b) document(s) in support of his having passed qualifying or equivalent qualifying assessment/examination.

    c) Date of Birth Certificate issued by the Registrar of Birth and Death, wherever existing, as proof of date of birth.

Explanation

A person who has been studying in an institution, which is not recognized by this Board or by any other recognized Board of Secondary Education of the concerned place, shall not be admitted to any class of a '*School*' on the basis of certificate(s) of such unrecognized institution attended by him earlier.

1.2 No student migrating from a School in a foreign country, other than the School affiliated to this Board, shall be eligible for admission unless an eligibility certificate in respect of such a student has been obtained from this Board. For obtaining eligibility certificate from the Board, the Principal of the School, to which admissions is being sought, will submit to the Board full details of the case and relevant documents with his own remarks/ recommendations. The

*A school here refers to any school offering CBSE-*i* curriculum

eligibility certificate will be issued by the Board only after the Board is satisfied that the course of study undergone and assessment/examination qualified is equivalent to the corresponding class of this Board.

1.3   No person who is under the sentence of rustication or is expelled from any Board/University/School or is debarred from appearing in the assessment/examination by any Board/University for whatever reason   shall be admitted to any class in a school offering CBSE-*i*.

1.4   No student shall be admitted or promoted to any subsequent higher class in any school unless he has completed the regular course of study of the class to which he was admitted at the beginning of the academic session and has achieved the performance targets of School Based Assessment at the end of the concerned academic session / term qualifying him for promotion to the next higher class.

2.   Admission: Specific Requirements

2.1   Admissions up to Class VIII (i.e., Class VIII and below) shall be regulated by the rules, regulations, orders applicable to the place where the school is located. However the following are the broad guidelines to be followed:

- Admission register in the form prescribed by the Local Government / Education Board concerned shall be maintained by the "School" where the name of every student joining 'the School' shall be entered.

- Successive admission numbers must be allotted to students on their admission and each student should retain this number throughout the entire span of his schooling in a particular school. A student returning to the school after absence of any duration shall resume his original admission number.

- If a student applying for admission to a school has attended any other school, an authenticated copy of the Transfer Certificate from his last school must be procured before his name can be entered in the Admission Register.

- In no case shall a student be admitted into a class higher than that for which he is entitled according to the transfer certificate.

- A student leaving his school at the end of a session or who is permitted to leave his school during the session shall on payment of all dues, receive an authenticated copy of the Transfer Certificate up to date. A duplicate copy may be issued if the head of the institution is satisfied that the original is lost but it shall always be so marked.

- In case a student from an institution not affiliated to the Board seeks admission in a school affiliated to the Board offering CBSE-*i*, such a student shall produce a transfer certificate duly countersigned by educational authorities of Board/Country concerned.

- If the statement made by the parents or guardian of a student or by the student himself (*if he is a major at the time of his admission to a school*) is found to contain any willful misrepresentation of facts regarding his/her career, the head of the institution may punish him as per the Rule applicable in the country where the school is situated and the matter may be reported to the Board.

3. **Admission to Examinations**

No candidate who has been expelled or is under the punishment of rustication or is debarred from attending regular school for any reason whatsoever shall be admitted to any Assessment of the Board for CBSE-*i*.

4. **Scheme of Examinations for Classes VI-VIII**

(i)   Formative Assessment and Summative Assessment in the subjects under Scholastic Area for specific shall be undertaken by the schools, based on the specifications given in the Curriculum document and circulars available on the CBSE-*i* Portal. Assessment on Co-Scholastic areas may be based on the indicators of assessments provided.

(ii)   The evaluation for subjects under Scholastic Area and Co-Scholastic Areas shall be based on cumulative record of the candidate during his/her continuous assessment in the school.

(iii)   Schools are expected to maintain regular records of student's achievement and progress. These records are subject to scrutiny by the Board when it deems fit.

5. **Grading (CBSE-*i* Assessment for classes VI-VIII)**

(i)   For classes VI-VIII under CBSE-*i*, the assessment of subjects under Scholastic Area shall be in numerical scores to be converted to Grades on a nine-point scale which shall be indicated in the Statement of Subject-wise Performance of School-Based Assessment. Assessment in subjects under Co-Scholastic Areas shall also be in grades.

(ii) The qualifying grade in each subject under Scholastic Area shall be minimum Grade D.

(iii) The students shall be assessed in subjects under Scholastic Area using the conventional numerical marking and later converted into the grades and the same shall be awarded as under:

MARKS RANGE	GRADE	GRADE POINT
91-100	A1	10.0
81-90	A2	9.0
71-80	B1	8.0
61-70	B2	7.0
51-60	C1	6.0
41-50	C2	5.0
33-40	D	4.0
21-32	E1	--
20 and below	E2	--

(iv) Cumulative Grade Point Average (CGPA) shall also be reflected in the Statement of Subject wise Performance.

Note: Cumulative Grade Point Average (CGPA) is the average of Grade Points obtained in all the subjects. Subject wise and overall indicative percentage of marks can be assessed as under:

• Subject wise indicative percentage of marks = 9.5 x GP of the subject

• Overall indicative percentage of marks = 9.5 x CGPA

Scheme of Studies
Classes VI – VIII

The learning areas will include:	Core Areas:
1. Language I-English 2. Language II-Indian languages/Mother Tongue/Local language/Foreign Language 3. Language III-Any other language besides Language I or II 4. Mathematics 5. Science 6. Social Science 7. Information and Communication Technology (ICT) 8. Visual Arts 9. Performing Arts 10. Physical and Health Education	• Perspectives • SEWA • Life Skills • Research

Note:

(i) It is expected that all the students would study three languages upto class VIII. Those students who do not clear the third language in class VIII and are promoted to class IX shall be examined by the school concerned at the end of class IX in the same syllabus prescribed for class VIII. Those who are still unable to clear the third language at the end of class IX may be given another opportunity in class X itself again. No student shall be eligible to appear at the Secondary School Examination of the Board at the end of class X unless he/she has cleared the third language.

(ii) English must be one of the first two languages of the three to be offered as stated above.

Instructional Time:

Classes VI-VIII	No. of Periods	Approximate hours of Study
Language – I	5 periods	3 hours 45 minutes
Language – II	5 periods	3 hours 45 minutes
Language-III	5 periods	3 hours 45 minutes
Social Science	6 periods	4 hours 30 minutes
Mathematics	6 periods	4 hours 30 minutes
Science	6 periods	4 hours 30 minutes
Physical and Health Education	1 period	45 minutes
Information and Communication Technology (ICT)	1 period	45 minutes
Perspectives	1 period	45 minutes
SEWA	1 period	45 minutes
Research	1 period	45 minutes
Visual Arts	1 period	45 minutes
Performing Arts -Dance / Drama/ Music	1 period	45 minutes
Life Skills	1 period	45 minutes
	Total 40 periods	**About 30 hours per week**

Note: The Scheme of Studies has been worked out keeping in view that a school works for 40 periods of 45 minutes each for atleast 180 days. The schools can marginally modify the allocation of periods in the event of their having 45 periods of 40 minutes each. It must be ensured that adequate opportunities are given to all disciplines of learning. The school, keeping the overall number of periods in each subject/ area the same, may assign more or less number of periods to individual units according to their relative importance, if thought necessary.

The Core consists of the elements, Perspective, Life Skills, SEWA (Social Empowerment through Work and Action) and Research. All the elements of the Core will be commented upon and are not examinable.

Schools are expected to give adequate time for SEWA and Research projects outside the school hours, the minimum being equivalent of two-three periods a week. This must be done under the direct supervision of the teacher.

Medium of Instruction

The medium of instruction, in general, in all the schools affiliated with the Board for CBSE-*i* shall be English.

Languages

CBSE–*i* views English language development as key element of the curriculum; it is a critical tool for the learning of all other subjects that the learner is required to study at all the levels. Learners need to be aware of the many purposes of the use of English as well as the diverse forms that it takes and to serve this end they begin to learn to use the appropriate forms of the language suited to the variety of audiences and purposes. They learn to distinguish the formal language of an official letter, the figurative language of a poem and the technical language of a lab report. The English Curriculum at Middle is aimed at developing language skills to analyse and interpret ideas and information in order to enable them to communicate effectively. At the same time the study of literature is also meant to understand other people, cultures vis-à-vis themselves and to appreciate the power of many different uses of language on one hand and to use literature as a tool to teach language on the other.

Broad Objectives of Curriculum at Middle

The student will develop the ability to :

❖ read a variety of fiction and non-fiction materials for different purposes

❖ interpret, analyse, infer and evaluate written work linking it with personal experiences and knowledge

❖ communicate ideas for a variety of purposes using various features of appropriate forms for a specific audience in a given context

❖ express and respond to a range of ideas and opinions concisely, clearly and appropriately

❖ organize information creatively and logically during any expression

❖ concentrate by identifying the main points and staying on the topic

❖ use appropriate forms of language suited to a variety of purposes

❖ use appropriate style and structure in communication

❖ give and receive feedback for a piece of communication and subsequently improve as per the suggestions arrived at

❖ use correctly the conventions of language viz., spelling, grammar, punctuation of the set of vocabulary and syntax used

Specific Objectives for English:

The Receptive skills: Listening and Speaking

Listening Skills:

Students will be able to understand factual information about common everyday topics – identifying both general messages and provided spoken text is clearly articulated in a generally familiar accent. Students will generally be able to listen and understand familiar topics, they hear everyday. In general, a student at this stage can display listening abilities in the following three ways:

1. **Listening for general comprehension:**

    It is expected that the student will be able to listen effectively and constructively so that he/she can:

    a. recognise and understand most of the phonological features of the text

    b. deduce the meaning of simple words from the given context

    c. collect information from the spoken text

    d. follow largely simple instructions

    e. skim (gist of the text) and scan (specific details of the text)

    f. understand the explicit point of view of the speaker in the given text

    g. enjoy the spoken text in familiar accent

2. **Listening to communicate:**

    Listening is an important part of oral communication, hence student at this level will be able to participate in informal and semi-formal discussion and develop the ability to:

    a. understand the conceptual and factual meaning of the spoken text

    b. understand the communicative functions of the spoken text with reference to simple cohesive devices and discourse makers used in the oral utterances

    c. identify and understand the explicitly stated ideas and information

    d. draw simple inferences from the concrete oral text

    e. refer to ideas in order to take turns and participate effectively in the discussion

    f. make simple predictions about what is going to come next while listening

3.   Listening for language development and skill application:

Listening being a receptive skill, plays an important role in immersion in the language. It should lead to acquisition of patterns and forms, as well as new content and ideas for language development and its application. At middle level, the student needs to develop the ability to:

a.   understand the syntactic forms of both - the concrete and somewhat abstract spoken text

b.   understand relationship between different parts of spoken utterances

c.   understand the tone of spoken text by identifying the discourse markers used in the text

d.   understand the use of different listening strategies in different contexts and situations

e.   set personal goals with the help of seniors to enhance communication based on effective listening

f.   learn to use the simple strategies to understand the spoken meaning before, during and after listening

g.   acquire appropriate strategies to understand the verbal and non-verbal cues in oral communication

Reading Skills:

Students will be able to read and comprehend a variety of genres of literature as well as themes on familiar topics regularly encountered in school and at home. In general, a student at this stage will read for following purposes:

1.   Reading for general comprehension:

It is expected that the student will be able to read with satisfactory level of comprehension to:

a.   recognise and understand the features of the given text

b.   deduce the meaning of words from the given context

c.   gather information

d.   skim to understand the gist of the text

e.   scan the text for specific details

f.　understand largely explicit point of view of the speaker in the given text and make an effort to understand some of the implicit messages for a given situation.

g.　interpret and infer the meaning of the written text

h.　engage in extensive and intensive reading

i.　read the text for pleasure

2.　**Reading to Communicate:**

Reading is an important skill to internalise the language for effective communication, the student at this level will develop ability to:

a.　understand the literal and factual meaning of the text

b.　understand the communicative functions of familiar texts in terms of vocabulary, syntax, simple cohesive devices and discourse markers used in the written text

c.　identify and understand the explicitly stated ideas and information in the given text

d.　infer the meaning in the given context

e.　make simple predictions based on the given text

3.　**Reading to appreciate literature: Learners are exposed to a great deal of authentic literature of all the three main genres.**
The student will develop the ability to:

a.　display a good sense of local and global comprehension of the literary text

b.　draw inferences from the literary text

c.　**interpret the import** of the text as a whole

d.　evaluate the literary text

e.　identify the techniques of written language

f.　understand simple literary devices like simile, metaphor etc.

g.　appreciate different genres of literature and the writings of different authors

h.　know about the author to correlate his work with the background that he/she lived in

4.   Reading for language development and skill application:

Reading too being a receptive skill, plays an important role in acquiring proficiency in language. The student will develop the ability to:

a.   understand the syntactic forms of both - the concrete and somewhat abstract text.

b.   understand relationship between different parts of the text through cohesive devices such as reference

c.   consider which reading strategies work better in different contexts, situations and purposes

d.   learn to set personal goals to enhance communication based on effective listening

e.   learn to use appropriate strategies and the language cueing systems to understand the meaning before, during and after reading the text

The Productive Skills: Speaking and Writing

Speaking Skills

Students at this stage will be asked to :

a)   communicate by using English with growing confidence and competence in personal, social and academic situations.

b)   understand the need for the acquisition of new vocabulary, in order to increase effectiveness in communication.

c)   understand the need to adapt and suit language to audience and purpose in oral communication.

d)   learn to organise thought and present their point of view in a variety of contexts.

e)   gradually develop clarity and coherence in speech.

f)   progressively become aware of the need for correct pronunciation for greater clarity.

Specifically a student can at this stage displays speaking ability in the following contexts:

1. **Speaking skills in conversations and discussions:**

   It is expected that in the middle school years the students will gradually develop their speaking skills and develop the ability to:

   ❖ participate in conversations on familiar topics, with a growing understanding of correct speech and pronunciation.

   ❖ speak with some degree of accuracy, gradually becoming aware of errors, and correct some of their own mistakes while speaking.

   ❖ contribute to discussions by using simple connected language on topics which are known or of personal interest.

   ❖ describe experiences and events and briefly give reasons and explanations for opinions and plans.

   ❖ acknowledge and respond to the contributions of others in group discussions.

2. **Speaking skills in making presentations:**

   It is expected that the students will develop their presentation skills and the ability to:

   ❖ use some verbal and non-verbal techniques to make talk interesting for listeners.

   ❖ use connected speech and a range of age appropriate vocabulary to clarify ideas.

   ❖ narrate a story or the plot of a film or book, describing reactions.

   ❖ use the key conventions of standard English as appropriate.

3. **Debating skills:**

   It is expected that the student will

   ❖ develop skills in debating a topical issue, giving the advantages or disadvantages of different viewpoints, with some prior preparation and guidance.

   Writing Skills

   At this stage the students will develop the ability to write :

   ❖ with growing confidence, understanding and applying their knowledge of the conventions of grammar, spelling and punctuation to improve their writing.

   ❖ a variety of purposes: to persuade, argue, elucidate or entertain, for a variety of audiences in both formal and informal contexts.

❖ different forms/genres: letters, articles, essays, reports, diary entries and poems, to express their thoughts, feelings and ideas.

Specifically, at this stage, students will demonstrate their writing skills in the following areas:

1. **Pre-writing and Writing:**

   It is expected that the students will develop the ability to :

   ❖ develop diverse ways of generating their own ideas for writing.

   ❖ plan and draft writing according to various formats given to them.

   ❖ learn how to develop viewpoint, ideas, character and voice in writing.

   ❖ demonstrate an awareness of audience and context.

   ❖ produce coherent, logically connected text on subjects that are familiar or of personal interest.

   ❖ clarify a topical issue giving reasons in support of or against a point of view.

   ❖ describe experiences, events, dreams, hopes and ambitions.

   ❖ use a range of age appropriate vocabulary to express their ideas.

   ❖ draw on their knowledge of grammar and punctuation to make text as clear as possible for the reader.

2. **Language conventions, editing and re-drafting:**

   It is expected that the students will:

   ❖ learn to shape and polish writing, taking care to improve vocabulary, punctuation and structure.

   ❖ develop techniques, both linguistic and literary to improve expression and structure.

Class - VI
English
Term-wise Syllabus

Term - I

Sr. No.	Units
1.	Adventure
2.	Friends
3.	Inventions that changed the World
4.	Space the Final Frontier

Term - II

Sr. No.	Units
5.	Caring for Animals
6.	The Environment
7.	The World of Sports
8.	Explorer

Important Note For The Teacher:

Note: The Self Learning Modules or Units are meant for enhancing all the skills in a language in an integrated manner. Schools may decide to pick up a minimum of six and a maximum of eight units based on the themes that interest their students. The areas covered under grammar and writing tasks must be covered from the Units you decide to leave out. It may be mentioned that feedback on the Themes/Units/Activities that your students have enjoyed the most must be shared with the CBSE-*i* Academic team to encourage them to provide more such tasks.

Unit 1: Theme: Animals Rights/Caring for Animals

In this Unit students will develop their

Description/rationale	Listening skills	Speaking skills	Reading skills	Writing skills	Vocabulary	Language structure and conventions; literary devices
This unit aims to open up students to be more sensitive and aware of the importance of lives around us. We need to remember that the world we know will not be the same without the plants and animals which are a part of its identity. Many species have become extinct. This issue is serious enough to warrant a close inspection of the status of the species. Note: a wide selection of activities have been provided to help any teacher wishing to extend their students beyond the learning outcomes/expectations outlined here.	They will: • Listen and respond to a popular song for specific information and comprehending the message conveyed • Listen to grasp the main idea • Listen for specific information	They will: • Participate actively in group discussions • Present their viewpoint with clarity • Stage a play • Describe a character	They will: • Understand the meaning of new words in context • Understand the elements of a short story • Draw inferences • Identify the main points of the poem	They will: • Write a story • Write a notice • Write a character sketch • Write an informal letter • Write a postcard • Write a dialogue • Write a magazine report • Write with logical continuity • Use literary devices like similes and metaphors to improve their writing	• Synonyms • Antonyms • Simple phrasal verbs	• Tenses of the Verb, irregular verbs • Figures of Speech – alliteration • Revision of Pronouns • Revision of Articles

Unit 2: Theme: Friendship

	In this Unit students will develop their					
Description/rationale	*Listening skills*	*Speaking skills*	*Reading skills*	*Writing skills*	*Vocabulary*	*Language structure and conventions; literary devices*
The purpose of this unit is to introduce students to a variety of friendship issues using high-quality children's literature. This unit contains activities that have been organized to teach about the following friendship issues: making friends and friendly behaviour, difficulties in friendships, intergenerational friendships, interracial and cross cultural friendships, imaginary friends, and loss of a friend. Note: a wide selection of activities have been provided to help any teacher wishing to extend their students beyond the learning outcomes/expectations outlined here.	They will: • Listen and respond to a popular song • Listen to grasp the main idea • Listen for specific information	They will: • Participate actively in role play • Present their viewpoint with clarity • Participate in a group discussion • Debate for and against an idea and come to a consensus	They will: • Understand the meaning of new words in context • Understand the elements of a short story • Draw inferences • Identify the main points of the poem	They will: • Write a message • Design a scrapbook • Make a Thank you card • Write a short story • Write a diary entry • Design a questionnaire • Write a profile • Write with logical continuity • Use literary devices like similes and metaphors to improve their writing	They will: • Learn use of idioms • Learn use of proverbs	• Tenses of the Verb, Simple Past and Simple Present • Perfect Tense

Unit 3: Theme: Explorers

In this Unit students will develop their

Description/ rationale	Listening skills	Speaking skills	Reading skills	Writing skills	Vocabulary	Language structure and conventions; literary devices
This unit aims to expose students to the kinds of people who choose a life of exploration, adventure, and danger and discuss where we would be without them. Students will answer those questions as they investigate explorers and determine their impact on our world. Note: a wide selection of activities have been provided to help any teacher wishing to extend their students beyond the learning outcomes/expectations outlined here.	They will: • Listen and respond to a passage • Listen to grasp the main idea • Listen for specific information • Listen to tone and rhythm for punctuation	They will: • Conduct an interview • Present their viewpoint with clarity in a speech • Share an experience logically and with coherence	They will: • Understand the meaning of new words in context • Understand the elements of a short story • Read to understand the gist of the texts • Read for specific information • Be able to think critically • Read for understanding and Literary appreciation • Appreciate a given poem	They will: • Write a diary entry • Fill up a form • Write a summary • Write a speech • Write an e-mail • Write an itinerary • Rewrite the end of a story • Write with logical continuity • Use literary devices like similes and metaphors to improve their writing	• Learn new words through puzzle • Identify meanings in context • Rhyming words • Complete crossword • Antonyms	• Nominalisation • Rewriting sentences in simple present tense • Adjective order

| Unit 4: Theme: The Environment | In this Unit students will develop their | | | | | |
Description/rationale	Listening skills	Speaking skills	Reading skills	Writing skills	Vocabulary	Language structure and conventions; literary devices
This unit aims to introduce environmental issues in an engaging manner. Students will participate in discussion about things they know about caring for the environment and things they want to learn. They will know at least some different types of pollution, and how to reduce that pollution. They will know and understand the term "recycle". They will know how to "reuse" materials to make something functional for their final projects. All students will be able to write about this project and its use. They will have an idea of how to keep their environment cleaner and safer. In this Unit, students will read and research on environmental issues, and in the process discover their own connection with nature. Note: a wide selection of activities have been provided to help any teacher wishing to extend their students beyond the learning outcomes/expectations outlined here.	They will: • Listen and respond to a passage • Listen and respond to a poem • Listen and respond to a song • Listen to grasp the main idea • Listen for specific information	They will: • Participate actively in role play • Present their viewpoint with clarity • Participate in a group discussion • Discuss ways to resolve conflict • Debate for and against an idea and come to a consensus	They will: • Understand the meaning of new words in context • Understand the elements of a short story • Read to understand the gist of the texts • Read for specific information • Be able to think critically • Read for understanding and Literary appreciation • Appreciate a given poem	They will: • Write a poem • Write a letter to the editor • Design a poster • Write a dialogue • Write a diary entry • Write an article • Create a timeline • Write a report • Write with logical continuity • Use literary devices like similes and metaphors to improve their writing	• Phrasal verbs	• Finite and Non-finite Verbs

Unit 5: Theme:
The World of Sports

In this Unit students will develop their

Description/ rationale	Listening skills	Speaking skills	Reading skills	Writing skills	Vocabulary	Language structure and conventions; literary devices
This unit aims to introduce students to sports and sporting issues in an engaging manner. Students will realise the importance of sports and physical education in life. The main objective of the unit is to inculcate a spirit of fairness not only in the field of sports and games but also in life. Note: a wide selection of activities have been provided to help any teacher wishing to extend their students beyond the learning outcomes/ expectations outlined here.	They will: • Listen and respond to a passage • Listen and respond to a poem • Listen and respond to a song • Listen to grasp the main idea • Listen for specific information	They will: • Participate actively in role play • Present their viewpoint with clarity • Participate in a group discussion • Discuss ways to resolve conflict • Debate for and against an idea and come to a consensus	They will: • Understand the meaning of new words in context • Understand the elements of a short story • Read to understand the gist of the texts • Read for specific information • Be able to think critically • Read for understanding and Literary appreciation • Appreciate a given poem	They will: • Write a poem • Write a letter to the editor • Design a poster • Write a dialogue • Write a diary entry • Write an article • Create a timeline • Write a report • Write with logical continuity • Use literary devices like similes and metaphors to improve their writing	• Synonyms • Antonyms • Phrasal verbs	• Finite and Non-finite verbs • Subject-verb concord

Unit 6: Theme: Inventions that changed the world	In this Unit students will develop their					
Description/ rationale	Listening skills	Speaking skills	Reading skills	Writing skills	Vocabulary	Language structure and conventions; literary devices
Throughout history, people have imagined and then created new things to make their lives better, easier, and more enjoyable. From the wheel to penicillin to the computer, inventions continue to change the way we live. This theme/unit introduces students to the amazing world of inventions — they'll learn about famous inventors, explore everyday inventions, discuss the most important inventions of all time. Note: a wide selection of activities have been provided to help any teacher wishing to extend their students beyond the learning outcomes/expectations outlined here.	They will: • Listen and respond to a given text • Listen and respond to a popular song/ poem • Listen to grasp the main idea • Listen for specific information	They will: • Participate actively in group discussions • Present their viewpoint with clarity • Enact a scene • Discuss ways to resolve conflict • Debate for and against an idea and come to a consensus	They will: • Understand the meaning of new words in context • Understand the elements of a short story • Appreciate a poem	They will: • Write a slogan • Write a simple poem • Write an opinion on simple day to day issues • Write an advertisement for a new product • Write with logical continuity • Use literary devices like similes and metaphors to improve their writing	• Use of phrasal verbs • One word substitution	• Use of conditionals

Unit 7: Theme: Adventure

Description/ rationale	In this Unit students will develop their					
	Listening skills	Speaking skills	Reading skills	Writing skills	Vocabulary	Language structure and conventions; literary devices
Most people, at some point in their lives, long for adventure. By definition, adventure is an exciting or very unusual experience. It is a part of human nature to desire these experiences, to want for events that will define their lives, to give them meaning, to make them special. An adventure is often a defining experience in a person's life. It is usually risky and uncertain and often requires boldness, courage and strength. Adventures sometimes make us stronger. Many times, adventure teaches lessons that always change us. Note: a wide selection of activities have been provided to help any teacher wishing to extend their students beyond the learning outcomes/ expectations outlined here.	They will: • Listen and respond to a given text • Listen and respond to a popular song • Listen to grasp the main idea • Listen for specific information	They will: • Participate actively in group discussions • Present their viewpoint with clarity • Narrate an experience • Discuss ways to resolve conflict • Debate for and against an idea and come to a consensus	They will: • Understand the meaning of new words in context • Understand the elements of a short story • Appreciate a poem on war	They will: • Write a message • Write a short story • Draft an advertisement • Write a description • Write with logical continuity	They will: • Understand and use idioms and phrases	• Use of modals

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Unit 8: Theme: Space: The Final Frontier

In this Unit students will develop their

Description/rationale	Listening skills	Speaking skills	Reading skills	Writing skills	Vocabulary	Language structure and conventions; literary devices
Space is indeed the final frontier. Even from the confines of our tiny planet, we have been able to discover much about our immediate neighbourhood and thanks to technology, we have discovered mysteries that extend into the vastness beyond. Our technology has taken us to the moon and someday, perhaps, our technology will allow us to follow our imaginations to Mars and beyond. In this unit we will highlight some of the information we have discovered about space from planets to galaxies, from the sun to super novas, from Apollo to ISS. Note: a wide selection of activities have been provided to help any teacher wishing to extend their students beyond the learning outcomes/expectations outlined here.	They will: • Listen and respond to a historical speech • Listen and respond to a popular song • Listen to grasp the main idea • Listen for specific information	They will: • Participate actively in group discussions • Present their viewpoint with clarity • Make and present a PPT • Discuss ways to resolve conflict • Debate for and against an idea and come to a consensus	They will: • Understand the meaning of new words in context • Understand the elements of a short story • Appreciate and compare poems in given context	They will: • Write a story • Write a simple poem • Write a short story • Write with logical continuity • Use literary devices like similes and metaphors to improve their writing	• Use of phrasal verbs • Antonyms	• Study of passives • Expand headlines into news items • Write headlines

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Class - VII
English
Term-wise Syllabus

Term - I

Sr. No.	Units
1.	Friendship
2.	Real Animal Heroes
3.	Travel Diaries- Travelogue
4.	The Art of Story Telling
5.	New Inventions and Technology

Term - II

Sr. No.	Units
6.	Our Planet Earth
7.	Films and Film Reviews
8.	Music
9.	Caring for others

Important Note For The Teacher:

Note: The Self Learning Modules or Units are meant for enhancing all the skills in a language in an integrated manner. Schools may decide to pick up a minimum of six and a maximum of eight units based on the themes that interest their students. The areas covered under grammar and writing tasks must be covered from the Units you decide to leave out. It may be mentioned that feedback on the Themes/Units/Activities that your students have enjoyed the most must be shared with the CBSE- *i* Academic team to encourage them to provide more such tasks.

Syllabus - Matrix
English Class-VII

Unit 1: Theme: Friendship		*In this Unit students will develop their*				
Description/rationale	*Listening skills*	*Speaking skills*	*Reading skills*	*Writing skills*	*Vocabulary*	*Language structure and conventions; literary devices*
In this Unit, students will learn what true friendships are as well as make new friendships. This unit is also to help build self-esteem and an environment that will be pleasant for all. Activities will include: 1. Friends do things together. 2. Friends are alike and different. 3. Friends care. 4. Friends share. Note: a wide selection of activities have been provided to help any teacher wishing to extend their students beyond the learning outcomes/ expectations outlined here.	They will: • Listen and respond to a popular song for specific information and comprehend the message conveyed • Listen to grasp the main idea • Listen for specific information	They will: • Participate actively in group discussions • Present their viewpoint with clarity • Stage a play • Describe a person	They will: • Understand the meaning of new words in context • Understand the elements of a short story • Draw inferences • Identify the main points of the poem	They will: • Write a story • Write a poem • Write a character sketch/ physical description • Write an informal letter • Write a dialogue • Write with logical continuity • Use literary devices like similes and metaphors to improve their writing	• Synonyms • Antonyms • Simple phrasal verbs	• Revision of Articles and Determiners

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Unit 2: Theme: Real Animal Heroes	In this Unit students will develop their					
Description/rationale	Listening skills	Speaking skills	Reading skills	Writing skills	Vocabulary	Language Structure and conventions; literary devices
The purpose of this unit is to introduce students to a variety of heroic tales involving animals who have rescued human beings who were under threat. This unit contains heart-warming stories about animal heroes. Humans or other animals who have been stuck in the wilderness when something dangerous threatens their life have survived because of the help of an animal hero! Animal heroes are animals that have saved humans or other animals from danger. Note: a wide selection of activities have been provided to help any teacher wishing to extend their students beyond the learning outcomes/expectations outlined here.	They will: • Listen and respond to a popular song • Listen to grasp the main idea • Listen for specific information	They will: • Participate actively in role play • Present their viewpoint with clarity • Participate in a group discussion • Debate for and against an idea and come to a consensus	They will: • Understand the meaning of new words in context • Understand the elements of a short story • Draw inferences • Identify the main points of the poem	They will: • Write a newspaper report • Design a scrapbook • Make a Thank you card • Write a short story • Write a diary entry • Write with logical continuity • Use literary devices like similes and metaphors to improve their writing	They will: • Learn use of idioms and proverbs related to animals	• Sentences: simple, compound

Unit 3: Theme: Travel Diaries/Travelogue	In this Unit students will develop their					
Description/rationale	Listening skills	Speaking skills	Reading skills	Writing skills	Vocabulary	Language structure and conventions; literary devices
The passion for knowledge about other countries has always driven men to embark upon land travels and sea-voyages to distant lands, the accounts of which have been left by them for posterity. This unit aims to expose students to writing about travel; it is written in a style that is both interesting and informative. Note: a wide selection of activities have been provided to help any teacher wishing to extend their students beyond the learning outcomes/expectations outlined here.	They will: • Listen and respond to a passage • Listen to grasp the main idea • Listen for specific information • Listen to tone and rhythm for punctuation	They will: • Conduct an interview • Present their viewpoint with clarity in a speech • Share an experience logically and with coherence • Narrate an experience • Make a PPT	They will: • Understand the meaning of new words in context • Understand the elements of a short story • Read to understand the gist of the texts • Read for specific information • Be able to think critically • Read for understanding and Literary appreciation • Appreciate a given poem	They will: • Write a diary entry • Fill up a form • Write a summary • Write a speech • Write an e-mail • Write an itinerary • Send a telegram • Write with logical continuity • Use literary devices like similes and metaphors to improve their writing	• Learn new words through puzzle • Identify meanings in context • Rhyming words • Complete crossword • Antonyms	• Phrases and clauses

Unit 4: Theme: The Art of Story Telling

In this Unit students will develop their

Description/rationale	Listening skills	Speaking skills	Reading skills	Writing skills	Vocabulary	Language structure and conventions; literary devices
The art of storytelling has a long and venerable history, dating back for centuries. Long before there were written books, the storyteller performed an important function in society teaching, entertaining, and maintaining an oral record of historical events. This thematic unit explores storytelling history, and engages students to learn storytelling techniques. Note: a wide selection of activities have been provided to help any teacher wishing to extend their students beyond the learning outcomes/expectations outlined here.	They will: • Listen and respond to a passage • Listen and respond to a poem • Listen and respond to a song • Listen to grasp the main idea • Listen for specific information	They will: • Participate actively in role play • Present their viewpoint with clarity • Participate in a group discussion • Narrate a story with stress, intonation and expression	They will: • Understand the meaning of new words in context • Understand the elements of a short story • Read to understand the gist of the texts • Read for specific information • Be able to think critically • Read for understanding and Literary appreciation • Appreciate a given poem	They will: • Write summary of an authentic text • Write a short story • Design a poster • Write a dialogue • Create a timeline • Create a storyboard/comic strip • Write with logical continuity • Use literary devices like similes and metaphors to improve their writing	• Phrasal verbs • Synoyms • Antonyms	• Transitive and intransitive verbs

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Unit 5: *Theme: New Inventions and Technology*

In this Unit students will develop their

Description/rationale	Listening skills	Speaking skills	Reading skills	Writing skills	Vocabulary	Language structure and conventions; literary devices
This unit enables students to read widely in a relevant topic within the fields of information technology and information systems. It offers more in-depth knowledge in an area with which they already have some familiarity. They will read about selected significant people, their contributions to society, and ways the contributions impacted society. Contributions in the fields of communication and technology and significant scientific discoveries and inventions are explored. Note: a wide selection of activities have been provided to help any teacher wishing to extend their students beyond the learning outcomes/ expectations outlined here.	They will: • Listen and respond to a passage • Listen and respond to a poem • Listen and respond to a song • Listen to grasp the main idea • Listen for specific information	They will: • Participate actively in role play • Present their viewpoint with clarity • Participate in a group discussion • Discuss ways to resolve conflict • Debate for and against an idea and come to a consensus	They will: • Understand the meaning of new words in context • Understand the elements of a short story • Read to understand the gist of the texts • Read for specific information • Be able to think critically • Read for understanding and Literary appreciation • Appreciate a given poem	They will: • Write an account • Write a summary of a given text • Design a poster • Write a newspaper report • Write an article • Write with logical continuity • Use literary devices like similes and metaphors to improve their writing	• Synonyms • Antonyms • Phrasal Verbs	• Modals

| Unit 6: Theme: Our Planet Earth | In this Unit students will develop their | | | | | |
	Listening skills	Speaking skills	Reading skills	Writing skills	Vocabulary	Language structure and conventions; literary devices
Description/rationale In this unit, examine the unique characteristics that make our planet habitable and learn how these conditions were created. Students will also read of the danger our planet faces due to waste and misuse of the natural resources of the earth. Problems like oil spills, hazardous waste, loss of rain forests, endangered species, acid rain, the ozone layer, the municipal waste crisis can be out of our control. At the very least, these problems require group and corporate action or government intervention. However, there are some things the individual can control. Our waste reduction and recycling activities can make a difference. Note: a wide selection of activities have been provided to help any teacher wishing to extend their students beyond the learning outcomes/expectations outlined here.	They will: • Listen and respond to a given text • Listen and respond to a popular song/poem • Listen to grasp the main idea • Listen for specific information	They will: • Participate actively in group discussions • Present their viewpoint with clarity • Enact a scene • Discuss ways to resolve conflict • Debate for and against an idea and come to a consensus	They will: • Understand the meaning of new words in context • Understand the elements of a short story • Appreciate a poem	They will: • Write a slogan • Write a simple poem • Write an opinion on simple day to day issues • Write an advertisement for a new product • Write with logical continuity • Use literary devices like similes and metaphors to improve their writing	• Use of phrasal verbs • One word substitution	• Future Time Reference

Unit 7: Theme: Films and Film reviews

In this Unit students will develop their

Description/rationale	Listening skills	Speaking skills	Reading skills	Writing skills	Vocabulary	Language Structure and conventions; literary devices
Through study of this unit, students will learn about the film medium including the silent era of film history, and legendary actors and studios. Students will also tangent introduction to the two basic poles of film: Realism and Cartoon-making. Note: a wide selection of activities have been provided to help any teacher wishing to extend their students beyond the learning outcomes/ expectations outlined here.	They will: • Listen and respond to a given text • Listen and respond to a popular song • Listen to grasp the main idea • Listen for specific information	They will: • Participate actively in group discussions • Stage a play • Present their viewpoint with clarity • Narrate an experience • Discuss ways to resolve conflict • Debate for and against an idea and come to a consensus	They will: • Understand the meaning of new words in context • Understand the elements of a short story • Appreciate a poem • Read and appreciate a biographical account/ narrative	They will: • Write a message • Write a short play/ film script • Draft an advertisement • Write a film review • Write with logical continuity	• Idioms and phrases • Synonyms • Antonyms	• Reported speech

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Unit 8: Theme: Music	In this Unit students will develop their					
Description/rationale	Listening skills	Speaking skills	Reading skills	Writing skills	Vocabulary	Language structure and conventions; literary devices
Students will read of music of India and from around the world including multiple varieties of folk, popular, pop, classical music and also about famous musicians who created this music. They will read of music as spiritual inspiration, cultural expression and pure entertainment. Note: a wide selection of activities have been provided to help any teacher wishing to extend their students beyond the learning outcomes/expectations outlined here.	They will: • Listen and respond to a historical speech • Listen and respond to a popular song • Listen to grasp the main idea • Listen for specific information	They will: • Participate actively in group discussions • Present their viewpoint with clarity • Make and present a PPT • Discuss ways to resolve conflict • Debate for and against an idea and come to a consensus	They will: • Understand the meaning of new words in context • Understand the elements of a short story • Appreciate and compare poems in given context	They will: • Write a simple poem. Write a short story • Write a biographical account • Use literary devices like similes and metaphors to improve their writing	• Use of phrasal verbs • Antonyms	• Study of linkers

Unit 9: Theme: Caring for Others	In this Unit students will develop their					
Description/rationale	*Listening skills*	*Speaking skills*	*Reading skills*	*Writing skills*	*Vocabulary*	*Language structure and conventions; literary devices*
This integrated unit focuses on the concepts of hunger, philanthropy, and community service. Using literature, students will explore the principles of philanthropy. They will learn to: • Treat people with kindness and generosity. • Help people in need. Be sensitive to people's feelings. • Never be mean or hurtful. • Think about how your actions will affect others. Note: a wide selection of activities have been provided to help any teacher wishing to extend their students beyond the learning outcomes/expectations outlined here.	They will: • Listen and respond to a historical speech • Listen and respond to a popular song • Listen to grasp the main idea • Listen for specific information	They will: • Participate actively in group discussions • Present their viewpoint with clarity • Make and present a PPT • Discuss ways to resolve conflict • Debate for and against an idea and come to a consensus	They will: • Understand the meaning of new words in context • Understand the elements of a short story • Appreciate and compare poems in given context	They will: • Write a story • Write a simple poem • Write with logical continuity • Write a letter to the editor	• Use of phrasal verbs • Antonyms	• Revision of Perfect Tenses

Class - VIII
English
Term-wise Syllabus

Term - I

Sr. No.	Units
1.	Magic
2.	Amazing Plants
3.	Tales of Endurance and Struggle
4.	Journeys to Remote Areas of the World
5.	In the News

Term - II

Sr. No.	Units
6.	Family : The Ties that Bind
7.	Real Life Drama
8.	School Days
9.	Ghosts and Humorous Ghost Stories

Important Note For The Teacher:

Note: The Self Learning Modules or Units are meant for enhancing all the skills in a language in an integrated manner. Schools may decide to pick up a minimum of six and a maximum of eight units based on the themes that interest their students. The areas covered under grammar and writing tasks must be covered from the Units you decide to leave out. It may be mentioned that feedback on the Themes/Units/Activities that your students have enjoyed the most must be shared with the CBSE- i Academic team to encourage them to provide more such tasks.

Syllabus - Matrix
English Class-VIII

Unit 1: Theme: Magic	In this Unit students will develop their					
Description/rationale	Listening skills	Speaking skills	Reading skills	Writing skills	Vocabulary	Language structure and conventions; literary devices
Magic is defined by Aleister Crowley as "*the art and science of causing change to occur in conformity with the will.*" Magic is a topic that naturally interests and amazes students. In this unit, students read about magicians and magic tricks, they follow instructions to perform a magic trick, critique its directions, and teach another student what they have learned. Note: a wide selection of activities have been provided to help any teacher wishing to extend their students beyond the learning outcomes/expectations outlined here.	They will: • Listen and respond to a given piece for specific information and comprehending the message conveyed • Listen to grasp the main idea • Listen for specific information	They will: • Participate actively in group discussions • Present their viewpoint with clarity • Stage a magic trick • Describe a character	They will: • Understand the meaning of new words in context • Understand the elements of a short story • Draw inferences • Identify the main points of the poem	They will: • Write a story • Write a notice • Write a character sketch • Write an informal letter • Write a postcard • Write an advertisement • Design a poster • Write a magazine report • Write with logical continuity • Write a biosketch • Write a process • Use literary devices like similes and metaphors to improve their writing	• Synonyms • Antonyms • Simple phrasal verbs	• Tenses of the Verb, irregular verbs • Figures of Speech – alliteration

Unit 2: Theme: Amazing Plants

	In this Unit students will develop their					
Description/rationale	*Listening skills*	*Speaking skills*	*Reading skills*	*Writing skills*	*Vocabulary*	*Language structure and conventions; literary devices*
This is a comprehensive, standard-based unit on plants that includes: poetry, word play, writing activities which are focused on the parts of a plant and the plant life-cycle, amazing plants that eat insects, rainforests, recipes, bulletin board ideas, student incentives, and themed learning. These activities may be used as a concentrated unit of study. Note: a wide selection of activities have been provided to help any teacher wishing to extend their students beyond the learning outcomes/expectations outlined here.	They will: • Listen and respond to a popular song • Listen to grasp the main idea • Listen for specific information	They will: • Participate actively in role play • Present their viewpoint with clarity • Participate in group discussions • Debate for and against an idea and come to a consensus • Participate in Turncoat activity	They will: • Understand the meaning of new words in context • Understand the elements of a short story • Draw inferences • Identify the main points of the poem	They will: • Write a message • Design a scrapbook • Write a short story • Write a diary entry • Design a questionnaire • Write a description • Write with logical continuity • Use literary devices like similes and metaphors to improve their writing • Use Mechanics of writing, punctuation	They will: • Learn use of idioms • Learn use of proverbs	• Tenses of the Verb Perfect Tense

Unit 3: Theme: Tales of Endurance and Struggle

In this Unit students will develop their

Description/rationale	Listening skills	Speaking skills	Reading skills	Writing skills	Vocabulary	Language structure and conventions; literary devices
This unit aims to expose students to the kinds of people who choose a life of struggle, and danger and endure hardships. They will learn about "physical courage" or courage in the face of physical pain, hardship, death, or threat of death, and "moral courage" or the ability to act rightly in the face of popular opposition, shame, scandal, or discouragement. They discuss where we would be without them and what they learn from such men? Students will answer those questions as they investigate these great men and determine their impact on our world. Note: a wide selection of activities have been provided to help any teacher wishing to extend their students beyond the learning outcomes/expectations outlined here.	They will: • Listen and respond to a passage • Listen to grasp the main idea • Listen for specific information • Listen to tone and rhythm for punctuation	They will: • Conduct an interview • Present their viewpoint with clarity in a speech • Share an experience logically and with coherence	They will: • Understand the meaning of new words in context • Understand the elements of a short story • Read to understand the gist of the texts • Read for specific information • Be able to think critically • Read for understanding and appreciate literature • Appreciate a given poem and enjoy it	They will: • Write a diary entry • Fill up a form • Write a summary/precis • Write a speech • Write an email • Write a biosketch • Write with logical continuity • Use literary devices like similes and metaphors to improve their writing • Use of porenthesis	• Learn new words through puzzles • Identify meanings in context • Rhyming words • Complete crossword • Antonyms	• Clauses and complex sentences

Unit 4: Theme: Journeys to remote areas of the world

In this Unit students will develop their

Description/rationale	Listening skills	Speaking skills	Reading skills	Writing skills	Vocabulary	Language structure and conventions; literary devices
This unit aims to introduce the world and exotic foreign locales in an engaging manner. Students will participate in discussion about the causes and results of world exploration and the people who undertook journeys to remote areas of the world. Note: a wide selection of activities have been provided to help any teacher wishing to extend their students beyond the learning outcomes/expectations outlined here.	They will: • Listen and respond to a passage • Listen and respond to a poem • Listen and respond to a song • Listen to grasp the main idea • Listen for specific information	They will: • Participate actively in role play • Present their viewpoint with clarity • Participate in group discussions • Discuss ways to resolve conflict • Debate for and against an idea and come to a consensus • Organize a symposium	They will: • Understand the meaning of new words in context • Understand the elements of a short story • Read to understand the gist of the texts • Read for specific information • Be able to think critically • Read for understanding and Literary appreciation • Appreciate a given poem and enjoy it	They will: • Write a poem • Write a letter to the editor • Design a poster • Write a dialogue • Write an essay in about 250 words • Write an article • Create a timeline • Write a report • Write with logical continuity • Use literary devices like similes and metaphors to improve their writing	• Phrasal verbs	Verbs: • Transitive and Intransitive • Finite and Non-finite Verbs

Unit 5: Theme: In the News

In this Unit students will develop their

Description/ rationale	Listening skills	Speaking skills	Reading skills	Writing skills	Vocabulary	Language structure and conventions; literary devices
News is the communication of selected information on current events which is presented by print, broadcast, Internet, or word of mouth to a third party or mass audience. This unit aims to introduce students to events and incidents that are newsworthy- or, in other words have sufficient relevance to he public or a special audience to warrant press attention or coverage. Note: a wide selection of activities have been provided to help any teacher wishing to extend their students beyond the learning outcomes/ expectations outlined here.	They will: • Listen and respond to a passage • Listen and respond to a poem • Listen and respond to a song • Listen to grasp the main idea • Listen for specific information	They will: • Participate actively in role play • Present their viewpoint with clarity • Participate in group discussions • Discuss ways to resolve conflict • Debate for and against an idea and come to a consensus	They will: • Understand the meaning of new wards in context • Understand the elements of a drama/ short one act play • Appreciate a poem	They will: • Write a poem • Write a letter to the editor • Design a poster • Write a dialogue • Create a timeline • Write a report • Create a school newspaper/ news bulletin • Write with logical continuity • Use literary devices like similes metaphors to improve their writing	• Synonyms • Antonyms • Phrasal verbs	• Subject- verb concord • Sentences

Unit 6: Theme: Family: The ties that bind

	In this Unit students will develop their					
Description/rationale	Listening skills	Speaking skills	Reading skills	Writing skills	Vocabulary	Language structure and conventions; literary devices
Family units take a variety of forms, all of which involve individuals living under one roof. Students will define bonds that family members share. In the past few decades, the world has seen major changes in the face of the family. This unit aims at a discussion of the many definitions of "family" and how they demonstrate the changes that are occurring within the family. Note: a wide selection of activities have been provided to help any teacher wishing to extend their students beyond the learning outeomes/expectations outlined here.	They will: • Listen and respond to a given text • Listen and respond to a popular song/poem • Listen to grasp the main idea • Listen for specific information	They will: • Participate actively in group discussions • Present their viewpoint with clarity • Enact a scene • Discuss ways to resolve conflict • Debate for and against an idea and come to a consensus	They will: • Understand the meaning of new words in context • Understand the elements of a drama/short one act play • Appreciate a poem • Participate actively in role play • Present their viewpoint with clarity • Participate in group discussions • Discuss ways to resolve conflict • Debate for and against an idea and come to a consensus	They will: • Write a story/diary entry • Write an essay • Write an opinion on simple day to day issues • Write an article • Write a precis on a given piece • Write with logical continuity	They will: • Use phrasal verbs • One word substitution	• Use of conditionals

Unit 7: Theme: Real life Drama

In this Unit students will develop their

Description/ rationale	Listening skills	Speaking skills	Reading skills	Writing skills	Vocabulary	Language structure and conventions; literary devices
Most people, at some point in their lives, long for adventure. By definition, drama or adventure is an exciting or very unusual experience. It is a part of human nature to desire these experiences, to want for events that will define their lives, to give them meaning, to make them special. Real life drama involves incidents that may be life-threatening. They often require boldness, courage and strength to overcome such challenges. These situations sometimes make the sufferer stronger. Note: a wide selection of activities have been provided to help any teacher wishing to extend their students beyond the learning outcomes/ expectations outlined here.	They will: • Listen and respond to a given text • Listen and respond to a popular song • Listen to grasp the main idea • Listen for specific information	They will: • Participate actively in group discussions • Present their viewpoint with clarity • Narrate an experience • Discuss ways to resolve conflict • Debate for and against an idea and come to a consensus	They will: • Understand the meaning of new words in context • Understand the elements of a short story • Appreciate a poem on war	They will: • Write a message • Write a short story • Draft an advertisement • Write a description • Write with logical continuity • Write a precis	They will: • Understand and use idioms and phrases	• Use of modals • Connections

Unit 8: Theme: School days

Description/rationale	*In this Unit students will develop their*					
	Listening skills	Speaking skills	Reading skills	Writing skills	Vocabulary	Language structure and conventions; literary devices
In the past and today, schools play an important part in the community. Classrooms/ Schools often served as the focal point for many small towns, being used as meeting places for the community as well as where local children were taught. In this unit students explore the history of schools, and to examine the nature of their school environment today. Note: a wide selection of activities have been provided to help any teacher wishing to extend their students beyond the learning outcomes/ expectations outlined here.	They will: • Listen and respond to a historical speech • Listen and respond to a popular song • Listen to grasp the main idea • Listen for specific information	They will: • Participate actively in group discussions • Present their viewpoint with clarity • Make and present a PPT • Discuss ways to resolve conflict • Debate for and against an idea and come to a consensus	They will: • Understand the meaning of new words in context • Understand the elements of a short story • Appreciate and compare poems in given context • Understand the elements of a one act play.	They will: • Write an essay • Write a simple poem • Write a short story • Write with logical continuity • Use literary devices like similes and metaphors to improve their writing • Write a bio-data (CV)	• Use phrasal verbs • Antonyms	• Passive voice • Expand headlines into news items • Write headlines

Unit 9: Theme: Ghosts and Humourous Ghost stories

In this Unit students will develop their

Description/rationale	Listening skills	Speaking skills	Reading skills	Writing skills	Vocabulary	Language structure and conventions; literary devices
The human race always had a strong attraction to stories about the supernatural and paranormal. Such stories make life seem interesting or give hope that there might be a next life where nights are interesting. One way of dealing with such stories is to turn these stories to our advantage by using them to teach critical thinking skills. Note: a wide selection of activities have been provided to help any teacher wishing to extend their students beyond the learning outcomes/expectations outlined here.	They will: • Listen and respond to a given text • Listen and respond to a popular song • Listen to grasp the main idea • Listen for specific information	They will: • Participate actively in group discussions • Present their viewpoint with clarity • Narrate an experience • Participate in turncoat activities • Discuss ways to resolve conflict • Debate for and against an idea and come to a consensus	They will: • Understand the meaning of new words in context • Understand the elements of a short story • Appreciate a poem	They will: • Write a message • Write a short story • Draft an advertisement • Write a description • Write with logical continuity • Write an e-mail	They will: • Understand and use idioms and phrases	• Use of relative clauses

हिंदी

बच्चों में भाषा अर्जित करने की क्षमताएँ जन्म से ही मौजूद होती हैं और वे अपने घर और समाज से स्वाभाविक रूप से भाषा का अर्जन कर लेते हैं अथवा सीख लेते हैं। विद्यालय में आने से पहले से ही वे भाषा की विशेषताओं, संरचनाओं और जटिलताओं को अपनाकर उसका उपयोग रोज़मर्रा की चुनौतियों को समझने और सुलझाने में करते हैं। कई परिस्थितियों में, जहाँ बच्चे की मातृभाषा, घर की भाषा और परिवेश की भाषा अलग-अलग होती है, बच्चे एक से अधिक भाषाएँ बोल और समझ लेते हैं। कुछ परिस्थितियों में बच्चों का संबंध विद्यालय में एक और परिचित या अपरिचित भाषा से होता है और बच्चे उन सभी को बोल-समझ पाते हैं और उनका उपयोग भी कर पाते हैं।

यदि कक्षा में एक से अधिक भाषाएँ समझने और उपयोग करने वाले बच्चे मौजूद हैं तो इस परिस्थिति को संसाधन के रूप में इस्तेमाल करने से भाषा-शिक्षण सरल और रोचक हो सकता है। भाषाओं के विशिष्ट तत्व तथा संरचनाएँ तथा कभी-कभी शब्द भी एक-दूसरे से मेल खाते हुए होते हैं। अत: एक भाषा का ज्ञान दूसरी भाषा को समझने में सहायता करता है। दूसरी ओर, बच्चे की मातृभाषा को पहचान तथा सम्मान प्रदान किए जाने से बच्चे अन्य भाषाओं के प्रति सहजता, उदारता और स्वीकार्यता का भाव विकसित करते हैं। अत: बहुभाषिकता हिंदी सीखने-सिखाने के प्रस्थान-बिंदु के रूप में भी कार्य कर सकती है।

हिंदी विश्व की सर्वाधिक बोली और समझी जाने वाली भाषाओं में से एक है और विश्व की आबादी के $\frac{1}{6}$ लोग हिंदी को संप्रेषण के माध्यम के रूप में आवश्यकतानुसार उपयोग करते हैं। विश्व के अनेक शिक्षा संस्थान हिंदी के महत्व को स्वीकार करते हुए इसके पठन-पाठन का प्रारंभ कर चुके हैं। हिंदी भारत की राजभाषा के रूप में स्वीकार की गई है। सीबीएसई-आई पाठ्यचर्या का अभिन्न हिस्सा है – हिंदी।

सीबीएसई-आई का प्रथम अधिगम क्षेत्र भाषा है, जिसके अंतर्गत शिक्षार्थी कक्षा 5 तक दो भाषाओं का अध्ययन करेंगे। इनमें से हिंदी भी एक भाषा के रूप में चुनी जा सकती है। कक्षा 6 से 8 तक वे तीन भाषाएँ पढ़ेंगे। इन दो भाषाओं के अतिरिक्त वे सीबीएसई द्वारा अनुमोदित कोई तीसरी भाषा भी 'अतिरिक्त विषय' के रूप में चुन सकेंगे।

हिंदी पाठ्यचर्या का मुख्य उद्देश्य है – विभिन्न संदर्भों में सुनने, बोलने, पढ़ने और लिखने के कौशलों का विकास करना। शिक्षार्थी विभिन्न कार्यों, व्यक्तियों और उद्देश्यों के अनुसार समुचित भाषा-शैली का चुनाव तथा उपयोग कर सकें, इस योग्यता का विकास भी हिंदी पाठ्यचर्या का एक महत्वपूर्ण उद्देश्य है। हिंदी पाठ्यचर्या का लक्ष्य यह है कि शिक्षार्थी भाषायी कौशलों तथा क्षमताओं का प्रयोग करते हुए आत्मविश्वास के साथ स्वयं को अभिव्यक्त कर सकें, आलोचनात्मक दृष्टि विकसित कर सकें तथा विविध प्रकार की

लिखित सामग्री का विश्लेषण कर सकें, तर्क कर सकें, राय दे सकें तथा अपने विचारों के समर्थन मं उदाहरण दे सकें। हिंदी पाठ्यचर्या का विकास तथा व्यवहार पूर्णत: शिक्षार्थी केंद्रित तथा प्रयोगात्मक है। इस बात का भी प्रयास किया गया है कि शिक्षार्थी पूर्व ज्ञान को नई परिस्थितियों में लागू करके, अपने दैनिक जीवन के अनुभवों से जोड़कर स्वयं ज्ञान का सृजन कर सकें। शिक्षार्थियों को इस प्रकार के अवसर प्राप्त होंगे कि वे प्रश्न पूछ सकें, शोध तथा खोज कर सकें, अपने विचार स्वतंत्रतापूर्वक प्रस्तुत कर सकें, जानकारी तथा सूचनाओं को अपने निजी ढंग से व्यवस्थित तथा विश्लेषित कर सकें, अपने आस-पास के संसार की अपने ही विशिष्ट रूप से व्याख्या कर सकें।

हिंदी पाठ्यचर्या बच्चों की इस प्रकार मदद करेगी ताकि वे हिंदी द्वारा विचारों, व्यक्तियों, वस्तुओं और अपने आस-पास की दुनिया से अपने आपको जोड़ सकें।

शिक्षण-अधिगम-प्रक्रिया का अभिन्न तथा अनिवार्य अंग है – मूल्यांकन। हिंदी शिक्षण-अधिगम में मूल्यांकन सहज, सतत और व्यापक होना चाहिए। मूल्यांकन को भाषा-दक्षता के संदर्भ से जोड़ा जाना चाहिए न कि स्मृति-परीक्षण के रूप में। मूल्यांकन के लिए संचयी अभिलेख, अवलोकन, प्रश्न-अनुसूची आदि का उपयोग किया जा सकता है। मूल्यांकन में बच्चे की भाषा संबंधी समझ के साथ-साथ उसकी साहित्य के प्रति अभिरुचि और दिन-प्रतिदिन के कार्यों में भाषा के उपयोग की कुशलता को भी शामिल करना उपयोगी रहेगा।

विभिन्न योग्यताओं वाले बच्चों/विशेष चुनौती वाले बच्चों में भी सामान्य कक्षा की गतिविधियों द्वारा हिंदी की बुनियादी क्षमताएँ विकसित की जा सकती हैं। परंतु आवश्यकता पड़ने पर उनके लिए ब्रेल लिपि या संकेत भाषा का भी उपयोग किया जा सकता है। हिंदी भाषा ही नहीं बल्कि प्रत्येक भाषा के रोचक, सक्रिय और प्रभावी अध्ययन-अध्ययन के लिए आवश्यक है कि बच्चों को भाषायी दृष्टि से समृद्ध वातावरण मिले। कक्षा तथा परिवेश को भाषा की दृष्टि से समृद्ध बनाने के लिए पुस्तकालय (कक्षा, विद्यालय और सामुदायिक पुस्तकालय) लिखित और छपी हुई सामग्री (चार्ट, फ्लैश कार्ड, समाचार पत्र, पत्रिकाएँ, पोस्टर आदि) दृश्य श्रव्य सामग्री (वीडियो, ऑडियो कार्यक्रम रेडियो, टेलीविज़न कंप्यूटर आदि द्वारा प्रदर्शित) आदि का उपयोग अवश्य किया जाना चाहिए। सामग्री एक से अधिक भाषाओं में उपलब्ध हो तो और अधिक बेहतर रहेगा।

हिंदी भाषा के अध्ययन के लिए पाठ्यपुस्तक एकमात्र स्रोत नहीं हो सकती। बच्चों को अधिक से अधिक पुस्तकें पढ़ने तथा स्वयं की पुस्तकें बनाने के लिए उपयुक्त माहौल बनाए जाने की आवश्यकता है।

हिंदी भाषा के अध्ययन-अध्यापन और मूल्यांकन का एक महत्त्वपूर्ण माध्यम है – बातचीत। कक्षा-कक्ष के भीतर और बाहर, हिंदी में संवाद, अनौपचारिक बातचीत भाषायी संस्कारों को विकसित करने में सर्वाधिक उपयोगी साबित हो सकती है। बच्चे अपने साथियों और बड़ों से स्वतंत्रतापूर्वक बातचीत कर सकें, इसके लिए विशेष ध्यान दिए जाने की ज़रूरत है। लेखन में मौलिकता, कल्पनाशीलता और स्वतंत्र अभिव्यक्ति के उपाय सोचने होंगे ताकि परंपरागत नीरस विषयों पर निबंध या पत्र लिखवाकर अभिव्यक्ति की रस्म अदायगी से बचा जा सके। जब बच्चे दैनिक जीवन की प्रक्रियाओं, घटनाओं, उनपर अपने विचारों को बोलकर या लिखकर अभिव्यक्त करना प्रारंभ करेंगे और उनकी अभिव्यक्ति को सम्मान दिया जाएगा, तब रटने की समस्या, परीक्षा के भय और श्यामपट्ट या कुंजियों की बैसाखी की ज़रूरत समाप्त हो जाएगी।

हिंदी भाषा के पढ़ने-पढ़ाने में गतिविधियों खेलों और प्रतियोगिताओं का योगदान परंपरागत अध्यापन-विधियों से कहीं अधिक कारगर साबित होता है। इन गतिविधियों में लोकगीतों, लोकसंगीत और लोक कथाओं को भी स्थान दिया जा सकता है। परंपरागत कथाओं, लोक गीतों के साथ-साथ परंपरागत नाटकीकरण की शैलियों, जैसे– कठपुतलियों आदि को

> ### पढ़ाई शुरू करन का कार्यकारी उपागम–
>
> - कक्षा में प्रिंट सामग्री की बहुतायत हो, संकेतों, चार्ट, कार्यकारी सूचना आदि उसमें लगे हों जिसमें लिखित संकेतों की पहचान हो, साथ ही अक्षर-ध्वनि की संगति को बढ़ाया जाए।
>
> - कल्पनाशीलता के समावेश की ज़रूरत है, जिसपर एक योग्य पाठक हाव-भाव से उसे पढ़े।
>
> - छात्रों द्वारा बताए गए अनुभवों का लेखन और उनके द्वारा उस लिखित पाठ का वाचन।
>
> - अतिरिक्त सामग्री का पाठ – कथा, कविता आदि।
>
> - प्रथम पीढ़ी के विद्यार्थियों को इसका अवसर दिया जाना चाहिए कि वे अपने पाठ स्वयं तैयार करें और स्वयं द्वारा चुने गए पाठ का योगदान

भी उपयोग में लाया जा सकता है। लोक संस्कार से जुड़ी शैलियाँ और भाषा एक-दूसरे के साथ संस्कृति से जुड़ी हुई है।

हिंदी पढ़ने-पढ़ाने के प्रत्येक स्तर पर बच्चों की सहभागिता और उनकी राय अवश्य ली जानी चाहिए। शिक्षण-सामग्री और विधियों के चुनाव में रोचकता और आनंद को केंद्रीय स्थान दिया जाना चाहिए।

पहले कही गई बातों को जानने-समझने के बाद अब आप स्वयं अनुभव कर रहे होंगे कि अब शिक्षक की भूमिका ज्ञान प्रदान करने वाले विश्वकोश से कहीं अधिक महत्वपूर्ण हो गई है। अब शिक्षक को ऐसे व्यक्ति

के रूप में कार्य करना होगा जो स्वयं सीधे-सीधे तथ्य प्रस्तुत नहीं करता बल्कि वे परिस्थितियाँ निर्मित करता है जिनमें शिक्षार्थी स्वयं ज्ञान का सृजन करने में सक्षम हो जाते हैं। अब शिक्षक को निम्नलिखित कार्य करने हैं–

- शिक्षार्थियों के साथ स्वयं को सम्मिलित करके ज्ञान की रचना तथा खोज करना।

- कक्षा का प्रबंध और समय का नियोजन करना।

- विभिन्न स्रोतों और संसाधनों का इस्तेमाल करके विविध कौशलों का विकास करना।

- शिक्षार्थियों के व्यवहार में आए परिवर्तनों का अवलोकन और रिकॉर्ड रखना।

शिक्षक को इस पाठ्यचर्या को अमल में लाने के लिए निम्नलिखित मुद्दों को ध्यान में रखना चाहिए-

1. **सृजनात्मकता और कल्पनाशीलता–** शिक्षार्थियों को पाठ्य सामग्री या शिक्षक पर आश्रित रहने के बजाय स्वतंत्र चिंतन के लिए प्रेरित करना चाहिए। उन्हें प्रोत्साहन देना चाहिए कि वे अपने पूर्वज्ञान, कल्पना, अपने अनुभवों आदि का उपयोग करके अपने विचार स्वतंत्रतापूर्वक प्रकट करें और अपने दृष्टिकोण से समस्याओं के अनूठे समाधान खोजें।

2. **समालोचनात्मक चिंतन–** किसी विचार, समस्या, परिस्थिति या घटना को देखने-समझने के अनेक तरीके या मार्ग हो सकते हैं। ज़रूरी नहीं कि किसी प्रश्न/समस्या का एक ही उत्तर हो या कोई उत्तर किसी एक ही समस्या से संबंधित हो। शिक्षार्थियों को किसी एक मानक उत्तर की प्रतीक्षा करने के बजाए अपने स्वयं के उत्तर खोजने चाहिए। विविध सामग्रियों/साहित्य आदि को पढ़ने-सुनने तथा विचार करने के बाद शिक्षार्थियों को उनके मौलिक विचार अभिव्यक्त करने की स्वतंत्रता होनी चाहिए।

3. **स्व-अवलोकन–** अपनी प्रगति के बारे में स्वयं विचार करना (स्व-मूल्यांकन) अधिगम का एक महत्वपूर्ण अंग ह। शिक्षार्थियों को अपनी प्रगति का स्वयं आकलन करने और प्रबंध करने का अवसर दिया जाना चाहिए।

4. **जीवन-कौशल–** हिंदी पाठ्यचर्या का एक महत्वपूर्ण उद्देश्य बच्चों में जीवन-कौशलों को विकसित करना है। वे समस्या समाधान, तनाव से निपटना, चिंतन आदि जीवन कौशलों को अपने जीवन में इस्तेमाल कर सकें, इसके प्रयास किए जाने चाहिए तथा इस प्रकार के क्रियाकलाप आयोजित किए जाने चाहिए जिनसे बच्चों को जीवन-कौशलों का उपयोग करने के अवसर मिलें।

5. **आकलन–** बच्चों की स्मृति की जाँच के बजाए उनके चिंतन, प्रश्न पूछने अर्थात् जिज्ञासा, किसी परिस्थिति में उनके स्वाभाविक व्यवहार और प्रतिक्रिया आदि का आकलन किया जाना चाहिए। वे हिंदी का कितनी मौलिकता और कल्पनाशीलता के साथ उपयोग करते हैं, यह अधिक महत्वपूर्ण है न कि उनकी रटने की क्षमता।

6. **सामाजिक मुद्दे–** हिंदी पाठ्यचर्या बच्चों में ऐसे गुणों के विकास के लिए भी आधार का कार्य करती है जिनके द्वारा बच्चे एक जागरूक नागरिक तथा स्वावलंबी व्यक्ति बन सकें। इसके लिए अध्यापक को बच्चों में पहल करने, अपने विचारों के समर्थन में तर्क करने, दूसरों के विचारों का सम्मान करने, वैज्ञानिक चिंतन, परिवेशीय सजगता, आपदा के समय उचित व्यवहार, पूर्वाग्रहों से मुक्ति, दूसरों को अवसर देना जैसे सामाजिक रूप से महत्वपूर्ण कौशलों को विकसित करने का प्रयास करना चाहिए।

पठन सामग्री/विषयवस्तु

हिंदी भाषा के उद्देश्यों को ध्यान में रखते हुए इस प्रकार की सामग्री का चयन किया जाना चाहिए जो रोचक तथा स्तरानुकूल हो। केवल पाठ्यपुस्तक ही नहीं बल्कि विविध स्रोतों से प्राप्त सामग्री का भी कक्षा में उपयोग किया जाना चाहिए। चयन की गई सामग्री ऐसी हो जो प्रत्येक कक्षा में बच्चों की अभिव्यक्ति को और अधिक सँवारती चले। सामग्री में कथात्मक और जानकारीपरक रचनाओं की विविधता हो ताकि बच्चों को विभिन्न प्रकार के साहित्य और विधाओं का परिचय मिल सके और वे उन्हें समझ सकें। साथ ही उनकी सराहना कर सकें और उन पर भावनात्मक और बौद्धिक प्रतिक्रिया कर सकें। सामग्री में परंपरागत विधाओं, जैसे- कहानी, कविता, निबंध, पत्र आदि के साथ लेख, साक्षात्कार, एकांकी, विज्ञापन, नारे, संदेश, कार्टून, रेखाचित्र, जीवनी, आत्मकथा, व्यंग्य, संस्मरण, घोषणाएँ, पद्य-कथाएँ, कॉमिक्स, रिपोर्ताज, यात्रा-वर्णन आदि का भी समावेश किया जाए। पठन सामग्री के विषय सामाजिक और सांस्कृतिक परिवेश की विविधता लिए हों ताकि बच्चे विभिन्न विषयों से जुड़े भाषायी प्रयोगों और शैलियों से परिचित हो सकें। यह विविधता कथा-साहित्य में भी विद्यमान रहनी चाहिए और विज्ञान, हास्य, रहस्य, साहस आदि प्रत्येक प्रकार की कथाओं को उचित महत्व दिया जाना चाहिए। बोलचाल की भाषा और पठन सामग्री की भाषा में अधिक अंतर नहीं होना चाहिए।

अभ्यास और व्याकरण– पठन सामग्री के अभ्यास उसे समझने और उसपर प्रतिक्रिया देने का अवसर उपलब्ध कराते हैं। वे रचना को विस्तार देने और पाठक के जीवन से उसका संबंध जोड़ने का कार्य भी करते हैं। सांस्कृतिक विविधता को सराहना, संवेदनशीलता विकसित करना, विश्लेषण, आलोचना, चिंतन जैसे मानसिक कौशलों का विकास तथा हिंदी शिक्षण के उद्देश्यों की प्राप्ति में सहायता करना, अभ्यास कार्यों द्वारा संभव है। अत: पठन सामग्री के साथ-साथ अभ्यास कार्यों और क्रियाकलापों को भी सतर्कता और नवीनता

से प्रस्तुत किया जाना चाहिए। अभ्यास कार्य ऐसे हों जो बच्चों को भाषा की संरचना और खूबसूरती की पहचान और सराहना करने के लिए प्रेरित करें। प्रश्नों के माध्यम से किसी रचना या विषयवस्तु को अनेक पहलुओं से देखने और विविध संदर्भों से जोड़ने की दृष्टि विकसित की जानी चाहिए।

कक्षा 8 तक व्याकरण के व्यावहारिक पक्ष पर अधिक बल दिया जाना चाहिए जिसके अंतर्गत बच्चे विविध भाषायी प्रयोगों के उदाहरणों और नमूनों का विश्लेषण करके स्वयं नियमों की पहचान कर सकें। व्याकरण के पक्षों को चरणबद्ध रूप से प्रस्तुत किया जा सकता है जिससे बच्चे पहले तो नियमों की पहचान करें, उसके बाद उनका वास्तविक परिस्थितियों में प्रयोग करें। व्याकरण के विभिन्न पक्षों की पहचान के लिए खेलों, पहेलियों आदि का भी प्रयोग किया जा सकता है।

हिंदी पाठ्यचर्या के सामान्य लक्ष्य

शिक्षार्थी–

- व्यक्तिगत, सामाजिक और शैक्षिक उद्देश्यों के लिए मौखिक तथा लिखित रूप से भाषा का उपयोग करते हुए स्वयं को स्पष्ट, व्यवस्थित और असरदार ढंग से अभिव्यक्त कर सकेंगे।

- दूसरों की मौखिक और लिखित अभिव्यक्ति को सुनकर और पढ़कर समझ सकेंगे।

- विविध साहित्यिक विधाओं में प्रयोग की गई लिखित भाषा की विशेषताओं और शैलियों की पहचान और विश्लेषण कर सकेंगे।

- लिखित सामग्री का अर्थ ग्रहण करने और उसका विश्लेषण करने के लिए प्रवाहपूर्वक पढ़ सकेंगे और उस सामग्री में से ज़रूरी सूचनाएँ/बातें चुन सकेंगे।

- किसी विशेष उद्देश्य को ध्यान में रखकर लिखित सामग्री को पढ़ सकेंगे और वांछित सूचना प्राप्त करने के लिए उसका विश्लेषण कर सकेंगे।

- लिखित सामग्री को गहनता से समझने के लिए उसका पुनः व्यवस्थित कर सकेंगे।

- लिखित सामग्री को समझने के लिए शब्द भंडार और भाषायी-कौशलों का प्रयोग कर सकेंगे।

- संप्रेषण को और अधिक प्रभावशाली बनाने के लिए अपने शब्द भंडार को और अधिक समृद्ध करने में रुचि लेंगे।

- दैनिक जीवन में हिंदी में समझने और बोलने की क्षमता का विकास कर सकेंगे।

- श्रोताओं, परिस्थितियों और उद्देश्यों को ध्यान में रखकर मौखिक और लिखित रूप से अपने विचारों, सूचनाओं, प्रक्रियाओं और निर्देशों को अभिव्यक्त कर सकेंगे।

- लिखित या मौखिक सामग्री का विश्लेषण करके उसके उद्देश्यों, संरचनाओं और विशिष्ट तत्वों की पहचान कर सकेंगे।

- श्रव्य-दृश्य (रेडियो, टेलिविजन, इंटरनेट आदि) साधनों के उपयोग द्वारा विविध प्रकार की हिंदी रचनाओं का पठन, विश्लेषण और निर्माण कर सकेंगे।

- भाषायी नियमों को पहचान सकेंगे।

- अपनी मौखिक और लिखित अभिव्यक्ति के विकास के लिए मानक भाषा, व्याकरण, वर्तनी आदि की जानकारी को समझकर उपयोग में लाएँगे।

- किन्हीं विशेष उद्देश्यों और श्रोताओं के लिए लिखित/मौखिक रचना करते समय शब्दों, वाक्यों, विचारों आदि के चयन और क्रम का स्वयं मूल्यांकन करेंगे और संशोधन करेंगे।

- विविध उद्देश्यों के लिए उपयुक्त शैली चुनेंगे और स्पष्टता और सहज प्रवाह के साथ लिखित और मौखिक रचना करेंगे।

- लोगों, संस्कृतियों और परंपराओं की विविधता के प्रति संवेदनशीलता विकसित करेंगे।

- विभिन्न संस्कृतियों के साहित्य और भाषा की विविधता की पहचान, समझ और सम्मान विकसित करेंगे।

- जानकारी प्राप्त करने, मनोरंजन, खेल, संप्रेषण, चिंतन आदि उद्देश्यों क लिए हिंदी का दैनिक जीवन में उपयोग कर सकेंगे।

- हिंदी साहित्य के विभिन्न रचनाकारों के साहित्य का आनंद लेते हुए उनकी कृतियों के बारे में अपनी राय बना सकेंगे।

- आवश्यकता तथा उद्देश्यों के अनुसार पत्र-पत्रिकाओं, कोशों, पुस्तकों आदि में से उपयुक्त सामग्री एकत्रित करके उनका उपयोग कर सकेंगे।

- कही या लिखी गई बात को आँख मूँदकर स्वीकार करने के बजाय उसे आलोचनात्मक दृष्टि से परख सकेंगे और उसपर प्रासंगिक सवाल उठा सकेंगे।

- दो बातों के बीच के संबंध को समझ सकेंगे।

- अपने आस-पास बिखरी कला की उसके विविध रूपों में सराहना कर सकेंगे तथा स्वयं के कार्यों और अभिव्यक्ति में कलात्मकता और सृजनशीलता प्रदर्शित कर सकेंगे।

- चीज़ों, स्थितियों, लोगों, परिवेश और मनोभावों का बारीक और विश्लेषणात्मक वर्णन कर सकेंगे।

- हिंदी भाषा और उसकी विविधता की सराहना कर सकेंगे और उनस आत्मीयता का अनुभव कर सकेंगे।

- हिंदी और अपनी मातृभाषा/स्थानीय भाषा की संरचना की समानताओं और अंतर की पहचान कर सकेंगे।

- अवसर के अनुसार लिखित और मौखिक भाषा में लोक संस्कृति के तत्वों लोकगीतों, पहेलियों, कहावतों, लोकोक्तियों, दोहों आदि का उपयोग कर सकेंगे।

- सामाजिक महत्व के मुद्दों, परिवेश आदि की सामान्य जानकारी रखेंगे और उन पर अपने विचार आत्मविश्वासपूर्वक व्यक्त कर सकेंगे।

- अपने द्वारा कही या लिखी गई बात की तर्क से पुष्टि कर सकेंगे।

हिंदी के विशिष्ट उद्देश्य

हिंदी भाषा के चार प्रमुख कौशल माने जाते हैं– सुनना, बोलना, पढ़ना और लिखना। यह वर्गीकरण केवल शैक्षिक दृष्टि से समझने में सुविधा के कारण किया गया है, जबकि ये चारों कौशल एक-दूसरे के साथ अंत: संबंधित हैं इन चारों कौशलों से संबंधित प्रमुख उद्देश्य निम्नलिखित हैं-

(क) **सुनना**- कई जीव विज्ञानी और शिक्षा शास्त्री यह बात स्पष्ट कर चुके हैं कि शिशु माता के गर्भ से ही सुनना और उस पर प्रतिक्रिया करना प्रारंभ कर देता है। विद्यालय में प्रवेश से पूर्व ही बच्चे सुनने संबंधी कौशलों पर कुशलता प्राप्त कर चुके होते हैं परंतु विद्यालय के क्रियाकलापों द्वारा वे इस क्षेत्र में और अधिक प्रवीणता प्राप्त कर लेते हैं। इसका वर्णन निम्नलिखित है-

1. **सामान्य समझ के लिए सुनना**- शिक्षार्थी विविध मौखिक/उच्चरित सामग्री को ध्यानपूर्वक सुनकर-

   - सामग्री की ध्वन्यात्मक विशेषताएँ पहचान और समझ सकेंगे।
   - दिए गए संदर्भों के अनुसार शब्दां और वाक्यों का अर्थ ग्रहण कर सकेंगे।
   - सामग्री का आनंद उठा सकेंगे।

- संवादों/संदेशों/सामग्री की प्रभावशीलता का मूल्यांकन कर सकेंगे।
- सूचनाओं का संग्रह कर सकेंगे।
- निर्देशों के अनुसार कार्य कर सकेंगे।
- सामग्री का मूल भाव ग्रहण कर सकेंगे।
- सामग्री में से विशिष्ट जानकारी या सूचनाएँ छाँट सकेंगे।

2. **संप्रेषण (बातचीत) के लिए सुनना**-मौखिक संप्रेषण या बातचीत का प्रमुख हिस्सा है - सुनना। शिक्षार्थी औपचारिक और अनौपचारिक चर्चाओं में भाग लेकर –

- कही गई बातों का अर्थ और संदर्भ समझ सकेंगे।
- संदेशों क अर्थ का पूर्वानुमान लगा सकेंगे।
- दिए गए संदर्भ के अनुसार अकथित बातों/छुपे अर्थ भी समझ सकेंगे।
- संदर्भ के अनुसार शब्दों के अर्थ समझ सकेंगे।
- सामग्री की ध्वन्यात्मक विशेषताओं की पहचान और समझ विकसित कर सकेंगे।
- बोली गई सामग्री को सुनकर सूचनाएँ/जानकारो एकत्रित कर सकेंगे।
- निर्देशों, अनुरोधों, प्रक्रिया के चरणों को सुनकर उनके अनुसार कार्य/व्यवहार कर सकेंगे।
- परिचित उच्चारण-शैली में कही गई सामग्री/ साहित्य को सुनकर उसका आनंद ले सकेंगे।
- वाचक की बातों को सुनकर उसके दृष्टिकोण को समझ सकेंगे।
- सुनी गई सामग्री का मूल भाव समझ सकेंगे।
- सुनी गई सामग्री में से विशिष्ट तत्व खोज सकेंगे।
- किसी सामग्री को सुनकर उसकी पृष्ठभूमि, देश-काल आदि के बारे में समझ विकसित कर सकेंगे।

3. **बातचीत/संप्रेषण के लिए सुनना**

   मौखिक संप्रेषण का एक महत्वपूर्ण अंग है सुनना। अत: शिक्षार्थी इस स्तर पर –

- कही गई बात की अवधारणा तथा तथ्यात्मक अर्थ समझ सकेंगे।
- कही गई बात सुनकर साधारण निष्कर्ष निकाल सकेंगे।
- विस्तार से बताई गई सूचनाओं और विचारों की पहचान तथा समझ विकसित कर सकेंगे।
- हावभाव, अनुतान, विराम आदि के साथ बोली गई सामग्री सुनकर समझ सकेंगे।
- अशाब्दिक संप्रेषण द्वारा शाब्दिक संप्रेषण में किए गए योगदान को पहचान तथा समझ सकेंगे।
- सुनते समय आगे क्या कहा जाने वाला है, इस बात का अनुमान लगा सकेंगे।
- सुनते हुए कब और कैसे अपनी बात कहनी है, कब और कैसेउत्तर या प्रतिक्रिया देनी है, इस बात का निर्धारण कर सकेंगे।
- वाचक की बातों को सुनकर उचित/उपयुक्त समय पर सटीक हाव-भाव, सहमति या विरोध सूचक शब्दों या टिप्पणियों का प्रयोग कर सकेंगे।
- कहे गए विचारों और सूचनाओं की पहचान और समझ विकसित करेंगे।

- कही गई बातों में स्वर के उतार-चढ़ाव या कहने के ढंग से अभिधात्मक अर्थ, लाक्षणिक अर्थ या व्यंग्यार्थ को समझ सकेंगे।

4. **भाषायी विकास और कौशलों के प्रयोग के लिए सुनना –**

भाषायी विकास और इसके व्यावहारिक प्रयोग के लिए सुनना कौशल अत्यंत महत्वपूर्ण है। बच्चे दूसरों के द्वारा कही गई बातें सुनकर उनके भाव ही ग्रहण नहीं करते बल्कि यह भी समझ बनाते हैं कि किन्हीं भावों या विचारों को किस प्रकार की भाषा या शब्दों द्वारा सर्वाधिक प्रभावी रूप से व्यक्त किया जा सकता है। अत: इस स्तर पर शिक्षार्थी –

- मूर्त और अमूर्त, विचारों को सुनकर उनका अर्थ ग्रहण कर सकेंगे।
- विभिन्न परिस्थितियों और संदर्भों के लिए उपयुक्त श्रवण-युक्तियों को पहचान तथा प्रयोग कर सकेंगे।
- मौखिक संप्रेषण के दौरान शाब्दिक और अशाब्दिक संकेतों/भावों को समझ सकेंगे।
- सुनने के दौरान, पहले और बाद में, कही गई बात का अर्थ और भाव समझने की उपयुक्त रणनीतियों का उपयोग कर सकेंगे।
- वर्तमान श्रवण कौशलों पर विचार करके बेहतर संप्रेषण के लिए स्वयं लक्ष्यों का निर्धारण कर सकेंगे
- विभिन्न मुहावरों, लोकोक्तियों, आदि के प्रयोगों को सुनकर समझ सकेंगे तथा उचित प्रकार से उनका प्रयोग कर सकेंगे।

प्रभावी संप्रेषण की रणनीतियाँ

- स्वरों में उतार-चढ़ाव, फुसफुसाना, ऊँचे स्वर में बोलना

- वाक्य अधूरा छोड़ना

- आँखों में आँखे डालकर बोलना

- सुनकर प्रतिक्रिया देने से पहले कुछ सेंकड रुकना/सोचना

- उचित स्थान पर हाँ, नहीं, फिर, ओह आदि शब्द कहना।

- चेहरे से हैरानी, प्रसन्नता, दुख, निराशा, क्रोध आदि भाव प्रदर्शित करना

- जिज्ञासा, उत्सुकता या रुचि प्रदर्शित करने के लिए उपयुक्त प्रश्न पूछना

(ख) बोलना

शिक्षार्थी-

- व्यक्तिगत, सामाजिक और शैक्षिक स्थितियों में हिंदी में सफलतापूर्वक संप्रेषण कर सकेंगे।
- बातचीत, प्रस्तुति, वाद-विवाद, साक्षात्कार, भाषण आदि क्रियाकलापों में अपने विचारों को व्यवस्थित करके अपने दृष्टिकोण को स्पष्टता और सगढ़ता से प्रस्तुत कर सकेंगे।
- मौखिक संप्रेषण हेतु श्रोताओं और उद्देश्यों के अनुसार भाषा का चुनाव और उपयोग कर सकेंगे।
- संप्रेषण की प्रभावशीलता में वृद्धि के लिए शब्द भंडार विकसित करने में रुचि लेंगे।

- उच्चारण में स्थानीय भेदों/प्रभावों के प्रति सतर्क हो सकेंगे और उन्हें कम कर सकेंगे।

विशेष रूप से इस स्तर पर शिक्षार्थी निम्नलिखित संदर्भों में बोलने के कौशलों को प्रदर्शित करेंगे-

1. **बातचीत और चर्चा-** शिक्षार्थी प्रभावी और सर्जनात्मक रूप से इस प्रकार बोल सकेंगे ताकि-

   - औपचारिक और अनौपचारिक बातचीत में भाग लेकर अपने अनुभव, घटनाएँ, उम्मीदें, विचार, आशाएँ आदि का वर्णन करेंगे, कारण बताएँगे, अपनी राय और योजनाओं की व्याख्या करेंगे।
   - शब्दों को सोचने के लिए अटके/रुके बिना स्वत: और धाराप्रवाह बोलते हुए बातचीत जारी रखेंगे।
   - गलतफ़हमी पैदा करने वाली गलतियों से बचते हुए स्पष्टता से बातचीत करेंगे और बोलने में कोई गलती होने पर स्वयं उसे ठीक कर लेंगे।
   - अपनी रुचि के मूर्त और अमूर्त विषयों पर चर्चा में योगदान देंगे।
   - सामूहिक चर्चा में भाग लेने और अपने विचार रखने के कौशलों को विकसित करेंगे।

2. **प्रस्तुतियाँ-**
   - किसी कहानी-कविता, चलचित्र, नाटक को भावानुसार सुनाएँगे तथा उस संबंध में अपनी प्रतिक्रियाएँ व्यक्त करेंगे।
   - अनेक प्रकार के विषयों के बारे में विस्तार से वर्णन प्रस्तुत करेंगे, वर्णन के बिंदुओं का विकास करेंगे, समेटेंगे और उचित निष्कर्ष प्रस्तुत करेंगे।
   - सर्वाधिक प्रभाव उत्पन्न करने की रणनीतियों का प्रयोग करते हुए और श्रोताओं के अनुसार अपनी अभिव्यक्ति को ढालकर अपने विचार प्रस्तुत करेंगे।
   - पढ़ी कई सामग्री के आधार पर साधारण भविष्यवाणी कर सकेंगे।
   - पढ़ने के लिए उपयुक्त रणनीतियों का उपयोग कर सकेंगे।

3. **वाद-विवाद-**
   - शिक्षार्थी किसी विषय के पक्ष या विपक्ष में स्पष्टता के साथ व्याख्या या विश्लेषण कर सकेंगे।
   - स्पष्ट विचारों तथा दृष्टिकोणों को प्रस्तुत करते हुए तर्क करेंगे तथा श्रोताओं को अपने तर्कों से संतुष्ट कर सकेंगे।

पढ़ने की कुछ रणनीतियाँ

- *मुख्य भाव जानने के लिए लिखित सामग्री पर नज़र डाल लेना*

- *विस्तृत अध्ययन के लिए शब्दश: पढ़ना।*

- *किसी विशिष्ट सूचना को प्राप्त करने के लिए सामग्री का विश्लेषण करना*

- *कुछ अंश/प्रारंभ/अंत पढ़कर उस सामग्री के बारे में अपनी राय बनाना*

- *किसी विधा/लेखक के बारे में अपनी राय बनाकर उसकी पुस्तकों को चुनना*

पढ़ना

इस स्तर पर शिक्षार्थी विविध प्रकार का साहित्य पढ़ने में रुचि का प्रदर्शन करेंगे। पढ़ने संबंधी मुख्य उद्देश्य निम्नलिखित हैं–

(1)   **सामान्य समझ/बोध के लिए पढ़ना-_शिक्षार्थी –**

- प्रवाहपूर्वक तथा सर्जनात्मक रूप से पढ़कर आनंद प्राप्त करेंगे।
- पठित सामग्री की विशेषताओं को पहचान और समझ सकेंगे।
- दिए गए संदर्भ क अनुसार शब्दों का अर्थ समझ सकेंगे।
- सूचनाएँ/जानकारी प्राप्त कर सकेंगे।
- पठित सामग्री का सार/मुख्य भाव ग्रहण कर सकेंगे।
- विशेष विवरणों को प्राप्त करने के लिए सामग्री का विश्लेषण कर सकेंगे।
- लेखक के दृष्टिकोण को समझ सकेंगे।
- लिखित सामग्री की प्रभावशीलता का मूल्यांकन कर सकेंगे।
- गहन और विस्तृत पठन में रुचि लेंगे।
- लिखित सामग्री के विशिष्ट तत्वों जैसे, शब्द-प्रयोग, मुहावरे, संदर्भ आदि की पहचान कर सकेंगे तथा उन्हें समझ सकेंगे।
- पढ़ी गई सामग्री के आधार पर आगे आने वाली सामग्री का अनुमान लगा सकेंगे।

साहित्य की सराहना

शिक्षार्थी –

- पठित सामग्री के विषय, शैली, भाव आदि की सराहना कर सकेंगे।
- लिखित सामग्री के विषय, शैली आदि की पहचान कर उसकी मूल्यांकन कर सकेंगे।
- विभिन्न लेखकों की रचनाओं में विद्यमान सांस्कृतिक विविधता की सराहना कर सकेंगे।
- पठित सामग्री के लेखकों के जीवन तथा कृतियों के बारे में विस्तृत जानकारी प्राप्त करेंगे।
- विभिन्न लेखकों की विविध पुस्तकों की विषय-वस्तु से जुड़ी रचनाओं को स्वयं पढ़ने में रुचि लेंगे।

लिखना

शिक्षार्थी –

- विभिन्न उद्देश्यों के लिए लिखेंगे, जैसे– तर्क करना, मनोरंजन करना, उदाहरण देना, राष प्रकट करना, राय देना, सूचना देना, कल्पना करना आदि।
- हिंदी में अपने विचार, अनुभव, संस्करण, कल्पनाएँ और संदेश लिखेंगे।
- विभिन्न शैलियों/विधाओं में अपने विचार, भाव और अनुभव लिखेंगे। उदाहरण के लिए, पत्र, लेख, निबंध, रपट, डायरी, कविता, कहानी, नाटक।
- कथ्य के अनुसार भाषा शैली, शब्द, संवाद आदि का चयन तथा प्रयोग कर सकेंगे।

- कथ्य के अनुसार व्याकरण सम्मत भाषा का प्रयोग या व्याकरणिक नियमों में सूझबूझपूर्ण छूट ले सकेंगे।
- भाषा का सृजनात्मक और कल्पनाशील प्रयोग कर सकेंगे।
- पाठकों के अनुसार शैली और शब्दों का चुनाव कर सकेंगे।
- विचारों और दृष्टिकोण को तार्किक और प्रभावशाली रूप से शुरू, विकसित तथा समापन करेंगे।
- किसी मुद्दे के पक्ष या विपक्ष में तर्क देकर उसे स्पष्ट कर सकेंगे।
- कथा वस्तु और घटनाओं के क्रम को तार्किक और प्रभावशाली रूप से प्रस्तुत कर सकेंगे।
- किसी रचना को रूप बदलकर उसका पुन: लेखन कर सकेंगे, जैसे- विधा या शैली बदलना, सार लेखन आदि।
- अपने व्याकरण, वर्तनी, विराम-चिह्नों आदि के ज्ञान का प्रयोग अपने लेखन को उन्नत करने के लिए करेंगे ताकि अर्थ अपने मूल रूप में व्यक्त हो सके।

हिंदी पाठ्यक्रम

समृद्ध भाषिक परिवेश और समय के साथ-साथ बच्चों का भाषा और उसके संसार के प्रति दृष्टिकोण और अधिक प्रगाढ़ होता जाता है। वह भाषा का और अधिक व्यापक संदर्भों में प्रयोग करने लगता है। इस दौरान उनके मन, मस्तिष्क और शरीर में भी तीव्र गति से परिवर्तन होते हैं। इस दृष्टि से किशोरावस्था का समय अत्यंत संवेदनशील होता है।

इस अवधि में बच्चों की ऊर्जा तथा उत्साह को यदि सकारात्मक दिशा दी जाए तो उनको एक सकारात्मक तथा वैज्ञानिक सोच वाले संवेदनशील व्यक्ति के रूप में बढ़ने में सहायता की जा सकती है।

इस काल में बच्चों का दुनिया के प्रति आशावादी और सकारात्मक दृष्टिकोण होता है। उन्हें साहस, रोमांच, हास्य और खोजपूर्ण रचनाएँ अच्छी लगती है। वे सामाजिक आदर्शों चरित्रों का अनुकरण करना चाहते हैं। सामाजिक मुद्दों और समस्याओं से उनका किशोर मन उद्वेलित हो उठता है और वे उन स्थितियों में सकारात्मक परिवर्तन लाना चाहते हैं। इस काल में बड़ों द्वारा किया जाने वाला दोहरा व्यवहार उनको असमंजस में डाल देता है। इस आयु के लिए पाठ्य सामग्री का निर्धारण करते हुए इन पहलुओं को भी ध्यान में रखा जाना चाहिए। रचनाएँ इस प्रकार चुनी जाएँ जो परंपरागत मूल्यों और किशोर मन की आवश्यकताओं को पूरा करने के साथ-साथ भविष्य की चुनौतियों के लिए भी बच्चों को तैयार कर सकें।

उद्देश्य
पाठ्यसामग्री

कक्षा 6 से 8 की पाठ्यसामग्री में 8 से 10 पाठ रखे जा सकते हैं। प्रत्येक कक्षा हेतु मूल पाठों के साथ-साथ कुछ पाठ अतिरिक्त अध्ययन के लिए भी रखे जाएँगे ताकि बिना पाठ्यक्रम का बोझा बढ़ाए बच्चों को हिंदी साहित्य के विविध रंगों से परिचित करवाया जा सके। पाठों का चयन करते समय बच्चों की रुचि,

आयु और आवश्यकता को ही आधार बिंदु बनाया जाएगा। रचनाएँ ऐसी होंगी जो दुनिया को किशोरों के दृष्टिकोण से व्यक्त करती हों ताकि वे रचनाओं के माध्यम से अपने संसार की खोजबीन और पड़ताल कर सकें। इन रचनाओं में उनकी उम्मीदें, सपने, आशंकाएँ और चुनौतियों का प्रतिनिधित्व होना चाहिए। जहाँ तक संभव हो, प्रत्येक रचना के साथ अतिरिक्त खोजबीन के लिए संकेत और मार्गदर्शन भी उपलब्ध करवाए जाएँगे। रचनाओं में विधा की दृष्टि से भी पर्याप्त विविधता रहेगी। प्रयास किया जाएगा कि कक्षा 6 से 8 तक बच्चों का परिचय हिंदी साहित्य की सभी प्रमुख विधाओं से हो जाए।

शिक्षण-युक्तियाँ

इस स्तर पर इस प्रकार की शिक्षण युक्तियों का प्रयोग किया जाएगा जिनसे विद्यार्थियों की पढ़ने में रुचि जागे और वे एक नियमित पाठक बन सके। इसके लिए पाठ्यसामग्री के साथ दृश्य-श्रव्य सामग्री का यथासंभव उपयोग किया जाएगा। कक्षा-कक्ष के भीतर और बाहर रोचक गतिविधियों द्वारा पाठ्यसामग्री को समझने पर बल दिया जाएगा। कक्षा में बातचीत समूह कार्य और खोजबीन को प्रोत्साहित किया जाएगा। विद्यार्थी निष्क्रिय श्रोता न रहकर ज्ञान के सर्जक के रूप में कार्य करेंगे तथा शिक्षक एक संसाधनकर्ता तथा प्रेरक की भूमिका में कार्य करेंगे। पाठ्यसामग्री के अतिरिक्त अन्य अनेक प्रकार की रचनाएँ तथा पुस्तकें पढ़ने के लिए बच्चों को प्रेरित किया जाएगा। इस दृष्टि में विद्यालय के समृद्ध पुस्तकालय का अधिकतम उपयोग किया जाएगा। पाठ्यसामग्री में निर्धारित गतिविधियों के साथ-साथ बच्चे स्वयं द्वारा निर्मित गतिविधियों द्वारा भी सीखने-सिखाने का कार्य करेंगे। कुछ गतिविधियाँ निम्नलिखित हैं–

- परिचर्चा
- अभिनय
- नई कहानी, कविता आदि की रचना
- विज्ञापन, पोस्टर, सूचना आदि की रचना और उनका शिक्षण में प्रयोग
- चित्रपठन, रचना के आधार पर चित्र बनाना
- परिवेश, प्रक्रिया या भाषा का अवलोकन, उसपर चर्चा
- भित्ति पत्रिका, बाल-समाचार पत्र आदि का निर्माण
- विद्यालय उत्सवों, सभाओं आदि में हिंदी कार्यक्रमों की प्रस्तुति
- हिंदी गीतों, फिल्मों आदि द्वारा भाषा-अर्जन और सर्जन
- साक्षात्कार, प्रश्न पूछना, प्रश्न निर्माता

रचनात्मक (फॉरमैटिव) आकलन के लिए कुछ सुझाव

फॉरमैटिव आकलन का मुख्य लक्ष्य यह है कि बच्चों की भाषायी कुशलताओं का आकलन वर्ष में केवल दो-तीन अवसरों पर करने के बजाय नियमित और सतत रूप से होता रहना चाहिए। मूल्यांकन कृत्रिम और नियंत्रित परिवेश में न होकर भयमुक्त, सहज और अनौपचारिक रूप से होना चाहिए। मूल्यांकन हेतु अलग से कोई विशेष कार्यक्रम आयोजित करने के बजाय उसे कक्षा और विद्यालय की रोज़मर्रा की गतिविधियों का अभिन्न अंग बनाया जाना चाहिए।

आपने अब तक कक्षा 6-8 हेतु हिंदी भाषा के उद्देश्यों को पढ़ लिया होगा। इन उद्देश्यों को प्राप्त करने हेतु आप समय-समय पर अनेक गतिविधियाँ भी करवाते होंगे। आप यह अवश्य जानना चाहेंगे कि इन गतिविधियों द्वारा बच्चों में वांछित योग्यताओं का विकास हो रहा है या नहीं। इन्हीं कुशलताओं के आकलन द्वारा ही आप अपने शिक्षण की सफलता का आकलन भी कर सकेंगे।

फॉरमैटिव आकलन हेतु आपको रोचक, सरल और बच्चों के जीवन से जुड़े हुए क्रियाकलाप, पाठ्य सामग्री और खेल चुनने चाहिए। क्रियाकलापों और आकलन हेतु पहले से योजना बना लेनी चाहिए। क्रियाकलापों में दृश्य-श्रव्य साधनों का यथासंभव इस्तेमाल किया जाए। चूँकि भाषा के सभी कौशल एक-दूसरे में घुले-मिले रहते हैं अतः आप भी एक गतिविधि द्वारा एक से अधिक कौशलों/उद्देश्यों का आकलन कर सकते हैं।

इन गतिविधियों को कक्षा या विद्यालय प्रांगण में ही करवाया जाना है। यदि कोई ऐसा क्रियाकलाप है जिसमें विद्यालय से बाहर जाकर कार्य करने की आवश्यकता पड़ती है तो ऐसी स्थिति में वह कार्य शिक्षक के पर्यवेक्षण और मार्गदर्शन में होना चाहिए।

यह आकलन व्यक्तिगत, सामूहिक या साथियों द्वारा किया जा सकता है। फॉरमेटिव आकलन में स्व-आकलन भी बहुत महत्वपूर्ण है जिसमें बच्चा स्वयं अपनी प्रगति का मूल्यांकन करता है।

आप जो भी क्रियाकलाप करवाएँ, उसके बारे में बच्चों को तुरंत प्रतिपुष्टि (Feedback) अवश्य दें। उस प्रतिपुष्टि का उपयोग करते हुए बच्चों को उनका प्रदर्शन सुधारने के अवसर भी दें। प्रतिपुष्टि देने के लिए आप अन्य बच्चों द्वारा किए गए कार्य के नमूने भी दिखा सकते हैं।

फॉरमेटिव मूल्यांकन की कुछ गतिविधियाँ आगे दी गई हैं –
(1) सुनना
(2) निर्देश सुनकर कुछ बनाना/कार्य करना
(3) बोलना
(4) पढ़ना

(5) लिखना

(6) वाद-विवाद/आशुभाषण

(7) कवि सम्मेलन/अंत्याक्षरी

(8) अभिनय

(9) परिचर्चा

(10) परियोजना कार्य

(11) सामग्री निर्माण

(12) साक्षात्कार

(13) शैक्षिक खेल

(14) प्रतियोगिता

(15) पहेली/प्रश्नोत्तरी

(1) **सुनकर प्रतिक्रिया देना –** कौशल – सुनना, लिखना

सुनाइए! बच्चों के स्तर के अनुकूल किसी रोचक और प्रासंगिक विषय पर एक अनुच्छेद, कहानी या संवाद सुनाएँ। सुनाई जा रही रचना लगभग 100 शब्दों की हो सकती है। सुनाने से पहले बच्चों को बता दें कि इसको सुनने के बाद उन्हें कुछ क्रियाकलाप करने होंगे। मूल्यांकन हेतु सुनाए जा रहे अंश को रिकॉर्ड भी किया जा सकता है। रिकॉर्डिंग का लाभ यह है कि इसे पुनः सुनाया जा सकता है।

एक बार रचना सुनाने के बाद बच्चों को अभ्यास कार्य/ वर्क शीट दे दें। अभ्यास कार्य बहुविकल्पी, रिक्त स्थान पूर्ति, सत्य/असत्य का चुनाव जैसे कम समय लेने वाले हों ताकि बच्चे सुनते-सुनते उन्हें हल कर सकें।

वर्क शीट/कार्य पत्र देने के बाद वही रचना फिर सुनाएँ ताकि इस बार वे साथ-साथ हल भी लिख सकें।

इस गतिविधि में सुनी गई सामग्री पर आधारित प्रश्न निम्नलिखित संकल्पनाओं से संबंधित हो सकते हैं–

(1) सुनी गई सामग्री का भाव, मूल विचार

(2) प्रतिक्रिया

(3) प्रत्यास्मरण आधारित

(4) कल्पना आधारित

(2) **निर्देशानुसार बनाना** - कौशल - सुनना, लिखना

इस गतिविधि में किसी चीज़ को बनाने की प्रक्रिया चरणबद्ध रूप से बताई जाएगी और बच्चे उसे सुनकर और देखकर वह चीज़ बनाएँगे। उदाहरण के लिए, कागज़ का उपयोग करते हुए टोपी,

बंदूक, हाथी, चिड़िया आदि बनाना। बच्चों के स्तर के अनुसार आप प्रक्रियाओं के लिए चीज़ों का चयन कर सकते हैं।

इस गतिविधि के लिए, आप स्वयं सभी चरण भली-भाँति आत्मसात कर लें। यदि स्वयं प्रक्रिया का वर्णन करने में कोई दिक्कत है तो वीडियो/ऑडियो कार्यक्रमों का उपयोग भी किया जा सकता है।

इस गतिविधि के चरण निम्नलिखित हो सकते हैं–

- शिक्षक द्वारा वर्णन करते हुए/चरणों को स्पष्ट करते हुए कोई कलाकृति बनाकर दिखाई जाएगी। बच्चे ध्यानपूर्वक देखेंगे और सुनेंगे।
- बच्चों को सामग्री देना (उदाहरण के लिए कागज़)
- एक बार फिर से शिक्षक द्वारा वह कलाकृति चरणबद्ध रूप से बताई जाएगी। बच्चे साथ-साथ बनाएँगे।
- बच्चे पूरी प्रक्रिया चरणबद्ध रूप से लिखेंगे।

आकलन बिंदु –

- बच्चे ने निर्देश दोहराने के लिए अनुरोध नहीं किया।
- बच्चे ने चरण स्पष्ट करने के लिए संगत प्रश्न पूछा।
- बच्चे ने दूसरे बच्चे की त्वरित सहायता की।
- बच्चे ने पूरी कलाकृति तैयार की।
- बच्चे ने सही क्रम से पूरी प्रक्रिया लिखी।

(3) **बोलना –**

भाषा-शिक्षण का एक महत्वपूर्ण लक्ष्य है – बच्चों की बोलने संबंधी क्षमताओं का विकास करना। इस कौशल के आकलन हेतु अनेक गतिविधियों का आयोजन किया जा सकता है, उदाहरण के लिए–

- बातचीत
- परिचय लेना/देना
- अपने अनुभव सुनाना
- किसी प्रक्रिया का वर्णन करना
- मंच से बोलना/उद्घोषणा करना
- कक्षा में चर्चा करना
- किसी पुस्तक/फिल्म की कहानी सुनाना
- किसी चित्र का वर्णन करना
- किसी प्रसंग को सुनाना

इस कौशल में इस ओर ध्यान दिया जाएगा कि बच्चे स्पष्ट, पूर्ण और उचित विराम के साथ बोलकर अभिव्यक्ति करें। आत्मविश्वास, पहलकदमी और अपनी बारी का इंतज़ार करना भी महत्वपूर्ण योग्यताएँ हं।

'बोलना' कौशल का आकलन संपूर्ण सत्र में सतत रूप से चलते रहना चाहिए। बच्चों को बोलकर अपने विचार अभिव्यक्त करने के पर्याप्त अवसर मिलने चाहिए। बच्चों की अभिव्यक्ति को सम्मान तथा पहचान मिलनी चाहिए, तभी वे आत्मविश्वासपूर्वक अपनी बात कहने के लिए उत्सुक होंगे। शिक्षक को बच्चों की अभिव्यक्ति में कम से कम हस्तक्षेप करना चाहिए।

कहानी सुनाने के कुछ आधार बिंदु निम्नलिखित हैं –

- संवाद- भावानुकूल, पात्रानुकूल
- घटनाओं का क्रमिक वर्णन
- उच्चारण
- श्रोताओं से संवादात्मकता

(4) **पढ़ना** – पढ़ने की क्षमता के आकलन के लिए बच्चों को कहानी, कविता, लेख आदि पढ़ने के अवसर दिए जाएँ। निर्धारित पाठ्यसामग्री में बहुत से अतिरिक्त पाठ केवल पढ़ने के लिए ही दिए गए हैं। इनमें से परीक्षा में सवाल नहीं पूछे जाएँगे। इनका उद्देश्य बच्चों की पठन क्षमता में विकास और हिंदी साहित्य के प्रति अभिरुचि का विकास करना है। इन पाठों को पढ़ने के बाद बच्चे अवश्य ही और अधिक पुस्तकें/ रचनाएँ पढ़ने की इच्छा प्रकट करेंगे। बच्चों की पंसद की सूचनापरक, कलात्मक, वैज्ञानिक, सांस्कृतिक, सामाजिक, खेलकूद और मनोरंजक पुस्तकें उन्हें उपलब्ध न हों तो इंटरनेट का भी उपयोग किया जा सकता है।

पठन कौशल का एक अंग है – मौन पठन। बच्चों द्वारा अपनी पसंद की रचना चुनकर उसे पढ़ने की इच्छा प्रकट करना और उसके विषय में बातचीत करना जताता है कि बच्चे पढ़ने के प्रति उत्सुक हैं।

पठन क्षमता का मुख्य उद्देश्य ऐसे व्यक्तियों का निर्माण करने में निहित है जो स्वतंत्र रूप से चिंतन कर सकें तथा जिनमें न केवल अपने स्वयं के ज्ञान का निर्माण की क्षमता हो अपितु वे इसका आत्मावलोकन भी कर सकें। इसके अतिरिक्त पठन कौशल के निम्नलिखित उद्देश्य हैं –

- सरसरी दृष्टि से पढ़ पाठ का केंद्रीय विचार ग्रहण कर लेना।
- एकाग्र चित्त हो एक अभीष्ट गति के साथ मौन पठन करना।
- पठित सामग्री पर अपनी प्रतिक्रिया प्रकट कर सकना।
- भाषा, विचार एवं शैली की सराहना कर सकना।
- साहित्य के प्रति अभिरुचि का विकास करना।
- संदर्भ के अनुसार शब्दों के अर्थ-भेदों को पहचान लेना।
- किसी विशिष्ट उद्देश्य को ध्यान में रखते हुए तत्संबंधी विशेष स्थल को पहचान लेना।
- पठित सामग्री के विभिन्न अंशों का परस्पर संबंध समझना।
- पठित अनुच्छेदों के शीर्षक एवं उपशीर्षक देना और शीर्ष के देने का कारण बताना।
- कविता के प्रमुख उपादान तुक, लय, यति आदि से परिचित होना।

(4) **लिखना** – बच्चों को कहानी-लेखन कविता-लेखन, किसी घटना या वस्तु का वर्णन करने आदि क्रियाकलाप करवाए जाने चाहिए। किसी चित्र के बारे में लिखना, किसी खेल के नियम या प्रक्रिया लिखना, अपने मन से या देखी-सुनी घटना/कहानी/फिल्म की कहानी या गीत लिखना भी उतना ही महत्वपूर्ण है। इस काशल के अंतर्गत निम्नलिखित बातों पर ध्यान दिया जा सकता है –

लिखने की योग्यताएँ –

- देखी हुई घटनाओं का वर्णन करना और उन पर अपनी प्रतिक्रिया प्रकट करना।
- पढ़ी हुई कहानी को संवाद में परिवर्तित करना और संवाद को कहानी में।
- लिपि के मानक रूप का प्रयोग करना।
- विराम-चिह्नों का सही प्रयोग करना।
- लेखन के लिए सक्रिय (व्यवहारोपयोगी) शब्द-भंडार की वृद्धि करना।
- प्रभावपूर्ण भाषा तथा लेखन-शैली का स्वाभाविक रूप से प्रयोग करना।
- उपयुक्त अनुच्छेदों में बाँटकर लिखना।
- प्रार्थना पत्र, निमंत्रण पत्र, बधाई पत्र, संवेदना पत्र, आदेश पत्र, आदि लिखना, तार लिखना और विविध प्रपत्रों को भरना।
- विविध स्रोतों से आवश्यक सामग्री एकत्र कर अभीष्ट विषय पर अनुच्छेद लिखना।
- समारोहों और गोष्ठियों की सूचना और प्रतिवेदन तैयार करना।
- सार, संक्षेपीकरण, भावार्थ लिखना।
- गद्य एवं पद्य अवतरणों की व्याख्या लिखना।
- स्वानुभूत विचारों और भावनाओं को स्पष्ट, सहज और प्रभावशाली ढंग से अभिव्यक्त करना।
- क्रमबद्धता और प्रकरण की एकता बनाए रखना।
- अभिव्यक्ति में सौष्ठव एवं संक्षिप्तता का ध्यान रखना।
- लिखने में मौलिकता और सर्जनात्मकता लाना।

(5) **वाद-विवाद/आशु भाषण–** कौशल - बोलना, सुनना

वाद-विवाद आयोजित करने के लिए बच्चों के अनुभव संसार और परिवेश से जुड़े विषय लिए जाएँ। वाद-विवाद के नियम बच्चों को बता दें। कुछ नियम सुझाव के रूप में दिए गए हैं–

समय - 5 मिनट (अधिकतम)
निर्णायक गण - साथी, अध्यापक, अन्य अध्यापक आदि हो सकते हैं।
तैयारी हेतु समय – 2-5 मिनट
टाइम कीपर – एक बच्चा
अंक रिकार्ड रखने के लिए – एक बच्चा

बच्चों को पहले से बता दें कि प्रस्तुति का आकलन किन बिंदुओं के आधार पर किया जाएगा। कुछ आधार बिंदु आगे दिए गए हैं–

- समय का ध्यान रखा।
- अपनी बात अधिकारपूर्वक, आत्मविश्वासपूर्वक कही।
- अपनी बात के समर्थन में तर्क दिए।
- अपनी बात के समर्थन में उदाहरण दिए।
- हाव-भाव, अंग संचालन, स्वर में उतार-चढ़ाव।
- अपनी बातों को पूरा किया, अधूरा नहीं छोड़ा।
- श्रोताओं से संवाद स्थापित किया।

(6) **कवि सम्मेलन/अंत्याक्षरी–** कौशल - पढ़ना, बोलना, सुनना, लिखना

कक्षा या विद्यालय में कवि सम्मेलन का आयोजन किया जा सकता है। बच्चे स्व रचित या संकलित कविताओं का पाठ कर सकते हैं।

इसके लिए बच्चों को पहले से कवि सम्मेलन की तिथि समय तथा विषय (यदि है तो) बता दें और सामग्री संकलन में उनकी सहायता करें। कविता पाठ करने के तरीके को समझने में भी बच्चों की सहायता करें। बच्चे कविता पाठ देखकर भी कर सकते हैं। कविता को कंठस्थ करना ज़रूरी नहीं परंतु यदि कंठस्थ है तो अच्छा प्रभाव पड़ता है, यह बात स्पष्ट कर दें। कविता पाठ हेतु समय सीमा का निर्धारण उचित नहीं है।

कविता पाठ के आकलन के कुछ आधार बिंदु निम्नलिखित हो सकते हैं–

- गति, लय, आरोह - अवरोह, भाव सहित वाचन
- मंच से बोलने में सहजता
- कविता की उपयुक्तता
- श्रोताओं से नेत्रों/शब्दों द्वारा संवाद स्थापित करना

(7) **अभिनय –** कौशल - बोलना, सुनना, पढ़ना, लिखना

रोल प्ले (भूमिका निर्वहन) और ड्रामाटाइज़ेशन (नाट्य रचनाकरण) द्वारा बच्चे शाब्दिक और अशाब्दिक रूप में अभिव्यक्ति करना समझ सकेंगे।

अभिनय एकल भी हो सकता है और सामूहिक भी। नाटक किसी कहानी या घटना पर भी आधारित हो सकता है। नाटक की प्रस्तुति भी दो तरीकों से की जा सकती है –

(1)   बच्चे नाटक के संवाद स्वयं बनाएँ।

(2)   पहले से लिख हुए संवादों को याद करके प्रस्तुत करें।

नाटक हेतु पार्श्व संगीत/सज्जा आदि के लिए कार्यदल बनाए जा सकते हैं उनके कार्य का आकलन भी अभिनेताओं के आकलन के समान करना चाहिए।

अभिनय हेतु कुछ आधार बिंदु निम्नलिखित हैं –

- नाटक में भाग लेने में पहल की
- भाव, स्वर, विराम आदि को ध्यान में रखते हुए संवाद प्रस्तुत किए।
- स्थानीय समझ – मंच के स्थान का सदुपयोग
- अन्य अभिनेताओं से समन्वय

(8) **परिचर्चा**– कौशल-बोलना, सुनना
बच्चों की रुचि, अनुभव एवं जीवन से जुड़े सरल विषयों पर परिचर्चा का आयोजन करवाया जा सकता है। चर्चा का विषय, समयावधि, विशेष बिंदु आदि पहले से बच्चों को बता दिए जाएँ। परिचर्चा हेतु एक अध्यक्ष का चुनाव बच्चों द्वारा ही करवाया जा सकता है। एक या दो बच्चों को चर्चा के मुख्य बिंदु दर्ज करने का उत्तरदायित्व दिया जा सकता है।

मूल्यांकन के संकेत बिंदुओं का विवरण

प्रस्तुतीकरण	विषय-वस्तु	भाषा	उच्चारण
• आत्मविश्वास • हाव भाव के साथ • प्रभावशाली • तार्किकता • स्पष्टता	• विषय की सही अवधारणा • तर्क सम्मत	• शब्द चयन व स्पष्टता स्तर और अवसर के अनुकूल हों ।	• स्पष्ट उच्चारण, सही अनुतान, आरोह अवरोह अधिक बल देना चाहिए ।

(9) **साक्षात्कार**– कौशल – बोलना, सुनना, लिखना, पढ़ना
बच्चों को अपने साथी, अध्यापक, अभिभावकों, प्रधानाचार्य या समुदाय के किसी व्यक्ति का साक्षात्कार लेने के लिए कहा जा सकता है। अच्छा यह रहेगा कि बच्चे साक्षात्कार हेतु प्रश्न पहले से सोच लें। साक्षात्कार लेते हुए पूरक प्रश्न पूछे जा सकते हैं।

(10) **परियोजना कार्य**– बच्चों को भाषा से जुड़े परियोजना कार्य देकर उनका भाषा विकास, अभिरुचि और सहयोग जैसे कौशलों का आकलन किया जा सकता है। कुछ परियोजना कार्य निम्नलिखित हैं–
- पुस्तक समीक्षा
- पुस्तक सार
- तुलना (रचनाओं, कवियों आदि की)
- पुस्तकालय (स्थापना, रखरखाव, उपयोग)
- खोजबीन/संग्रह

(11) **सामग्री निर्माण** – बच्चे भाषा की कक्षा हेतु जिस प्रकार की सामग्रियाँ विकसित करते हैं, वे सामग्रियाँ भी बच्चों क भाषायी कौशलों का दर्पण होती हैं।

बच्चों से निम्नलिखित सामग्रियाँ विकसित करने में सहायता ली जा सकती है –

- पत्रिका
- बुलेटिन बोर्ड
- चार्ट, विज्ञापन, नोटिस
- शब्दकोश-निर्माण
- ऑडियो/वीडियो कार्यक्रम
- पावर पाइंट प्रेज़ेंटेशन (PPT)

इस अवस्था पर बल दिए जाने योग्य कुछ जीवन मूल्य
- सच्चाई, आत्म-अनुशासन
- सहकारिता, सहानुभूति
- न्याय, समानता
- पहल, नेतृत्व
- ईमानदारी, निष्ठा
- जनतांत्रिकता, देशभक्ति
- उत्तरदायित्व की भावना

हिंदी

संकलित परीक्षा 1 (एस 1) हेतु भार विभाजन (अप्रैल-सितंबर)	कुल भार %
विषयवस्तु	
अपठित बोध	30%
व्याकरण	
पाठ्यसामग्री	
सृजनात्मक लेखन	
फॉरमैटिव परीक्षा(एफ–1 व एफ 2)	20%
कुल भार	50%

संकलित परीक्षा 2 (एस 2) हेतु भार विभाजन (अक्तूबर–मार्च)		कुल भार %
विषयवस्तु		
अपठित बोध		30%
व्याकरण		
पाठ्यसामग्री		
सृजनात्मक लेखन		
फॉरमैटिव परीक्षा(एफ–3 व एफ 4)		20%
कुल भार		50%

टिप्पणी:

1. संकलित परीक्षाओं का कुल भार 60 प्रतिशत तथा फॉरमैटिव परीक्षाओं का कुल भार 40 प्रतिशत होगा। फॉरमैटिव परीक्षाओं के 40 प्रतिशत में से प्रत्येक सत्र में 5 प्रतिशत भाग(संपूर्ण वर्ष में 10 प्रतिशत) श्रवण व वाचन कौशलों के परीक्षण हेतु आरक्षित होगा। शेष 30 प्रतिशत फॉरमैटिव मूल्यांकन, पाठ्यचर्या के अन्य अंगों जैसे पठन, लेखन, व्याकरण, पाठ्यपुस्तक व पूरक पाठ्यपुस्तक, पर आधारित होगा । इसमें बोलने, सुनने, लिखने व बोध पर आधारित मौखिक, लिखित अथवा कार्यकलापों पर आधारित परीक्षण किया जा सकता है।

संकलित परीक्षाओं हेतु विभाजन

खण्ड	विभाग	कुल प्रतिशत
क.	अपठित गद्यांश (2 गद्यांश)	25
ख.	व्याकरण	30
ग.	पाठ्यसामग्री	20 (पद्य- 5, गद्य-15)
घ.	सृजनात्मक लेखन	25

कक्षा 6 से 8 संकलित परीक्षाओं हेतु परीक्षा विनिर्देशन 2012-2014

खंड क : अपठित गद्यांश बोध

प्रश्न संख्या 1-2 (25 प्रतिशत)

दो अपठित गद्यांश (50 से 80 शब्द)

शिक्षार्थियों के स्तर, रुचि और भाषायी उद्देश्यों को ध्यान में रखते हुए उपयुक्त गद्यांशों का चुनाव किया जाएगा। एक गद्यांश कथात्मक तथा एक गद्यांश ग़ैर कथात्मक रचना होगी। इन गद्यांशों पर आधारित **लघूत्तरात्मक प्रश्न** पूछे जाएँगे। अपठित गद्यांशों में से निम्नलिखित प्रकार के प्रश्न पूछे जाएँगे –

- विषयवस्तु का बोध
- भाषिक संरचना/बिंदु
- बच्चों की प्रतिक्रिया/कल्पना/तर्क आदि से संबंधित प्रश्न

खंड-ख : व्यावहारिक व्याकरण

प्रश्न संख्या 3-7 (30 पतिशत)

निर्धारित व्याकरणिक अवधारणाओं की समझ और व्यावहारिक प्रयोग के कौशलों के मूल्यांकन के लिए प्रश्न पूछे जाएँगे। प्रश्नों में अवधारणाओं को दैनिक जीवन के संदर्भों से जोड़कर प्रस्तुत किया जाएगा। प्रश्न बहुविकल्पी तथा लघूत्तरात्मक होंगे।

संकलित परीक्षा-1	संकलित परीक्षा-2
अवधारणा	अवधारणा
वर्णक्रम, संयुक्त अक्षर	मुहावरे लोकोक्तियाँ
वर्तनी	वर्तनी
अनुस्वार व अनुनासिक	कारक

र के रूप	क्रिया (सकर्मक-अकर्मक)
शब्द संपदा (प्यायिवाची, विपरीतार्थी, अनेकार्थी)	वाक्यांशों के लिए एक शब्द
संज्ञा व प्रकार	विराम चिह्नों का प्रयोग
वाक्य-निर्माण	विशेषण और उसके भेद
कारक	वचन बदलो, लिंग बदलो
सर्वनाम व प्रकार	वाक्य निर्माण
वचन बदलो, लिंग बदलो	शब्द संपदा (पर्यायवाची, विपरीतार्थी, अनेकार्थी)

खंड-ग : पाठ्यसामग्री

प्रश्न संख्या 8-12   (20 प्रतिशत)

इस खंड में एक पद्यांश दिया जाएगा (पद्यांश निर्धारित पाठ्यसामग्री में से ही होगा। गद्य पाठों में से सभी प्रश्न **बहुविकल्पी/अति लघूत्तरात्मक/ लघूत्तरात्मक** श्रेणी के होंगे। सभी प्रश्न निर्धारित पाठ्यसामग्री की विषयवस्तु से संबंधित होंगे। प्रश्नों के साथ यथासंभव पाठ्यसामग्री का संदर्भ दिया जाएगा। ये प्रश्न निम्नलिखित उद्देश्यों हेतु होंगे –

- विषयवस्तु का बोध/समझ

- लेखन शैली/भाषायी विशेषताएँ

- बच्चों की प्रतिक्रिया/राय/कल्पना/तर्क आदि से संबंधित प्रश्न

- आलोचना/सराहना संबंधी प्रश्न

- स्थितियों, चीज़ों, लागों, मनोभावों का बारीक और विश्लेषणात्मक वर्णन संबंधी प्रश्न

- दिए गए अंश/संदर्भ से पहले या बाद में आने वाली घटनाओं से संबंधित प्रश्न

प्रत्येक प्रश्न में दो विकल्प होंगे जिनमें से शिक्षार्थी एक प्रश्न चुन सकेंगे।

खंड-घ : सृजनात्मक लेखन

प्रश्न संख्या 13-16　　　　　　　　　　　　　　　**(25 प्रतिशत)**

इस खंड में 4 प्रश्न पूछे जाएँगे।

संकलित परीक्षा 1 और 2 में अलग-अलग लेखन कार्य निर्धारित किए गए हैं जिनका विवरण निम्नलिखित है–

क्र.	संकलित परीक्षा-1	संकलित परीक्षा-2
1.	पत्र लेखन (अनौपचारिक)	पत्र लेखन (औपचारिक)
2.	अनुच्छेद लेखन	अनुच्छेद लेखन
3.	संवाद लेखन	कहानी लेखन/कविता लेखन
4.	संदेश लेखन	विज्ञापन लेखन

पत्र

इस प्रश्न में **किन्हीं दो विषयों में से किसी एक विषय** पर पत्र लिखने के लिए कहा जाएगा। एक पत्र औपचारिक और एक अनौपचारिक पत्र होगा। पत्र में सहजता, संपूर्णता, स्पष्टता और पत्र के मुख्य तत्वों के आधार पर मूल्यांकन किया जाएगा। पत्र का विषय शिक्षार्थियों के जीवन और परिवेश से संबंधित होगा। पत्र में 50 से 60 शब्द पर्याप्त माने जाएँगे।

अनुच्छेद

इस प्रश्न में संकेत बिंदुओं पर आधारित शिक्षार्थियों के जीवन एवं परिवेश से जुड़े हुए विषयों पर 50 से 80 शब्दों में एक अनुच्छेद लिखने के लिए कहा जाएगा। इस प्रश्न में तीन विकल्प दिए जाएँगे। इस प्रश्न में शिक्षार्थियों को अपने अनुभव/संस्मरण/कल्पना/वर्णन या किसी कार्यक्रम की संक्षिप्त रिपोर्ट लिखने के लिए भी कहा जा सकता है। ये अनुच्छेद विभिन्न विषयों और संदर्भों पर बच्चों के तर्कसंगत विचार अभिव्यक्त करने की क्षमता परखने के लिए होंगे। इस प्रश्न के अंतर्गत इस ओर ध्यान दिया जाएगा कि शिक्षार्थी कितने प्रभावशाली तरीकों से अपनी बात का प्रारंभ और समापन करते हैं, उनके विचारों में कितनी तारतम्यता और अंत:संबंध है, वे किसी मुद्दे पर लीक से हटकर नवीन विचार प्रस्तुत करते हैं और वे नवीन विचार तर्कसंगत हैं या नहीं। शब्दजाल के बजाय ठोस, सरल और स्पष्ट अभिव्यक्ति को अधिक महत्व दिया जाएगा।

कहानी/कविता लेखन

इस प्रश्न में किन्हीं दो विषयों में से किसी एक विषय पर संकेतों या चित्र के आधार पर कहानी या कविता लिखने के लिए कहा जाएगा। कविता तुकांत या अतुकांत हो सकती है। यह प्रश्न अभिव्यक्ति की

क्षमता के आकलन पर केंद्रित होगा। कहानी/कविता का विषय बच्चों के जीवन, अनुभवों, कल्पना- संसार से जुड़ा होगा। इसके अंतर्गत शिक्षार्थियों को किसी पढ़ी/सुनी/देखी हुई कहानी/गीत को भी लिखवाया जा सकता है। इस प्रश्न में शिक्षार्थियों की कल्पनाशीलता, शब्दों का चयन, संवाद, शैली, रोचकता आदि के आधार मूल्यांकन किया जाएगा।

विज्ञापन

इस प्रश्न में किन्हीं दो विषयों में से किसी एक विषय पर विज्ञापन लिखने के लिए कहा जाएगा। यह प्रश्न शिक्षार्थियों की अभिव्यक्ति क्षमता के आकलन पर केंद्रित होगा। इस प्रश्न में विज्ञापन में प्रयोग की गई भाषा, आकर्षण, प्रस्तुति, चित्र, प्रारूप, सज्जा, संपूर्णता आदि के आधार पर आकलन किया जाएगा।

संवाद लेखन

इस प्रश्न में किन्हीं दो स्थितियों में से एक पर दो व्यक्तियों के बीच हुए संवाद को अपनी कल्पना से लिखने के लिए कहा जाएगा। यह प्रश्न शिक्षार्थियों की कल्पनाशीलता, संवाद शैली की समझ, अभिव्यक्ति और परिस्थिति की समझ के आकलन पर आधारित है। संवाद कम से कम 50 शब्दों के हों।

संदेश

किसी व्यक्ति द्वारा कही गई बात को दूसरे तक पहुँचाना या व्यक्ति/व्यक्तियों के लिए लिखित सूचना छोड़ना संदेश की श्रेणी में आता है। इस प्रश्न के अंतर्गत शिक्षार्थियों के जीवन, अनुभव संसार और परिवेश से जुड़े दो विषयों में से किसी एक विषय पर संदेश लिखने के लिए कहा जाएगा। इसके अंतर्गत शिक्षार्थियों की अभिव्यक्ति क्षमता, संदेश की संपूर्णता और संक्षिप्तता के आधार पर आकलन किया जाएगा। इस प्रश्न की शब्द सीमा 30 से 40 शब्द रहेगी।

कक्षा 6 से 8 संकलित एवं फॉरमैटिव परीक्षाओं हेतु पाठ्यक्रम का विभाजन

अपठित गद्यांश - 25 प्रतिशत	
व्याकरण - 30 प्रतिशत	
संकलित परीक्षा-1	संकलित परीक्षा-2
अवधारणा	अवधारणा
वर्णक्रम, संयुक्त अक्षर	मुहावरे लोकोक्तियाँ
वर्तनी	वर्तनी
अनुस्वार व अनुनासिक	कारक
र के रूप	क्रिया (सकर्मक-अकर्मक)
शब्द संपदा (प्र्यायवाची, विपरीतार्थी, अनेकार्थी)	वाक्यांशों के लिए एक शब्द
संज्ञा व प्रकार	विराम चिह्नों का प्रयोग
वाक्य-निर्माण	विशेषण और उसके भेद
कारक	वचन बदलो, लिंग बदलो
सर्वनाम व प्रकार	वाक्य निर्माण
वचन बदलो, लिंग बदलो	शब्द संपदा (पर्यायवाची, विपरीतार्थी, अनेकार्थी)
पाठ्यसामग्री- 20 प्रतिशत	
संकलित परीक्षा-1	संकलित परीक्षा-2
पाठ्यसामग्री से परीक्षा हेतु निर्धारित अध्याय	पाठ्यसामग्री से परीक्षा हेतु निर्धारित अध्याय
अध्याय–1	अध्याय–6
अध्याय–2	अध्याय–7
अध्याय–3	अध्याय–8
अध्याय–4	अध्याय–9
अध्याय–5	अध्याय–10
सृजनात्मक लेखन- 25 प्रतिशत	
पत्र लेखन (अनौपचारिक)	पत्र (औपचारिक)
अनुच्छेद	अनुच्छेद
संवाद लेखन	कहानी लेखन/कविता लेखन
संदेश	विज्ञापन

Social Science

The Social Science curriculum aims to develop in students an understanding and evaluation of the social, political, economic and environmental dimensions of the world, and helps them to formulate and justify arguments in response to a diverse range of issues.

In classes VI to VIII, it crystallizes into various disciplines of learning such as the study of *History, Political Science, Geography* and *Economics*, with a provision to include local element in all the disciplines.

Broad Objectives of Social Science Curriculum:

Students through this curriculum will develop the ability to :

- ❖ acquire key concepts in *History, Geography, Political Science and Economics.*

- ❖ encourage acquisition of knowledge of the past for an understanding of the present.

- ❖ acquire a lasting interest in the study of *Social Science* by bringing in an environment familiar to the students.

- ❖ appreciate the value of sources , its nature, origin, value and limitations.

- ❖ acquire skills of analysis, interpretation and evaluation.

- ❖ correlate events of the past to happenings in the present day and to their own lives.

- ❖ recognize the interaction of human beings on environment, the natural assets in the form of flora and fauna.

Specific Objectives of:

History

Students through this curriculum will develop the ability to :

- ❖ comprehend why the study of history is important and how geographical factors influence it.

- ❖ appreciate the skill and knowledge of hunter and gatherers –to understand the concept of stone age and its division.

- ❖ understand the changes in using types of stone tools.

- ❖ interpret human development through the time line.

❖ show the usage of metals in the history of mankind through a time line.

❖ understand the concept and development of the civilization of the world.

❖ infer the desire to know the unknown.

❖ visualize the historical changes in different parts of the world.

❖ understand the interpretation of new ideas, art and architecture in above mentioned period.

❖ understand the desire of the people to form nations based on common aims and aspirations.

Geography

Students through this curriculum will develop the ability to

❖ evaluate the unique place of the Earth in the Solar system.

❖ analyze the two motions of the Earth-Rotation, Revolution and their effects.

❖ classify the different realms of the Earth which will help them to understand the co-relation.

❖ understand the broad physiographic divisions of the world like mountains, plateau and plains.

❖ understand the environment in its totality including various components both natural and human.

❖ understand the formation of rocks and their importance in our life.

❖ understand about atmosphere and develop sensitivity towards environment.

❖ assimilate information of the distribution of water on the Earth.

❖ understand the significance of resources and their uses, and conversation.

Political Science

Students through this curriculum will develop the ability to

❖ understand the concept of society i.e., a family.

❖ understand knowledge processing and knowledge based sector.

❖ familiarize with revolution/organization and development of society.

❖ create an awareness of individuals rights in a civilized society and duties to be performed.

- ❖ understand the different organs of the government.
- ❖ understand the different functions of the government.
- ❖ know the basic concept of the different forms of the government.
- ❖ understand the tangibility of democracy.
- ❖ interpret and deduce components of information based on premises gathered on Karl Marx's philosophy.
- ❖ familiarize themselves with the concept of one party.
- ❖ familiarize themselves with the concept of monarchy.
- ❖ get an insight into peace and conflict resolution.

Economics

Students through this curriculum will develop the ability to

- ❖ understand the concept of Economy.
- ❖ understand the types of Economies.
- ❖ know about barter system and the concept of money.
- ❖ get an insight into economic activities in the development of a country.
- ❖ understand the concept of Economic Development.
- ❖ understand the indicators of Economic Development.
- ❖ acquire the analytical skills with regard to Economy at a very young age.

Social Science
Term-wise Syllabus
Class - VI

Term - I	Term - II
Unit-1: The Story of Man **Unit-2**: Man in the Stone Ages	**Unit -3:** River valley Civilizations-I-River Nile and Egyptian Civilization **Unit-4:** River valley Civilizations-II - River Indus: Indus Valley Civilization
Unit-5: My Home... My City...where I Live **Unit-6:** Earth and its History **Unit-7:** The Earth and its Movements in Solar System	**Unit-8:** Landforms-I-Mountains **Unit -9:** Landforms-II- Plains and River Valleys **Unit -10:** Landforms-III-Plateaus
Unit-11: Family, School and Society **Unit-12:** Rural and Urban Society- (Part-I) Life in the Rural and Urban Societies **Unit-13:** Rural and Urban society (Part-II)- Governance	**Unit-14:** Rural and Urban Society (Part-II)- Governance
Unit-15: What is Economics?	**Unit-16:** Money as Medium of Exchange Integrated Project.

Syllabus - Class VI
Social Science

Topic	Concepts	Skills/Learning Outcomes
Unit-1: The Story of Man	• Use of stone artefacts as source in the reconstruction of the Past. • The story of evolution from the early 'Stone Age' to the 'New Stone Age'. • Categories of Stone Age. • Characteristics of the three 'Stone Ages'- Palaeolithic, Mesolithic and the Neolithic Ages. • From Pastoralism to settled life. • Uses of stone tools and fire. • The skills and knowledge of hunter gatherers.	• Gain information about the people of the Stone Age and create a work of art, drawing from their new knowledge. • Comprehend a paragraph based on the life of early man. • Identify Palaeolithic, Mesolithic and Neolithic Age and name at least one characteristic of each. • Solve the quiz of the hidden keywords used in the lesson. • Co-relate the tools of the particular age for better understanding. • Collect information about the main occupations in different ages and explore how transition occurred from a pastoral/nomadic life to a settled life in the Neolithic Age.
Unit -2. **Man in the Stone Ages**	• Characteristic features of the three Stone Age categories. • Invention of Agriculture or the 'Neolithic Revolution'. • Method of cultivation in the 'Neolithic Age'.	• Explore and visualize the life of the Stone Age man through cave paintings. • Categorize the Stone Age into Palaeolithic, Mesolithic and Neolithic and identify their characteristic features • Correlate different tools of different ages and identify the differences.
Unit -3. **River valley civilizations-I**	• Ancient Egypt: focusing on the River Nile and its impact on ancient Egypt civilization. • Social, economic and political characteristics of this civilization. • The system of governance and the development of trade which later shaped the future of Egypt.	• Interpret physical/political maps to locate places, reasons of historic significance and explain the influence of geographical factors on the development of early civilization of the river valleys. • Comprehend the Social and Political characteristics of this civilization.

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Topic	Concepts	Skills/Learning Outcomes
	Legacy of the civilization to the world.	• Understand the lasting impact of this civilization on the other civilizations of the world. • Create a Travel Brochure by collecting information on various facets of Egyptian Civilization.
Unit –4. **River valley civilizations-II** **- River Indus: Indus** **Valley Civilization**	• To study the history of civilization of the Indus Valley: the political and social characteristics of the Indus Valley civilization. • The geographical, cultural and economic impact of the Nile Valley and Indus Valley civilization on society. • Mohenjo-daro and Harappa. • The nature and system of governance in the two societies. • Urbanism and Bronze Tools. • End of Indus Valley Civilization	• Analyse changes that resulted from the development of cities. • Students research and compare the political and social characteristics of Nile and Indus Valley civilization. • Create a travel brochure based on the political, social, geographical, economic and cultural research. • Be enabled to use the brochure to compare the Nile and Indus Valley civilization with other civilizations. • Students collect information on various causes for the decline of Indus Civilization and prepare a note.

Topic	Concepts	Skills/Learning Outcomes
Unit-5. **My home... My city** **...where I Live**	• Location of a Place • Cardinal Directions • Basic skills of Map Reading • Concept of Latitudes and Longitudes	• Develop spatial perception and locate their homes in relation to their city, country and the world. • Identify the four cardinal points and use these directions to locate the city and country with respect to other cities / countries of the world. • Develop the basic skills of map reading. • Relate to the exact position of a place on the Earth's surface with the network of lines of latitude and longitude. • Locate his / her city and other cities of the world on the map.

Topic	Concepts	Skills/Learning Outcomes
Unit-6. **Earth and its history**	• Big Bang Theory • Evolution of the Earth • Continent Building	• Comprehend the Big Bang Theory as the cause of evolution of our Solar System. • Explain the evolution of the Earth from a gaseous nebula to its present form. • Interpret the Earth as a planet which supports life due to its atmosphere, land and water. • Analyze the movement of the continents as a result of tectonic currents and Continent Building. • Locate the continents and the oceans in their present position on the world map.
Unit-7. **The Earth and its** **Movements in Solar System**	The Earth and its Movements in solar system • Rotation • Revolution	• Explain rotation as a movement of the earth-concept of Rotation of the Earth on its Axis from west to east. • Explain the concept of Day and Night as a result of rotation. • Explain the concept of revolution –movement of the Earth on its orbit. • Explain the concept of seasons as a result of revolution of the Earth. • Concept of The Solstices and Equinoxes.
Unit-8. **Landforms-I-Mountains**	• Mountains • Types :- Fold Mountains Fault Mountains • Features :- Valleys- Due to folding, due to faulting Passes Waterfalls • Location:-Distribution in the world. • Importance and uses- Case study: Himalayas • Conservation of mountains	• Explain mountains as physical features of the Earth. • Identify different mountain types in the world depending on their process of formation. • Identify the characteristic features of mountains through pictures and relate them to the specific mountain type. • Locate and name the different mountain ranges and peaks on the world map. • Analyse the usefulness of mountains to man. • Conservation of mountains. • Case study: Himalayas.

Topic	Concepts	Skills/Learning Outcomes
Unit-9. **Landforms-II** **- Plains and River valleys**	• Plains • Types of plains on the basis of the process of their formation- Structural, Erosional and Depositional • On the basis of the agents that form them-river, wind, sea and snow • Usefulness of Plains • Location of river plains • Conservation of plains	• Explain plains as landform features of low relief found on land • Identify few types of plains based on the process of their formation. • Understand plains as a very important resource for human use. • Correlate the fertile river valleys with human settlements since ancient times. • Understand the human use of plains • Comprehend the negative impact of human activities on our landform features and identify measures to protect them, i.e., conserving them.
Unit-10. **Landforms-III - Plateaus**	• Plateaus • Classification and Location • Types:- Intermontane Piedmont Continental • Importance and Conservation of Plateaus	• Identify plateaus as landform features on the surface of the earth. • Classify few plateaus in the world according to their location. • Locate different plateaus on the world map and identify them. • Understand conservation of Plateaus • Understand human use of Plateaus

Topic	Concepts	Skills/Learning Outcomes
Unit-11. **Family, School and Society**	• Meaning of the term 'society' and its importance in an individual's life. • Various roles and identities one has in the society and the interdependence of different identities. • The meaning and types of the family. • The meaning of school and its impact on a child's life. • One's own duties towards the school and the society.	• Comprehend the meaning of the term society and its importance in an individual's life. • Appreciate the diversities in a society. • Understand the role of the family and school in the child's life. • Generate sensitivity in the students towards pluralism. • Comprehend one's own role and responsibilities in their social groups/communities. • Gain qualities that help them to become responsible citizens.

Topic	Concepts	Skills/Learning Outcomes

Unit -12.
Rural and Urban
Society-(Part-I)
Life in the rural and
Urban Societies
	• The meaning of the term 'society' and its types.
	• The differences between the urban and the rural society on the basis of several parameters like:
	  a) Living conditions.
	  b) Educational facilities.
	  c) Employment opportunities available to the people in the urban and the rural society.
	  d) Nature of occupations in the rural and the urban society.
	  e) Availability of communication facilities in the rural and the urban society.
	  f) Choices of goods and services in both the societies.
		• Comprehend the meaning and the differences between the rural and the urban society.
		• Interpret the differences with the help of their experiences.
		• Explain the difference in opportunities and livelihood between the two societies.
		• Appreciate and understand that the rural and the urban society complement each other.

Unit -13.
Rural and Urban society
(Part-II)-Governance
	• The importance of governance.
	• Decentralization.
	• Governance and people's participation at the two levels:
	  Rural
	  Urban
		• Justify the need for proper governance in the society.
		• Appreciate the various forms of people's participation in the governance.
		• Comprehend the meaning and benefits of decentralization.
		• Understand the model of governance at the rural level.
		• Understand the model of governance at the urban level.

Topic	Concepts	Skills/Learning Outcomes
Unit -14. **What is Economics?**	• What is Economics? • Economics in daily life	• Comprehend the basic idea of economics as a subject of study. • Appreciate the use of economics in our daily lives.
Unit-15. Money as a **Medium of Exchange** **'Integrated project'**	• Money as a medium of exchange • Barter Economy • Role of money in our day to day life	• Learn about barter economy as a first step for exchange of goods between people. • Analyse the need of money as a medium of exchange. • Appreciate and value the role of money in our day to day life.

Social Science
Term-wise Syllabus
Class - VII

Term - I	Term - II
Unit-1: Athens and Sparta: Wars forts and Armoury **Unit-2:** Rise of Islam and the Crusades	**Unit-3:** The Delhi Sultanate: Rise and Growth. **Unit-4:** Europe in the Middle Ages: Feudalism. **Unit-5:** Society and Culture in Asia - The Mughals in India
Unit-6: Land Resources **Unit-7:** Interior of the Earth **Unit-8:** Natural vegetation	**Unit-9:** Water on land **Unit-10:** Water in the Oceans
Unit-11: Governance: Different Kinds of Governance **Unit-12:** Distribution of Power and Centers of Power	**Unit-13:** Birth and Growth of Democracy Forms of Democratic culture **Unit-14:** Forms of Democratic Government
Unit-15: Economic and Non-economic activities	**Unit-16:** Type of Economics

Syllabus – Class VII
Social Science

Topic	Concepts	Skills/Learning Outcomes
Unit-1 **Athens and Sparta: Wars, Forts and Armoury**	• The rise of Athens and Sparta as important City States in the ancient Greece. • Rise of Sparta over the Athens as a powerful military state. • Concept of Oligarchy and Democracy in Greece. • Characteristic features of Athens and Sparta.	• Comprehend the reasons for the rise of the warring states. • Understanding as to why they needed to maintain strong armies and the importance of wars in those times. • Analyze the reasons for implementing Oligarchy and Democracy as a form of governance.
Unit-2 **Rise of Islam and the Crusades**	• Conditions that led to the rise of Islam. • Hazrat Mohammed as the propagator and consolidator of Islam. • The dynastic rule of the Ummayyads and the Abbasids • The crusades or the Holy wars	• Understand the global situation that led to the rise of Islam as a religion and the role of Hazrat Mohammed (Prophet) as the propagator of Islam. • The concept of 'Khalifa' and the division of Islam into the 'Shia and Sunni' sects. • Explain the importance of the three Crusades and the call of 'Jihaad'.
Unit-3 **The Delhi Sultanate: Rise and Growth**	• Detailed study of five different dynasties that ruled over Delhi during this period: - The Slave Dynasty (1206-1210A.D) - The Khilji Dynasty (1290-1320A.D) - The Tughlaq Dynasty (1320-1413A.D) - The Syed Dynasty (1414-1451A.D) - The Lodhi Dynasty (1451-1526A.D) - The Administration of Sultanate • The rise of kingdoms with the decline of the Sultanate. • The life of the people during the Sultnate. • Social, Religious and Economic Life of the people during this period. • Language and Literature Architecture, Painting and	• Gain information about the five different dynasties during the sultanate period highlighting their Administrative, Military, Revenue policies. • Analyze the system of administration and the cause of failure of the policies of Muhammad bin Tughlaq. • Enhance the learning skills of the students by way of map work-'Chief kingdoms during the Sultanate period'. • Evaluate the condition of women during the period of Delhi Sultanate. • Elaborate the contribution of Sufi saints to Indian society. • Analyse by way of research, the art, architecture and music of this period.

Topic	Concepts	Skills/Learning Outcomes
	Music.	• Collect interesting details about any one sufi saint, e.g., Nanak or Kabir and conduct a case study. • Fine arts and their reflection on the Sultanate period.
Unit-4 Europe in the Middle Ages: Feudalism	Feudalism • Definition and Meaning • Working of the Feudal System • Life of people, condition of women and rights of the first two estates in the Feudal Society. • Breakdown of Feudal society • Causes of the decline of Feudal society	• Comprehend the meaning of the term 'Feudalism'. • Analyze the working of the Feudal system. • Critically interpret the breakdown and the decline of the Feudal society. • Explain critically why the Feudal system declined in Europe.
Unit-5 Society and Culture in Asia–The Mughals in India	• Brief introduction of the arrival of the Mughals. • Babur's invasion • Flow chart depicting the order of Mughal rulers. • Influence of the administrative, economic system and religious reform on Indian society. • Growth of art, architecture and language during this period	• Understand the circumstances leading to the arrival of the Mughals. • Analyze the strategies used by different rulers to consolidate their empire. • Enhance learning by way of a case study of the 'Nine Gems' in Akbar's court. • A comparative study of religious policies of Akbar and Aurangzeb and its impact on the polity. • Comprehend the impact and importance of the Mughal period on contemporary India.

Topic	Concepts	Skills/Learning Outcomes
Unit-6 Land Resource	• Land as a resource • Land utilisation patterns • Soil and Factors of soil formation • Types of soil • Land/Soil degradation	• Appreciate the importance of land as a resource and how it has influenced the development of human beings. • Understand the formation of soil. • Comprehend the nature of various types of soils. • Develop awareness towards land and soil

Topic	Concepts	Skills/Learning Outcomes
	• Conservation measures	conservation. • Take initiative to conserve land and soil.

Unit - 7
Interior of the Earth
	• Properties and characteristics
	• Formation of Rocks
	• Types of Rocks
	  - Igneous
	  - Sedimentary
	  - Metamorphic
	• Uses of Rocks
		• Analyze the earth as a solid spherical body divided into three layers each with its own characteristics.
		• Explain the earth's crust as a store house of rocks.
		• Understand the cycle of rock formation.
		• Diagrammatically illustrate the rock cycle and examine its significance.
		• Analyze the characteristic features of different rocks.
		• Appreciate the usefulness of rocks for human life.

Unit - 8
Natural vegetation
	• Concept of vegetation
	• Concept of flora and fauna
	• Types of vegetation of the world
	  - Tropical
	  - Temperate
	  - Polar
	  - Desert
	  - Mountain
	  - Forest and wild life conservation of forest and wild life
		• To understand the interrelationship of climate, rainfall and soil formation in various types of vegetation.
		• Comprehend the nature of diverse flora and fauna.
		• Develop awareness towards conservations of forests and wild life.

Unit - 9 **Water - Water on land**	• Importance of water on our Earth • Differentiate fresh and saline water • The water cycle - its processes • Importance of water cycle • Conservation of water • Effective and sustainable uses of water	• Explain how water is the source of life. • Identify the sources and forms of water present on the Earth. • Comprehend various aspects related to the water cycle and understand the processes of it. • Analyze and evaluate the importance of water cycle in maintaining a constant supply of fresh water and sustaining life on Earth.

Topic	Concepts	Skills/Learning Outcomes

Unit-10
Governance:
Different Kinds of
Governance
	• Meaning of governance:
	Origin and historical perspective
	• Kinds of governance
	  a) On the basis of politics: dictatorship, authoritarian, monarchy, republic and theocracy.
	  b) On the basis of economy: capitalism, communism and socialism.
	  c) On the basis of authority exercised: totalitarian, democracy and oligarchy along with the case studies.
	• Good governance :Key elements
		• Comprehend the meaning of the term "governance".
		• Gain an insight into the historical perspective of governments all over the world.
		• Comprehend the various features of governments with politics as the base: dictatorship, authoritarian, monarchy, republic, theocracy.
		• Understand the various kinds of governments based on the economy of a country: capitalism, communism, socialism.
		• Gain information on the kinds of governments which are based on the concept of authority: totalitarian, democracy, oligarchy.
		• Explain the different elements which influence the working of these governments at different levels.

Unit-11
Distribution of Power
and Centers of Power
	• Distribution of power: the concept and the historical perspective.
	• Centers of power in relation to the distribution of power throughout the world
	  a) Uni-polarity
	  b) Bi-polarity
	  c) Multi-polarity
	• Characteristics of Center of power
		• Comprehend the meaning of the term 'Distribution of power'.
		• Analyse the historical background of the concept of the distribution of power in the world.
		• Gain an insight into different power centers and correlate it to the historical events (case studies of the power centers).
		• Understand the concept of balance of power as a natural consequence of the distribution of power in international politics.

Unit-12 **Birth and Growth of** **Democracy**	• Meaning of Democracy • Features of Democracy • Emergence and Expansion of Democracy • Merits of Democracy • Demerits of Democracy	• Comprehend the meaning of Democracy. • Analyse the emergence of Democracy as a form of government. • Understand and interpret the important features of a democratic government.

Topic	Concepts	Skills/Learning Outcomes
		• Understand the reasons why democracy is the most popular form of government in the world. • State the merits of Democracy. • Analyse some of the drawbacks of a democratic system of governance.
Unit-13 **Forms of Democratic Government**	• Types of democracy- - Direct and Indirect • Concept of Party System and Election • Traditional instruments of direct democracy- The Referendum, Recall and Plebiscite • Difference between direct and indirect forms of democracy	• Comprehend the meaning of direct and indirect democracy with examples of both. • Understand the meaning of elections and the various forms of party system. • Understand the meaning of the instrument like Referendum, Recall, Plebiscite and elections. • Define indirect democracy and comprehend its various kinds. • Gain an insight into the comparisons between direct and direct democracy.

Topic	Concepts	Skills/Learning Outcomes
Unit-14 **Economic and Non- economic activities**	• Concept of economic and non- economic activities • Relevance of economic activities in the development of the country	• Comprehend the meaning of economic and non-economic activities. • Distinguish between economic and non-economic activities. • Classify activities into economic and non-economic.
Unit-15 **Types of Economics**	Concept of an Economy Types of Economics- • Capitalist economy • Socialist economy • Mixed economy	• Understand the concept of an economy. • Learn about the different types of economics of the world. • Analyse and examine the features of the different economics.

Social Science
Term-wise Syllabus
Class - VIII

Term - I	Term - II
Unit-1: Emergence of New Ideas: Renaissance in Europe **Unit-2:** Renaissance and Humanism **Unit-3:** Renaissance in Art and Literature	**Unit-4:** Renaissance and Science **Unit-5:** Renaissance and religion **Unit-6:** New World Order: A. Industrialization of Europe: The Industrial Revolution B. Capitalism C. Colonization D. Imperialism
Unit-7: Basic concepts of Weather and Climate **Unit-8:** Resources	**Unit-9:** Natural Regions of the World - I **Unit-10:** Natural Regions of the World – II **Unit-11:** Natural Regions of the World - III
Unit-12: Constitution: **Unit-13:** Kinds of Constitutions (Case Studies)	**Unit-14:** Peace and conflict Resolution: Meaning; Co-existence; Causes **Unit-15:** Need for Peace in the Society and Combating Terrorism
Unit-17: Why Nations Trade	**Unit-16:** Importance of Economics in Human Life

Topic	Concepts	Skills/Learning Outcomes
Unit-1 **Emergence of New Ideas:** **Renaissance in Europe**	• Meaning and Definition of Renaissance. • Rebirth and Cultural changes of this period. • Growth of Urban Culture and Revival of the Towns. • New disciplines (subjects) taught	• Understand the meaning and definition of Renaissance. • Comprehend the sweeping changes that took place during the 15th to 17th century which ushered in the Modern Age. • Gain insight into the growth of new Italian towns of Rome, Florence and Venice.
Unit-2 **Renaissance and** **Humanism**	• Growth of humanist culture in Italian Universities. • Man as an individual, capable of making his own decision and developing his own skills.	• Identify the great Universities of Padua and Bologna as seats of learning. • Appreciate the slackening of the control of religion over 'humans'. • Understand new ideals of individuality.
Unit-3 **Renaissance in Art and** **Literature**	• The Work of great artists like Leonardo -Da- Vinci, Michelangelo, Donatello, etc. • The new style of architecture the "Classical Style". • The element of realism added to art and architecture by studying, Geometry bone structures, use of light and oil. • Printing of Classical texts which helped in spreading the torch of knowledge amongst readers.	• Analyze the reasons why art and architecture revived in such a spectacular fashion. • Examine the new Styles—domes, arches, sculptures, paintings which inspired the next generation. • Identify the master pieces created by them and capture the element of realism in Art. • Critically review the great texts of those times which promoted learning.
Unit-4 **Renaissance and Science**	• Development of Scientific thinking • Humanism and Science • Scholastic thinking and Science • Role of Print Media • Scientific revolution	• Appreciate the role of Humanism on Science. • Analyse the impact of scholastic thinking on the development of science. • Relate the discovery of print media to the spread of scientific knowledge. • Learn about the achievements of the various scientists during the Renaissance.

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Topic	Concepts	Skills/Learning Outcomes
Unit-5 **Renaissance and Religion**	• Decline of Catholic Church • Religious Growth • Protestant Reformation • Protestant Movements	• Examine the various reasons leading to the decline of the Catholic Church. • Gain insight into the increasing popularity of religious movements in different parts of Europe. • Critically analyze the rejection of the authority of the Church and its implications in Europe. • The growth of Protestant movement.
Unit-6 **New World Order:** **A. Industrialization of Europe: The Industrial Revolution**	• Industrial Revolution • Growth of new Cities • Urban Migration • Changing Economy • Inventions and Inventors • Impact of Industrialization on Handicrafts and Cottage Industries	• Identify and explain the importance of Industrialisation. • Describe the conditions, causes and global consequences of the industrial revolution. • Research the events of the late 1800s and construct a list of important groups, events and people and their lives.
B. Capitalism	• The Concept and the Meaning of Capitalism • Difference between Haves and Have-nots • Factor giving birth to Capitalism • Characteristic Features of Capitalism	• Analyze the situation that lead to the emergence of Capitalism in Europe.
C. Colonization	• Concept of Colonization • Role of Mother Country • Political, social and economic changes in the ruled country	• Explain various dimensions of the functioning of a Capitalist order.
D. Imperialism	• Drain of wealth from the ruled country to the mother country • Meaning: Social political and economic domination of one country over the other • Causes for the growth of Imperialism	• Conduct a Case study of India as a British colony considering the social, economic and political changes which took place during the colonization period. • Examine the impact of imperialism. • Analyze the situations leading to the subjugation of a country by an Imperialistic power. • Examine the impact of imperialism.

Topic	Concepts	Skills/Learning Outcomes

Unit -7
Basic concepts of
Weather and Climate
	• Concept of weather and climate
	• Elements of weather and climate
	  - Temperature
	  - Pressure
	  - Wind -Surface and Upper Air Circulation. - Humidity- Absolute, Relative
	  - Precipitation and types
	• Correlation between temperature and pressure
	• Concept of isotherms, isobars.
	• local weather conditions
	• Chief characteristics of Tropical ,Temperate and Polar regions
		• Gain understanding of the phenomenon of weather vis-a-vis climate.
		• Comprehend the difference between weather and climate.
		• Understand the different elements of weather and climate.
		• Understand the Correlation between temperature and pressure.
		• Understand the terminology, isotherms, isobars.
		• Understand the local weather conditions-news bulletin interpretation and symbols.
		• Chief characteristics of Tropical, Temperate and Polar regions.

Unit-8
Resources
	• Resources and their types- Natural and Human
	• Classification of resources based on utility, renewability and sustainability
	• Types of resources
	  - Land- Soil, vegetation, wildlife, minerals
	  - Water
	  - Human
	• Need and conservation of resources
		• Comprehend the meaning of resources.
		• Understand the distribution of resources.
		• Know the importance of resources in human life.
		• Comprehend the role of human resource in the development of natural resources.
		• Evaluate the need and importance of conserving resources.

Unit-9
Natural Regions of
the World - I
	• Equatorial region
	• Savannah Region
	• Hot Desert Regions
	  - Location
	  - Climate
	  - Natural vegetation
	  - Animal life
	  - Human response
		• Understand the similarity of temperature, rainfall and natural vegetation in Equatorial and Savannah Regions Understand the influence of climate on natural vegetation and animal life.
		• Appreciate the response and occupations of Human in Equatorial and Savannah Regions.

Topic	Concepts	Skills/Learning Outcomes

Unit-10
Natural Regions
of the World - II
	• Mediterranean Region
	• Temperate grassland
	• Temperate Desert Regions
	  - Location
	  - Climate
	  - Natural vegetation
	  - Animal life
	• Human response
		• Understand the similarity of temperature, rainfall and natural vegetation in Temperate Desert Regions.
		• Mediterranean Region, Temperate grasslands.
		• Understand the influence of climate on natural vegetation and animal life.
		• Appreciate the response and occupations of Human in Temperate Desert Regions, Mediterranean Region, Temperate grasslands.

Unit-11
Natural Regions
of the World - III
	• Coniferous Forests
	• Tundra Region
	  - Location
	  - Climate
	  - Natural vegetation
	  - Animal life
	• Human response
		• Understand the similarity of temperature, rainfall and natural vegetation in Coniferous Forests, Tundra Regions
		• Understand the influence of climate on natural vegetation and animal life.
		• Appreciate the response and occupations of Human in Coniferous Forests, Tundra Region

Topic	Concepts	Skills/Learning Outcomes
Unit-12 **Constitution**	• Meaning, Features, History and growth • Meaning of the term Constitution • Key features of the Constitution • History of the growth of the Constitution	• Comprehend the meaning and the definition of the term 'Constitution'. • Interpret the key features of a Constitution. • Develop the ability to understand the meaning of the terms like codification, separation of power, entrenchment and state of emergency. • Analyze the historical background of the growth of the Constitution.

Topic	Concepts	Skills/Learning Outcomes
Unit-13 **Kinds of Constitutions (Case Studies)**	• Kinds of constitution: Codified; Uncodified; Rigid; Flexible; along with some examples (to remain the same) Case Studies: Constitutions of England (uncodified) and India (codified)	• Understand the various kinds of constitutions: written; unwritten; rigid; flexible along with examples. • Gain knowledge of various constitutions of the world; inception, growth and features. • Critically compare these constitutions. • Develop skills to debate and express opinions on the success or failures of these constitutions.
Unit-14 **Peace and conflict resolution:** **Meaning; Co-existence; Causes.**	• Meaning of the terms 'peace' and 'conflict resolution' • Co-existence of peace and conflicts in a society. Peace as a natural social condition • Kinds of conflicts: Economic, Socio-cultural, Political, Religious • Causes of Conflicts	• Understand the meaning of 'peace' and 'conflict resolution'. • Gain an insight into the importance of peace for the development of any society. • Understand the presence of conflicts in every society which further necessitates the establishment of peace. • Comprehend the various kinds of conflict and the means used to resolve them along with some case studies. • Appreciate the need for conflict resolution and transformation. • Causes like inequalities leading to conflicts in societies and creating an imbalance. • Develop skills to debate and express opinion on different conflicts around the world and try to devise ways to solve them. • Gain an insight into the relationship between inequalities and conflicts. • Analyse the causes which lead to a conflict in a society.
Unit-15 **Need for Peace in the Society and Combating Terrorism**	• Need for peace • Need for Peace Education in schools • Concept of Terrorism • Effects of Terrorism on various aspects of society	• Understand the need for peace and peace education in schools. • Comprehend the advantages of peace in the Society. • Knowledge on concept of Terrorism.

Topic	Concepts	Skills/Learning Outcomes
	• Case studies: WTC destruction, Militancy activities • Role and responsibility of citizens in combating Terrorism	• Gain an insight into Terrorism on various aspects of society and how it affects nation's growth. • Analysis of case studies - WTC destruction, Militancy Activities in various countries. • Understand the role and responsibility of citizens in combating Terrorism.

Topic	Concepts	Skills/Learning Outcomes

UNIT-16
Importance of economics in human life
	• Importance of economics in human life
	• Concept of
	  - Demand
	  - Supply
	  - Trade
		• Understand the importance of economics in human life.
		• Knowledge of demand and supply.
		• Need for Banking.
		• Analyse the factors that influence demand and supply.
		• Understand how the price of a commodity gets determined.

Unit-17 Why nations trade	• Meaning of trade • Concept of Domestic trade • Concept of International trade	• Comprehend the concept of trade. • Appreciate the advantage of trade. • Analyse how trade can be carried out at different levels. • Distinguish between domestic and international trade.

Science

Introduction

CBSE-*i* curriculum in Science at upper primary stage primarily focuses on helping the students comprehend fundamental concepts in *Physics*, *Chemistry* and *Biology* through enquiry based and experiential learning. Providing hands-on-experiences and encouraging them to pursue imaginative questions forms the central aspect of proposed teaching-learning process. Separate Teachers' notes have been included in the materials to guide the teachers in curriculum transaction. A large number of web-links have also been provided to take the students beyond rigid content and guide them explore the unknown through self-learning. Enough scope has been kept in the curriculum to develop desired scientific skills and competencies. Some of the key objectives of teaching –learning of Science at this stage include:

❖ understanding basic concepts of *Physics*, *Chemistry* and *Biology*.

❖ comprehending and explaining natural surroundings and daily life observations in terms of Scientific concepts and principles.

❖ acquiring process skills and generating knowledge through exploration and available resources and sites.

❖ developing competencies to construct knowledge through questioning, observations and experimentations.

Large number of suggested activities in different units in the syllabus aim at relating theoretical concepts to real life situations and strengthen understanding of fundamental concepts. Conduct of these experiments and activities in the classroom or the laboratory will also make the subject more interesting and enjoying for the students. Providing active learning experiences can go a long way in laying a sound foundation for further of the subject at later stage as well as develop liking for the subject.

Science
Term-wise Syllabus

Class - VI

S.No.	TERM I	S.No.	TERM II
1	Measurement	7	Magnetism
2	Classification of Materials	8	Variation, Classification and inheritance
3	Food and Nutrition	9	Electric circuits
4	Light	10	Changes Around us
5	The Living Organisms and their Surroundings	11	Movement in Plants and Animals
6	Separation of Mixtures	12	Air

Class - VII

S.No.	TERM I	S.No.	TERM II
1	Understanding Motion	9	Exploring Light
2	Heat	10	Electric Current and its effects
3	Wind and Storms	11	Change in Everyday Life: Physical and Chemical Changes
4	Understanding Matter	12	Water: The Universal Solvent
5	Acids and Bases	13	Soil: A Natural Resource
6	Natural Fibres and Fabrics	14	Respiration in Organisms
7	Nutrition in Plants	15	Transportation in Plants and Animals
8	Nutrition in Animals	16	Reproduction in Plants

Class - VIII

S.No.	TERM I	S.No.	TERM II
1	Exploring Forces	11	Some Natural Phenomena
2	Understanding Pressure	12	The Night Sky
3	Sound	13	Synthetic Fibres and Plastics
4	Language of Chemistry	14	Coal and Petroleum
5	Metals and Non Metals	15	Combustion and Flame
6	Chemical Effects of Electric Current	16	Air and Water Pollution
7	Cell- a Coordinator	17	Cell to Organism
8	Managing Interdependence	18	Landmark in the Human Development
9	Exploring Microorganism		
10	Light Exploration	19	Technology in Food Production

Class – VI	Class – VII	Class – VIII
Unit – 1 : Measurement	**Unit – 1 : Understanding Motion**	**Unit – 1 : Exploring Forces**
• Define the term physical quantity.	• Explore some time measuring devices used in earlier times.	• Define the term force.
• Name few common physical quantities.	• Compare these devices to the ones used in present times.	• Explore the effects of force in our daily life.
• Understand that a physical quantity is expressed completely in terms of a numerical value and a unit.	• Estimate time taken for different events.	• Name different kinds of forces such as gravitational force, impact force, muscular force, magnetic force, electrostatic force and frictional force.
• Name few common units of measurement used in earlier times.	• Understand the term 'Motion' of an object.	• Classify forces into contact and non-contact forces.
• Realise the necessity of standard units.	• Distinguish between 'uniform' and 'non-uniform' motion.	• Describe the effects of balanced and unbalanced forces on moving objects.
• List standard units used for measurement of length, mass, time, temperature, etc.	• Name different kinds of motions such as linear motion, circular motion and oscillatory motions.	• Explore the force of friction.
• Use prefixes and symbols to express multiples and sub-multiples of standard units.	• Explain the concept of speed of a body.	• Investigate the factors affecting friction.
• Estimate the magnitude of a given physical quantity.	• Calculate speed of a moving object using the mathematical relation between speed, distance and time.	• Analyze situations to decide whether friction is desirable or undesirable.
• Measure length, area, volume, mass, time, temperature, etc., correctly using common measurement tools and devices.	• State basic units of time and speed.	• Explain how lubricants and ball bearings reduce friction.
• Convert and calculate the magnitude of a given physical quantity in multiples and sub-multiples of standard units.	• Explain the use of simple pendulum for measurement of time.	• Suggest ways of reducing / increasing friction in daily life.
• Carry out simple activities related to estimation and measurement.	• Represent given distance and time information as distance –time graph.	• Perform simple activities related to different kinds of forces.
	• Explore different distance-time graphs to understand what kind of motion these represent.	**Suggested Activities**
	• Solve simple distance, time and speed numericals.	• Prepare a scrapbook on forces. Collect pictures from newspapers, old magazines or old books that show different types of forces in action.

Class – VI	Class – VII	Class - VIII
Suggested activities • Estimate the length, area, volume of a given object/surface. • Measure the length, area, volume, time and temperature using different tools/instruments. **Unit-2 : Classification of Materials** • Identify objects around us. • Classify objects on the basis of materials they are made of. • Describe properties of materials such as appearance, hardness, solubility, density, etc. • Distinguish between transparent, opaque and translucent objects. • Comprehend why certain objects float while others sink in water. • Classify materials into shiny and non-shiny group. • Carry out simple activities and experiments using different materials. **Suggested activities** • To compare carry bags made from different materials e.g., paper, plastic, cloth and assess their utility to keep different items like food, books and cloths, etc.	**Suggested Activities** • Make a sun dial to understand how it works and to learn how the apparent motions of the Sun and the shadows cast by its rays were used to measure time in earlier days. • Make a time measuring device like a one minute sand clock. Use two old similar bottles glued together to make a sand clock. Use this sand clock to measure time taken for various events. Find out how long does it take to brush the teeth or how long does it take for an egg to boil. • To play a game to learn about different time zones of the world. Each student may choose a time zone and then quiz the other about the time in the other zone. Find out whether one is ahead or behind in time and the difference in time. • To visit a science museum to explore the time measuring devices on display. • Collect information to find out about all the fastest men and women in the Olympic athletic events OR collect some interesting speed data, for instance, the fastest train, speed of a supersonic jet aircraft, a galloping horse, etc.	• Dedicate each page of your scrapbook to one type of force. Paste the pictures on the correct page. Share your scrapbook with your friends. • Finish the story have you ever wondered what would happen if the gravitational force disappeared suddenly. If not, then think about it now. • Today, I was at the playground. All of a sudden, gravity disappeared! Nothing worked the way it should. For example, _____. Complete the story or you can create your own. • Friction in sports- Find out from the internet how sports persons try to reduce friction. Find out about as many different sports as you can. • Visit a car workshop to find out about different parts of the car that need lubricants. What are the lubricants in use? Talk to a mechanic or an engineer to find out about the parts of a car where friction is desirable and where it is undesirable. **Unit-2 : Understanding Pressure** • Understand the concept of pressure as force per unit area.

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• To make temporary magnets from a piece of iron. • To use principle of density, shape and volume, and observe floating and sinking of different materials. **Unit-3 : Food and Nutrition** • Recognise the importance of food for a living organism. • Realise that food has to be consumed for production of energy. • Define the terms: nutrition, nutrient and balanced diet. • Recognise the fact that people living in different areas have different food habits. • Relate different food habits in people with availability of raw material, climate, tastes and beliefs. • Differentiate/categorise food stuffs on the basis of their source (plant and animal). • Identify the edible parts of plants. • Understand that different food stuffs contain different nutrients. • Realise the significance of nutrients for human health. • Infer that balanced diet is important.	• To investigate whether there is any relation between length of leg of a person and the walking speed. • Design a fair investigation to find out, this relation. **Unit-2 : Heat** • Understand the concept that heat is a form of energy. • Understand the effects of heat. • Explore daily life applications of effects of heat. • Understand the need to measure the degree of hotness or coldness of an object. • Relate heat to temperature. • Differentiate between heat and temperature. • Use a thermometer for measurement of temperature. • Compare different types of thermometers. • Interconvert the various units of temperature. • Understand and explain the methods of transfer of heat in solids (conduction), liquids and gases (convection).	• Explore the situations where high or low pressure is useful. • Name the units of pressure like N/m^2 and Pascal. • Solve numericals based on pressure. • Investigate the effect of pressure exerted by liquids at varying depths. • Explore the impact of pressure on construction of dams and fountains. • Apply the concept of atmospheric pressure to explain real life examples. **Suggested Activities** • The atmospheric pressure decreases as we go up higher. Find out from the internet how is the pressure maintained in an airplane. • Water pumps usually work on the principle of air pressure. Make a model of a pump using waste material. You can take help from website www.arvindguptatoys.com. • Collect pictures that show examples of high pressure and low pressure. • Divide your class bulletin board into two halves. Paste pictures that display high pressure on the one side and the ones that show low pressure on the other. • Design an investigation to find out

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for an individual to maintain good health.	• Study the formation of convection currents.	how much pressure you exert on the ground when you are on two feet; one foot; your hands; your head, etc. You will need to measure your weight and find the area of contact with the ground in each case.
• Carry out simple experiments to detect the presence of starch, proteins and fats in food stuffs.	• Understand the nature of heat radiations and behaviour of different colours to these radiations.	• Find out the story of the Magdeburg hemisphere from an encyclopedia.
• Explain the role of vitamins and minerals in human body.	• Apply the concepts of conduction, convection and radiation to daily life experiences and observations.	**Unit – 3: Sound**
• Comprehend that deficiency of vitamins and minerals may cause deficiency diseases.	**Suggested Activities**	• Understand and explore the production of sound.
• State the causes and symptoms of deficiency diseases.	• A visit to a cold storage unit to understand the methods and materials used for insulation.	• Investigate the conditions under which sound travels.
Suggested activities	• To observe the layers of insulation used in a thermos flask and to understand how heat transfer is prevented in it.	• Understand and explain the characteristics of sound.
• To read labels on different food containers and compare their food values.	• One stays in a very hot and dry area and has a house on the top floor. What changes should be suggested to keep the house cool? Make a report on the same.	• Explore the effect of amplitude on loudness and frequency on pitch of a sound.
• To prepare different sprouts.	• Four students are given a tray of ice each. The task is to prevent the ice from melting for as long as one can. Design a method by which one can do that.	• Understand the working of human ear.
• To conduct tests to detect contents of food items.	• Make a model of Galileo's gas thermometer.	• Explore that all the vibrations are not audible.
• To prepare balanced diet chart.	• Explore the working of Tandoors and ovens.	• Understand the difference between noise and pleasant sound.
Unit-4 : Light		• Analyse the effects of noise pollution on human health.
• Understand the nature, importance and basic properties of light.		• Explore the methods to reduce noise pollution.
• Comprehend the property of rectilinear propagation of light.		
• Distinguish between luminous and non-luminous objects.		

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• Classify materials as transparent, opaque and translucent.	• Record maximum and minimum temperature of a day for two weeks, plot a graph and analyze the data.	**Suggested Activities**
• Comprehend the phenomenon of shadow formation.	• Find out the special features of fire fighting suits which make them fire resistant.	• Suppose you stay near a traffic junction. What changes do you suggest to reduce the level of noise caused by the road traffic in your house? Prepare a project report on the same.
• Understand the function and use of a plane mirror.	• Gather information about the designing of space ships that make these heat resistant while entering back into the atmosphere of the earth.	• Make your own musical instruments using locally available materials. Prepare a brochure listing their special features. Explore the variation of pitch in these instruments.
• Explain the term reflection of light.	**Unit – 3: Wind and Storms**	• Use internet to find out the different kinds of musical notations. How does one notation vary from the other? How does a music instructor guide the instrumentalists in a show?
• Give examples of uses of plane mirror in everyday life.	• Explain common weather changes occurring at different times.	• What may be considered as music to one person may be noise to another! It is not a substance that can accumulate in the environment like most other pollutants. Noise may not seem as harmful as the contamination of air or water, but it is a pollution problem that affects human health and can contribute to a general deterioration of environmental quality. Prepare a newsletter giving information of the effects of noise pollution on humans, animals, plants and vegetation and the measures that can be taken to avoid the same.
• Carry out simple activities and experiments to explore properties of light.	• Explain how weather is tracked.	
Suggested activities	• Interpret weather charts and graphs.	
• To identify luminous and non-luminous objects.	• Differentiate between weather and climate.	
• To investigate shadow formation.	• Explore how climate has an effect on some living organisms.	
• To study transparent, opaque and translucent objects.	• Investigate and perform activities to demonstrate the role of air in weather phenomena.	
• To conduct experiments on reflection of light using shiny and non-shiny surfaces.	• Explain the occurrence of wind currents.	
Unit-5 : The Living Organisms and their Surroundings	• Describe the formation of cyclones.	
• Comprehend that most living organisms live in surroundings that may be different with respect to climate, altitude, temperature, living and non-living factors.	• Recongnise precautions and safety during a cyclone.	

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• List different types of habitats of living organisms. • Classify the components present in a habitat as Biotic and Abiotic. • Realise that Abiotic components are important for living organisms. • Carry out simple activities to show that Abiotic components are important for all living organisms. • Define the terms: Habitat, Adaptation, Growth, Respiration, Reproduction, Excretion, Stimulus and Response. • State characteristic features of living organisms. • Identify specific features in living organisms (adaptations) that enable them to live in their surroundings. • Give examples of adaptations that are present in plants and animals. • Realise that adaptations take place over a long period of time. • Observe and recall that all living organisms respond to change in surrounding environment. • Carry out simple activities to show that living organisms respond to change in surrounding environment. **Suggested activities** • To observe different habitats -	**Suggested Activities** • Carry out a project and collect on weather- Collect weather reports of seven successive days in different seasons. Record in a tabular form and analyze the data. • To visit the local meteorological department to study the methods involved in weather forecasting and the various instruments used. • To make a wind vane as a tool for measuring wind direction. • Role Play- To become the disaster manager for a day. Prepare a plan to reduce the impact of a cyclone on your city. Highlight how emergency preparedness is crucial for reducing impacts of disaster. What are the services that you think are essential for relief operations? • Prepare your own scrap book to track a cyclone. Look at weather reports for some days during October to December or April- May. If development of a cyclone is reported, collect the satellite pictures showing the movement of cyclone over the next few days. Also attach newspaper clippings on the predictions made about the cyclone.	**Unit - 4 : Language of Chemistry** • Recall the meaning of the terms-atoms and molecules. • Explain the formation of cations and anions. • Define the term radical. • List acidic and basic radicals. • Differentiate between acid and basic radicals. • Explain the formation of salts. • Comprehend the concept of atomicity. • Deduce the formula of salts using. displacement reaction. • Write chemical equations from word equations. • Explain balancing of chemical equations. • Infer that balancing of chemical equation justifies that mass remains conserved during a chemical reaction. • Carry out an activity to show balancing of chemical equations. **Suggested Activities** • Collect different samples of salts around us. Write their common and chemical names. Identify the acidic and basic radicals and tabulate mentioning one use of each.

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physically or videos and pictures.	**Unit - 4 : Understanding Matter:**	• Use Leggo blocks to make monovalent, bivalent and trivalent ions. Match the ions and make 5 different compounds and write their formulae.
• To carry out activities on a particular habitat or an organism in a particular habitat.	• Explore the surroundings and make a list of 10 different kinds of materials that make up the common objects in the surroundings.	• List five elements whose symbols have been derived from their Latin names and trace their historic development.
Unit - 6 : Separation of mixtures	• Classify these materials into pure substances and mixtures.	• Observe your mother baking a cake. List the ingredients used and find out why the cake swells up on heating.
• Define the term 'mixture'.	• Differentiate between elements and compounds on the basis of the types of particles of which these are made.	• Study a reaction between vinegar and baking soda. Write a word equation for the reaction involved. Using the symbols and formulas, translate the word equation to a balanced chemical equation.
• Explain the differences between pure substances and mixtures.	• Define the terms: an atom, an element, a compound and a molecule.	
• Explain the characteristics of mixtures.	• Identify materials commonly seen in the surrounding as elements and compounds.	**Unit - 5 : Metals and Non-Metals**
• Give examples of mixtures.	• Classify elements as metals and non-metals.	• Define the terms: displacement reaction, minerals and ores.
• Distinguish between the homogeneous and heterogeneous mixtures.	• Distinguish between compounds and mixtures.	• Explain briefly the position of metals and non-metals in the periodic table.
• Give examples of homogeneous and heterogeneous mixtures.	• Describe the structure of matter in terms of atoms and molecules.	• Identify the substances around you as metals and non-metals.
• Explain in general how mixtures can be separated.	• Recognize that an atom is the basic building block of matter.	• Study the physical properties of metals and non-metals highlighting the exceptions.
• Explain common separation techniques such as evaporation, sedimentation, crystallization, filtration, chromatography, centrifugation, etc.	• Comprehend the structure of an atom and its constituent parts.	
• Carry out simple activities and separate solid-liquid mixtures through separation method such as taking mixture of tea leaves and water.	• Recognize that atoms are too small to be seen.	
	• Write symbols of elements with atomic numbers 1 to 20.	

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• Carry out simple activities and separate liquid-liquid mixtures through separation method such as taking two immiscible liquids.	• Describe electron arrangements of elements with atomic numbers 1 to 20.	• Differentiate between the physical properties of metals and non-metals.
• Carry out simple activities and separate solid-solid mixtures through separation method such as taking mixture of iron and graphite, etc.	• Draw electron arrangement of an atom in an element.	• Investigate the effect of air, water, acids and bases on metals and non-metals and compare their chemical properties.
Suggested activities	• State the meaning of the term 'valence electrons'.	• Recall the burning of magnesium ribbon in air and identify the nature of the oxide formed by using litmus solution.
• Prepare different kinds of mixtures.	• Determine the number of valence electrons from given electron arrangement of an atom.	• Study the reactivity of different metals such as zinc and copper with the salt solution selected as Ferrous Sulphate.
• To separate different kinds of mixtures.	**Suggested activities**	• Recognize the uses of metals and non-metals in day to day life.
Unit – 7 : Magnetism	• "Meeting elements" - Identify symbols for selected elements and create a song to remember these elements.	• Investigate the factors causing corrosion in metals.
• Distinguish between a magnetic and a non-magnetic material.	• Provide a list of different elements such as Iron, Sulphur, Gold, Nickel, Bromine, Mercury, etc. Learners may choose each element in turn and collect information about its properties. Then classify it as a metal or non-metal.	• Carry out an activity to show the liberation of Hydrogen gas on reaction of Zinc metal with dilute Hydrochloric acid.
• Identify a magnetic material.		**Suggested Activities**
• List the main properties of a magnet.		• Visit in a group a jewellery shop to observe the ductile nature of gold and silver.
• Identify poles of a magnet through an activity.	• Prepare models of atoms of elements showing protons, neutrons, and electrons, and study how the elements differ from one another.	• In groups, perform an experiment to arrange the given metals such as Iron, Copper, Aluminum and Zinc in decreasing order of reactivity using displacement reactions.
• Name different kinds of magnets.		
• Explain the use of a compass needle in finding direction.	**Unit – 5 : Acids and Bases**	
• Explain the process of magnetization of a given piece of iron.	• Give an operational definition of an acid and a base, using the characteristic properties of these	
• Demonstrate that like poles repel and unlike poles attract each other.		
• List few uses of magnets.		

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• Carry out simple activities and experiments on magnets. **Suggested activities** • To conduct experiments to explore the properties of a magnet. • To use different types of magnets for different activities. • To magnetise and de-magnetise a magnetic material. **Unit - 8 : Variation, Classification and Inheritance** • Recognise reproduction as an important process for living organisms. • Classify the things present in our surroundings as living and non-living. • Observe and realize that variations exist among living organisms. • Understand that members of the same species also have inherent differences. • Define the terms: Reproduction, species, variation, inheritance, traits, breeding offspring, environment. • Recall that differences in the environment also cause variations within species. • Carry out simple activities to demonstrate inheritance of traits.	substances. • Perform activities to investigate the characteristics of acids and bases. • Name some acids and bases which are used in common household products. • Define and identify different types of indicators. • Differentiate between acids and bases on the basis of various properties exhibited by them. • Distinguish between natural and synthetic indicators. • Perform activities and experiments using indicators to classify solutions as acidic, neutral or alkaline and construct a pH scale. • Comprehend the meaning of pH scale. • Perform activities and experiments with the help of natural indicators extracted from red cabbage, turmeric, China rose, etc., to identify acids and bases. • Perform experiments by taking different soap solutions and indicators and study the resulting results. **Suggested activities** • Write invisible messages using acidic	• Make groups to collect pictures/information of various metals depicting their uses by depicting in a collage and share with each other. • Determine the conditions under which corrosion takes place by performing group activities and generalizing through group discussion. **Unit - 6 : Chemical Effects of Electric Current** • Recall different materials which conduct electric current. • Define the terms: electrodes, electrolytes, electroplating and electrolysis. • Devise a tester to test the conducting ability of liquids, using magnetic effects of current. • Comprehend that the solutions of acids, bases and salts conduct electricity. • Describe the process of electrolysis through examples. • Infer that passage of electric current through a conducting solution causes chemical reactions. • Justify that electrical appliances

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- Realise that the process of selective breeding results in offspring with particular characteristics.
- Classify living things into different groups of plant and animal kingdom.
- Apply the knowledge of classification to place the living organisms in different groups.

Suggested activities

- To investigate why fruits from same plant are not identical.
- To conduct activity related to sorting out living things.
- To study causes for variation in species.

Unit – 9 : Electric Circuits

- Understand that electricity is a form of energy which can perform different tasks.
- Give examples of different domestic tasks performed by using electricity.
- Recognize that simple electric cell is a source of electric energy.
- List uses of an electric cell.
- Identify different parts of an electric bulb.
- Understand the meaning of the term

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- solution/basic solution and then use suitable chemicals to develop and transmit the messages.
- Create colourful greeting cards using acidic solution ,basic solution and various indicators.
- "Disappearing Rainbow" – A demonstration where a rainbow of solution colors appear and disappear as acids and bases are added to a series of indicators.

Unit – 6 : Natural Fibres and Fabrics

- Understand the meaning of natural fibres.
- Identify different types of natural fibres.
- Classify natural fibres as animal and plant fibres along with their specific sources.
- Recognize different types of fabrics made from different natural fibres.
- Identify animals and plants from which we get fibres.
- Describe the properties of fibres and apply this knowledge to types of clothes worn in different seasons in different places.
- Understand various steps involved in

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- should not be touched with wet hands.
- Test whether fruits and vegetables also conduct electricity.
- Explain the applications of electroplating in day to day life.
- Describe the process that is used to carry out purification of copper.
- Appreciate how the process of electroplating helps to coat a layer of more expensive metal over an object made of a cheaper metal thus giving it an expensive look. For example, silver plating on an artificial flower vase made up of ordinary metal.
- Carry out an activity to show that liquids conduct electricity.
- Carry out an activity to show that acidified water breaks down to form hydrogen and oxygen gas on passing current through it.

Suggested Activities

- In a group visit a nearby factory outlet which deals in chrome plating on bicycle handles. Outline the process involved, specifying the different electrodes used. Also find the health concerns associated with chromium electroplating.
- Collect water from various sources

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'electric circuit'.	making of different types of yarns namely cotton, jute, wool and silk.	like tap, an RO (Reverse Osmosis) unit, water purifier (aqua guard), ground water, etc., and test whether the samples conduct electricity. Justify your observations in a tabular form.
• Construct simple electric circuits consisting of a cell, electric bulb, and electric switch.	• Relate the term 'sericulture' as human effort to produce silk in large scale.	
• Recognise different components of an electric circuit.	• Identify different stages in the life cycle of silk moth to comprehend the fact that why some cocoons are allowed to undergo metamorphosis.	• Perform an activity to show electroplating.
• Comprehend the meaning of the terms: electric conductor and insulator.	**Suggested Activities:**	• Perform electrolysis of an aqueous solution of potassium iodide.
• Give examples and uses of electric conductors and insulators.	• Make a fibre and fabric collection.	**Unit - 7 : Cell – A Coordinator**
• Carry out simple experiments on electrical circuits.	• Collect and identify different types of fibres and fabric samples. Group and classify the collection by its different types and characteristics.	• Familiarize with biographies of scientists and their work in discovering the cell.
Suggested activities		
• To conduct simple experiments using a cell, switch and an electric bulb.	• To study the difference in water absorbing capacity of same size woollen cloth and cotton cloth, and extend the understanding to the fact that why do we wear woollen clothes in winter.	• Understand the term structural and functional unit of a living organism.
• To identify electric insulators and conductors.		• Define a 'cell'.
• To study simple electric circuits.		• Explore different shapes, sizes and number of cells that make an organism(s).
Unit -10 : Changes Around Us	• Compare the clothing pattern of one city with two other cities. Parameters for comparison may be climate and the surroundings.	• Comprehend that cell is a unit of structure and function of an organism.
• Comprehend that our senses allow us to collect information about the physical world.		• Analyze the role of a cell as a coordinator.
• Differentiate between physical and chemical changes.	**Unit - 7 : Nutrition in Plants**	• Identify the role of parts of a cell and relate it to the function of an organism.
• Distinguish between reversible and irreversible changes.	• Define the term 'nutrition'.	• Differentiate between unicellular and multicellular organisms.
• Recognize how plants change when	• Differentiate between two types of nutrition.	

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they grow.	• Recognize the significance of autotrophs as producers.	• Compare and illustrate plant and animal cells.
• Identify changes that can be reversed.	• List the conditions required for photosynthesis.	**Suggested Activities**
• Identify changes that cannot be reversed.	• Recognise importance of photosynthesis laying stress on the importance of plants as a direct or indirect source of food.	• Gather information about the story of the discovery of cell, cell theory and about the contribution of Schleiden, Schwann and Leuwenhock.
• Describe seasonal changes that occur in the weather and living things.	• Comprehend that plants possess stomata through which gaseous exchange takes place.	• Collect pictures of a honey comb (beehive) and study its compartments and derive the meaning of the word 'cell'.
• Classify different changes occurring in nature broadly into physical, chemical, reversible, irreversible, etc.	• Explore the role of plants and animals in maintaining the balance in nature.	• Make slides of onion peel, leaf of lily, Roheo discolor and Tradescantia with the help of teacher and share observations and results.
• Carry out activities related to rusting of iron and burning of wood and observe slow and fast reaction.	• Carry out simple activity to explain the consequences of absence of photosynthesis and relating it to the interdependence in living organisms.	• Make a model of cell using different materials such as wires, pasticine, beads, etc. (group activity)
• Observe and study slow and fast reactions.	• Justify the need of other modes of nutrition in plants apart from autotrophic mode.	• Make a PPT on the comparison of plant and animal cells.
Suggested activities	• List different modes of heterotrophic nutrition in plants.	**Unit – 8 : Managing Interdependence**
• To investigate causes resulting in different kinds of changes.	**Suggested Activities:**	• Relate the existence of flora and fauna in a given area.
• To study different physical and chemical changes.	• To show that plants do not derive 'food' from the soil.	• Comprehend that different climatic conditions determine the flora and fauna.
• To investigate reversible and irreversible changes.	• Show stomata in leaf peel by preparing temporary mounts of various plants like bryophyllum, lily and rhoeo.	• Recognize inter –relationship between living and non-living
• To study slow and fast changes.	• To use counter examples in	
Unit – 11 : Movement in Plants and Animals		
• Recall that living things have the ability to move without outside help.		
• List and describe the different types		

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on movements observed in animals and plants. • Define the terms: movement, locomotion, gait, joint, streamlined, tropism. • Differentiate between movement and locomotion. • Identify and illustrate movement in plants. • Identify the parts of animals involved in movement and locomotion. • Locate joints in the human body and describe their role in movement and locomotion. • Explain the role of muscles in locomotion and movement in animals. • Identify and describe the parts and adaptive features in animals that are involved in movement and locomotion. • Carry out simple activities to show that Locomotion occurs when a body changes its position from one place to another while Movement is the change in the shape, direction, etc, of body parts. **Suggested activities** • To investigate working of our joints. • To study movement in plants.	comparison of autotrophs with green coloured animals like parrot / grasshopper, etc., to understand that the chlorophyll is a pigment and not a mere colouring matter. • To carry out Virtual practicals to show pigments in green and variously coloured leaves by using chromatography techniques. • To collect photographs of different plants like Nepenthes, Rafflesia, Cuscuta. etc., and discuss their mode of nutrition. • Plan a visit to nearby green house and find out how green house is regulated for growing plants and draw inferences. **Unit - 8 : Nutritition in Animals** • Understand the importance of food in different animals. • Comprehend on the statement, "Food in the body is yet not in the stomach". • Differentiate between nutrition in plants and animals. • Categorize/classify animals on the basis of their mode of nutrition. • Prepare an outline of various modes of intake of food.	components of the habitat. • Describe Interdependence between living organisms. • List and examine how unfavorable conditions affect lives of the organisms. • Identify and categorize man – made and natural disasters. • Relate man-made disasters to natural disasters. • Justify how human action can create conditions for natural disasters. • Prioritize responsibility to conserve wildlife. • Design campaigns for conservation of wildlife. • Classify the organisms according to their status (Endangered species). • Illustrate with examples the role of adults, children, students for Reuse, Recycle, Reduce. • Restate that natural disasters happen more infrequently as compared to man-made disasters. • Comprehend the need to maintain a balance in the Ecosystem. **Suggested Activities** • Collect information about animal

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• To investigate movement in other animals.	• List 10 commonly found animals; relate the type of food to the mode of taking it in.	behavior in relation to other animals.
Unit - 12 : Air	• Investigate and illustrate the journey of food in the alimentary canal.	• Visit National Parks/Wildlife Sanctuaries/Biosphere Reserves.
• Comprehend the nature of the atmosphere around us.	• Analyze that the utilization of food takes place only after it is digested into simple forms and absorbed by the body.	• Group Activity.
• Describe physical characteristics of air.		**Group 1**
• List the constituents of air.	• Describe the processes of digestion, Absorption, assimilation and release of energy.	• Collect pictures and information of natural disasters that have brought about extinction of wildlife (e.g., Dinosaurs, any others)
• Appreciate the importance of air to all living beings.	• Relate structure of Digestive System to its function(s).	**Group II**
• Explain the process of rusting.	• Discuss the role of various organs of ingestion, digestion, absorption and egestion.	• Collect pictures and information of the ongoing activity of mankind affecting lives of wildlife (flora and fauna) e.g., Elephants invading human territory and depleting numbers of tigers
• List various types of fuel.		
• Explain air pollution and its causes.	• Describe and interpret the difference in the digestive system of grass eating animals(herbivores).	• Role Play on human population explosion and its effect on flora.
• Explain the terms : atmosphere, respiration, photosynthesis, combustion, fuel, rusting, galvanization, air pollution.	• Understand nutrition in other animals.	• Impact of humans on the life of fauna, invasion of human territory by animals.
• Explore the key physical processes affecting weather and climate.	**Suggested Activities:**	• To make a Power Point presentation of wildlife extinction.
• Carry out simple experiments on air.	• Demonstrate the role of buccal cavity in digestion of food.	**Unit - 9 : Exploring Microorganism**
Suggested activities	• Study the pattern of teeth in human body and count the type of teeth. Create the dental formula for the same.	• Recognise the presence of organisms which are not visible to the naked eye.
• To conduct activities to study components of air.		• Explore diversity in the world of microbes and classify them on the
• To investigate air pollution.		
• To study physical processes affecting climate and weather.		

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	• Create a game on 'who stay in my body'. Highlight the microorganisms and their possible presence in human body. **Unit – 9 : Exploring Light** • Recall that light travels in a straight line. • Perform simple experiments to show the reflection of light. • Investigate the relation between the angles of incidence and the angles of reflection. • State the laws of reflection and apply them to problems. • Classify between the two types of reflection. • Explore the characteristics of image formed in a plane mirror through experiments and then list them. • Identify the two types of spherical mirrors concave and convex. • Compare and contrast between image formed in a plane mirror and spherical mirrors. • Perform experiments to understand image formed by a concave mirror for object placed at different distances from it.	basis of their distinctive features • Identify the role of microbes in various spheres of life. (medicine, industry, environment, agriculture, etc.) • Establish active and passive unique position of viruses in nature. • Comprehend the importance of microbes as recyclers. • Cite examples of microbes becoming a threat to the living world – animals and plants. • List some methods of curtailing food spoilage by microbes and relate them to the day to day activities which prevent food spoilage. **Suggested Activities** • To observe fermentation in yeast. • Compare between two samples of dough with and without yeast. • Make the mounts of the following microbes using pond water: a) slime moulds b) spirogyra c) algae d) amoeba • Identify the bacteria in the root nodules of leguminous plants.

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	• Differentiate between real and virtual image.
	
	• Recognise the use of spherical mirrors in different places.
	
	• Conclude that sunlight is composed of different colours.
	
	Suggested Activities:
	
	• Design a periscope to study how an arrangement of mirrors reflects light.
	
	• Prepare some mirror based tricks to use the properties of light. Arrange mirrors in special ways to create effects pleasing to the eye. Use these to carry out scientific investigations.
	
	• To visit a local science centre to explore the kind of mirrors on display and the tricks they play.
	
	• To play a game on mirror images in pairs. One person is the object and the other is the image. The game reinforces the concept of lateral inversion.
	
	Unit – 10 : Electric Current and its Effects
	
	• Draw an electric circuit using appropriate symbols.
	
	• Understand and elaborate the heating effect of electric current.
	
	• Name and explain the working of
		• Prepare a slide of bread mould.
		
		• Analyze different specimens showing diseases caused by microbes in plants.
		
		• Interpret the vaccination chart of a new born baby.
		
		• Explain the case study involving different samples of milk.
		
		  o milk + inoculum
		
		  o milk kept at normal temperature
		
		  o milk heated
		
		  o milk refrigerated
		
		  o milk +inoculum+ tablet of antibiotic
		
		• Collect information about different vaccination programmes launched and the diseases which have been eradicated by them.
		
		• Read and record the preservatives added to various canned foods.
		
		Unit – 10 : Light Exploration
		
		• Understand the phenomenon of refraction of light.
		
		• Explore the factors that cause refraction of light.
		
		• Trace the path of a ray of light through different transparent media like a rectangular glass slab.

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	simple devices which work on the heating effect of current.	• Apply the concept of refraction to real life examples.
	• Understand the working of an electric fuse and its importance in an electric circuit.	• Differentiate between convex and concave lens.
	• Understand and elaborate the magnetic effect of current.	• Perform experiments to show the formation of image by convex and concave lenses.
	• Make an electromagnet and explain its use in our day to day life.	• Analyse the use of different lenses for different purposes.
	• Explain the working of an electric bell.	• Understand the structure and function of human eye.
	• Perform simple activities to understand related concepts.	• Explore common defects of vision and their correction.
	Suggested Activities	• Understand the need/importance of taking care of eyes.
	• Collect information about different types of wires, switches, electric cells, etc., which are commonly used.	• Explore how visually challenged persons read or write and empathise with them.
	• To make a project on different types of fuse/MCB available in the market. The project must include information on the type of material used, rating and working of fuse and devices or circuits where different types of fuse are used.	• Perform simple activities related to refraction of light. **Suggested Activities** • Explore the working of various devices such as telescope, microscope, etc., which use convex or concave lenses. Make a report on the placement of lenses with ray diagram of their working.
	• To make a PowerPoint Presentation on the advantages and disadvantages of the heating effect of current.	• Conduct a survey in your locality on individuals suffering from the defects
	• To make a list of devices working on electric current at your home and arrange them in ascending order of	

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	consumption of electric current.(One can do this by checking the wattage on the appliances.) • To demonstrate the working of fuse to study how it breaks the circuit. • Investigate the working of an electromagnet and the factors affecting the strength of an electromagnet. **Unit - 11 : "Changes in Everyday Life": Physical and Chemical Changes** • Understand the concepts of a chemical change and a physical change. • Identify observable evidence of a physical change (e.g., change in shape, size, phase). • Identify observable evidence of a chemical change (e.g., color change, heat and/or light being given off or taken in by reactants, gas being given off, a change in odour). • Understand that mass is conserved during a physical and a chemical change. • Differentiate between a physical and chemical change. • Investigate the effects of chemical change on physical properties of a	of vision. Analyse your findings and make a tabular report on how many people suffer from different kinds of defects of vision, the cause and the remedy for the defects. • Make a powerpoint presentation on how to keep our eyes healthy and eye donation. • Make a treasure hunt game in which the clues must be in Braille format. One has to close the eyes and read the clues by feeling the dots. **Unit - 11 : Some Natural Phenomena** • Recall the structure of an atom. • Understand the production of static charges on rubbing. • Explore how charges are acquired on different objects. • Investigate the behavior of charges. • Understand the working of an electroscope. • Understand how accumulation of charges in clouds causes lightning. • Explain the precautions which need to be taken during a thunderstorm. • Understand the working of a lightning conductor.

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	substance (e.g., cooking a raw egg, iron rusting, and polymerization of a resin). • Investigate and measure the effects of increasing or decreasing the amount of energy in a physical or chemical change and relate this energy added to the motion of the particles. • Identify kinds of energy (e.g., heat, light, sound) given off or taken in when a substance undergoes a chemical or physical change. • Explain the terms: crystallization, galvanization, rusting, fermentation, sublimation, etc., with examples. • Recognise the significance of chemical changes in everyday situations, [e.g., ripening fruit, setting superglue, cooking food, etc.,] • Perform an activity for preparation of copper sulphate crystals to understand physical change. • Study various chemical and physical changes with experiments such as burning of magnesium, heating of lead nitrate, heating of iodine, heating of ammonium chloride. • Perform simple activities to classify the type of change undergone by various materials i.e., breaking of	• Understand the causes of an earthquake. • Collect information on different earthquake zones. • Explore the measures taken to minimize the destruction caused by an earthquake. **Suggested Activities** • Visit the meteorological laboratory near your locality to find out how the weather predictions are made and forecasted. • Organize a visit to a tall building which has a lightning conductor. • Have a drill/skit to demonstrate the safety measures to be taken during an earthquake. • Make a powerpoint presentation on any two earthquakes that occurred recently in the world. Include the following points in your presentation: (a) Intensity of the earthquake on the Richter scale. (b) A brief on destruction caused. (c) Impact of the earthquake on the life of the survivors. (d) Organizations that helped. Collect information about the National and International

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	chalk, heating of iron, rottening of eggs, etc. **Suggested activities:** • Perform simple experiments such as lightning a candle wick, melting wax, crushing facial tissue to a ball, adding vinegar into a beaker containing baking soda, digestion of food, etc. and classify them as a physical or a chemical change. • Perform experiments to determine which chemical reaction absorbs energy (endothermic) and which chemical reaction produces energy (exothermic). **Unit-12** **Water: 'The Universal Solvent'** • Recognize the importance of water for survival of life. • Appreciate the importance of water in food production and its avaibility. • Value water as an important renewable resource. • Define rate of percolation. • Recognize that there is a lot of water in the world but whole of it cannot be used for drinking or many other human activities.	organizations that help in re-establishment of people affected by a natural calamity. Make a report and present it in your class. If you are the member of one of such committee. what will be your plan of action? • Make a research based project on seismic zones in the world and India. **Unit 12** **The Night Sky** • Explore the phases of the moon to explain its formation. • Explain why we always see the same face of the moon. • Describe the surface of the moon. • Identify some common constellations in the night sky. • Name the planets in the solar system in order of distance from the Sun and state some facts about these. • Differentiate between a star and a planet. • Explain with diagrams how eclipses of the Sun and the Moon occur. • Describe some other members of the solar system like the asteroid, comets, meteor and meteorites.

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	• Describe sources of water and its management.	• Differentiate between natural and artificial satellite.
	• Recognize that ground water is a very small percentage of the earth's water.	• List the uses of artificial satellite.
	• Understand how important it is to take care of existing ground water.	• Locate and use information about the universe from different sources.
	• Distinguish between hard water and soft water.	**Suggested Activities**
	• Evaluate the use of commercial water softeners.	• Visit your local planetarium to explore the night sky, the motion of stars and planets.
	• Consider and evaluate the environmental and social and economic aspects of water quality and hardness.	• Carry out a project to study the position of sunrise at regular intervals during the year.
	• Perform an activity to compare the hardness of samples of water by shaking with soap solution.	• Set up an astronomy club in your class and prepare a plan of action. This would include – sharing of information and ideas, organizing night sky watch.
	• Appreciate that water of correct quality is essential for life and science.	• Gather information from different sources like books and internet on the works of some early astronomers and the impact of it to the society of that time.
	• Explain the purpose of waste water treatment.	• Explore to find out the difference between solar calendar and lunar calendar.
	• Identify and explain main physical, chemical and biological processes for water and waste water treatment.	• Prepare a travel brochure to a planet of your choice. Imagine it is year 3050 and it is now possible to travel to the planets. Study the characteristics of the planet of your choice and prepare
	• Explain the main design criteria for water and waste water treatment processes.	
	• Perform an activity related to waste water treatment.	

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	Suggested activities: • Conduct a survey at home to find out how much water individuals and families use on a weekly basis. Analyse a family's water use with a focus on ways to reduce water consumption. • Prepare a report on sewage disposal systems in your locality, area and cities, and prepare a comparative chart. • Explore by visiting an area and designing an activity to reuse the waste water by reverse osmosis process or any other process. **Unit-13** **Soil: A Natural Resource** • Describe why soil is an important dynamic natural resource. • Describe basic soil properties and soil formation factors. • Determine basic soil properties and limitations, such as mottling, permeability, by observing a soil pit. • Identify the types of soil erosion and suggest methods of reducing it. • List the various uses of soil. • Describe the composition of soil.	a travel brochure to invite people to your planet. • Prepare a powerpoint presentation on artificial satellites with their pictures and uses. **Unit-13** **Synthetic Fibres and Plastics** • Recall the meaning of the terms: natural fibers and fabrics. • Define the terms: monomers, polymers, plastics and polymerization. • Comprehend the transformation from fiber to fabric. • Explain the meaning of synthetic fibers. • Name various synthetic fibers. • Distinguish between natural and synthetic fibers. • Describe the properties of various synthetic fibers. • Appreciate the knowledge of the properties of synthetic fibers before selecting a fiber for a particular purpose. • Learn the effect of heat on various fibers.

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	• Recognize the types of soil: sandy, clayey, loamy, mixture of sand and loam.	• State the uses of synthetic fibers in daily life.
	• Develop an understanding of the soil properties that affect soil health and soil quality.	• Explain different types of plastics.
	• Discuss how soil is a factor in, or is impacted by nonpoint source pollution.	• Differentiate between different types of plastics.
	• Relate crop cultivation and type of soil.	• Appreciate the importance of biodegradable plastics over non-biodegradable ones.
	• Perform an activity to find out the moisture content of a sample soil.	• Recognize different linkages of monomers in plastics.
	• Perform activities and experiments by taking samples of soil and predict suitable cultivation activities, i.e., for cultivation of rice, wheat, etc.	• Describe the properties and uses of plastics.
	Suggested activities:	• Explore the harmful effects of excessive use of plastics on environment.
	• Perform an activity by adding water to different soil samples and prepare report of the type of soil.	• Discuss the ways to reduce usage of plastics.
	• Perform an activity of comparing earthen wares by using different soil types for objects.	• Carry out a survey in your area and name the marts where use of plastic bags is totally prohibited.
	• Determine the pH samples of different soils. Draw a pH scale and mark the pH of each sample.	**Suggested Activities:**
	• Carry out a survey and explain the interaction between soil type and plant communities as suitability for	• Collect samples of different types of synthetic fibers and study the effect of heat on them.
		• Collect different things made of plastic and classify them as thermosetting and thermoplastics.
		• Notify the effect of heat on plastic wares by carrying out an activity at

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	various land use production.	home and reason out why some plastics are microwave safe and some are not.
	Unit-14	• Explore videos on the manufacture of the fibers and share it amongst your peer group.
	Respiration in Organisms	
	• Comprehend the need for exchange of gases in all living organisms.	**Unit-14**
	• Describe process of breathing and respiration.	**Coal and Petroleum**
	• Differentiate between breathing and respiration.	• Recall the meaning of the term natural resources.
	• Relate types of respiration to the need of the organisms.	• Explain the term refining of Petroleum.
	• Examine utilization of oxygen for breaking down of assimilated food to release energy.	• Classify natural resources as exhaustible and inexhaustible resources.
	• Identify various organs involved in inhalation and exhalation in human body.	• Appreciate the historical background of the formation of coal.
	• Determine the role of diaphragm in breathing.	• Classify different types of coal based on their carbon content.
	• Restate breathing and respiration in animals living in different habitats.	• Appreciate the uses of the products of destructive distillation of coal.
	• Carry out simple activities related to breathing and respiration in living organisms.	• List the uses and properties of coke, coal tar and coal gas.
	• Reason out that exchange of gases in living organisms depends on the process of respiration and photosynthesis (plants).	• Describe the process of combustion of coal.
		• List the products of combustion of coal.

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	Suggested Activities: • Demonstrate that exhaled air has Carbon Dioxide (CO_2) [Hint- CO_2 turns lime water milky (for quick results fast and forceful exhalation helps)] • To carry out the activity related to two main processes in plants:- photosynthesis and respiration. Record the observations. • Observe breathing of fishes in an in-house aquarium and note the observations. **Unit-15** **Transporation in Plants and Animals** • Recognize the need for movement as a characteristic of living organism. • Comprehend related terms such as Transportation, Movement, Locomotion, Circulation. • Justify the need for transportation in the living world. • Describe the process of transportation in plants. • Explain the process of transportation, diffusion and osmosis in plants. • Identify various parts involved in transportation in human body,	• Relate the process of combustion of petroleum with coal. • Name various fractions of petroleum. • Comprehend the uses of various fractions. • Explain the process of Fractional distillation. • Describe the principle of Fractional distillation. • Infer the importance of non-renewable sources of energy. • Explore the harmful effects of excessive combustion of coal and petroleum. • Carry out an activity to study the process of destructive distillation of coal. **Suggested Activities:** • Visit a petroleum refinery and identify the different fractions of petroleum. • Visit a steel factory and learn the usages of coal. • Compare the availability of coal at various places in your country and draw the Bar graph. • Find petroleum refineries at various places in the country and locate them on the map.

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	• Describe human circulatory system in a simple manner. • Understand the functioning of kidney: 　- As an excretory organ. 　- As a purifier of blood. • Relate structure and function of excretory organs. • Identify different types of excretory organs found in different animals. • Explore different mechanism of excretion in lower organisms. **Suggested Activities:** • Warming up: To study. • Importance of transportation in living organism (plants and animals). • Medicines being administered orally. • Water and nutrients carried to the upper parts of the plant and food moving from leaf to other parts of the plant. • Transportation of coloured water to the upper parts of the balsam plant. • Activities related to transportation in plants by applying Vaseline on leaf surfaces which inhibits gaseous exchange, and polythene bags having vials of KOH crystals that absorbs CO_2 that inhibits diffusion of it in plants.	• Compare the usage of coal in 19th and 20th century. • Conduct a survey in the locality to know the awareness amongst people the advantages of using CNG over petrol. • See a documentary 'Incredible Truth' by Al Gore and try to find some more related videos and share it among the peer group. **Unit 15** **Combustion and Flame** • Recall the process of Combustion. • Define the term ignition temperature. • Appreciate the significance of air for combustion. • Differentiate the types of combustion on the basis of availability of oxygen. • Compare Rapid, Spontaneous and Explosive combustion. • Classify different examples of combustion observed in daily life. • Recognize the necessary conditions of combustion. • Explain the methods of controlling fire. • Recognise that attainment of ignition

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	• Hands on experience – using stethoscope listening to heart beat under different conditions(i.e., after jogging , running, mild exercises).	temperature can be made easier or difficult.
	• To study urine profile of normal person and its comparison with urine profile of diabetic person and analysis of data obtained.	• Explore the working of a simple fire extinguisher.
		• Appreciate the aesthetic sense of chemistry behind fire extinguisher by writing the chemical equation.
	Unit-16	• Identify different zones of a candle flame.
	Reproduction in Plants	• Explain the fuel efficiency in terms of calorific value.
	• Define the importance of reproduction as a process of propagation of life.	• Describe the causes of burning of fuel.
	• Comprehend sexual and asexual modes of reproduction in plants.	• Carry out an activity to prepare a simple fire extinguisher.
	• Examine and illustrate vegetative propagation in Ginger, Onion and Bryophyllum.	• Carry out an activity to deduce the necessary conditions required for combustion.
	• Identify parts of a flower.	**Suggested Activities:**
	• Compare self pollination and cross pollination.	• Prepare a survey report of people using LPG at home and contrast the advantages of using LPG over wood.
	• Define fertilization and study how an embryo is formed from a zygote.	• Prepare a simple fire extinguisher in laboratory under the teacher's supervision using baking soda and dilute hydrochloric acid.
	• Illustrate the process of fruit formation.	• Carry out an experiment to show that water can be boiled in a paper cup under the supervision of a teacher.
	• Investigate the journey of seed formation.	• Perform a magical trick to show that a

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	• Identify various agents of seed dispersal with specific examples. **Suggested Activities:** • Collect sample of plants which reproduce vegetatively and identify the part which participates in reproducing another plant of its own kind. • Collect a sample of pond water. Observe and draw the shapes of organism as seen under the microscope. • Differentiate between fruits and vegetables. List 10 to 20 fruits/vegetables. Observe the seeds and make a report about the manner of their dispersal. • In your school garden help the gardener to prepare space to grow cactus/rose corner.	wet handkerchief (dipped in alcohol) can appear to burn without burning the cloth. • Visit a neighbourhood fire station and enquire into the various means taken by the firemen to control fire. • Explore different types of burners available in the market and try to find different kinds of flames which they can give. **Unit-16** **Air And Water Pollution** • Recall the composition of air. • Define the terms: pollution and pollutants. • Explain air pollution. • List some air pollutants. • Discuss the sources of air pollutants. • Examine the harmful effects of air pollutants. • Classify different types of smogs. • Develop an understanding of Green house effect and Global warming. • Name various green house gases. • Explore the ways to reduce air pollution. • Predict the meaning of water

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		pollution.
		• Enlist the factors responsible for water pollution.
		• Describe the meaning of potable water.
		• Determine various ways to reduce pollution.
		• Carry out a survey of your local area by rising factories to find out the measures taken by them to reduce air and water pollutions.
		• Carry out simple activities to purify water which lead to reduction in air and water pollutions.
		Suggested Activities:
		• Conduct a webinar on Carbon credits and have a comparative view about the countries having maximum and minimum carbon credit.
		• Start a drive in the area to make people aware about 3 R's (Reduce, Reuse and Recycle) through posters, talks and presentations.
		• Collect the samples of water of a river near and away from a factory and test the quality of water.
		• Make a model representing greenhouse effect.
		• Conduct a symposium in your school

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		on global warming. • Visit your chemistry lab and enquire about the disposal of chlorinated and non-chlorinated waste and make a report on their disposal. • Conduct a survey in your neighborhood schools and make a report on the disposal of biodegradable and non-biodegradable waste. Ensure that two different types of bins are placed in every classroom. **Unit-17** **Cell to Organism** • Recall the characteristics of living beings. • Comprehend the importance of reproduction in the continuation of species. • Categorize reproduction as Asexual and Sexual reproduction. • Describe and draw the structure of male and female reproductive system. • Relate the structure of reproductive organs with their functions. • Describe the process of fertilization. • Identify male and female gametes. • Define the term fertilization. • Outline the steps of development of

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		foetus from a zygote.
		• Diagrammatically present the steps of development of a zygote.
		• Differentiate between external and internal fertilization.
		• Distiguish between ovipary and vivipary.
		• Understand that asexual reproduction takes place in microscopic organisms.
		• Describe and draw the process of Budding and Binary Fission.
		• Appreciate the contribution of technology in medicine (e.g., IVF) and childless couple.
		• Imagine the impact of cloning of different organisms on society.
		Suggested Activities:
		• Explore and collect pictures/video clips of various modes of asexual reproduction in plants and animals.
		• Organise a debate on cloning vs. biodiversity.
		• Organise a group discussion on "The appropriate age and importance of sex education" in schools.

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		Unit–18
		Landmark in the Human Development
		• Identify different physical, emotional and mental changes that occur during teenage.
		• Define and understand the term 'puberty' and 'adolescence and secondary sexual characters.
		• Discuss the difference between secondary sexual characteristics of human male and female.
		• Differentiate endocrine glands from exocrine glands.
		• Locate the functions of different endocrine glands in a human body.
		• Describe the main functions of each glands and the role of hormones in maintaining homeostasis.
		• Correlate the role of pituitary gland as master gland.
		• Identify different disorders/diseases caused due to malfunctioning of different glands and interpret their symptoms.
		• Recognise the importance of reproductive health and importance of nutritional needs of adolescents.
		• Discuss the possible role of hormones in life cycle of animals other than humans. Example- butterfly and frog.

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		Suggested Activities: • A counseling session with school counselor on development of secondary sexual characters and how to cope with so many changes of adolescent age. • An open house discussion on 'dealing with adolescents' and life skill education. • List out nutritional requirements of adolescents for growth and development. • Comparing their own photographs as a young child and the present photograph and knowing the difference on their own. • Study different stages of life cycle of butterfly by collecting larvae from tree or plants and keeping it inside a bottle (mouth covered with cloth) and feeding them with same leaves from where they had picked up the larva. • Study of diabetic patient and relate the symptoms with the status of insulin secretion. **Unit-19** **Technology in Food Production** • Recognize agriculture as the biggest industry in the world.

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		• Distinguish between various categories of crop plants on the basis of season and the part which is used the most.
		• Identify the benefits that horticulture has brought to the farmers as well as the economy of a country.
		• Compare the conventional and modern methods of agricultural practices and relate them to the progress made in the field of agro sciences and technology.
		• Interpret the link between scientific advancement and the development of high yielding methods using scientific methods.
		• Describe the role of different agricultural revolutions in making the countries self sustainable.
		Suggested Activities:
		• Visit a nearby farm and ask the farmers which one of the following they would prefer to use – chemical fertilizers or farm manures and also note the reasons for their preference of various crops.
		• Collect information about the tools that are used by women and men farmers respectively for different agricultural practices.

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		• Explore which irrigation method they apply for different types of crops and try to relate it with the availability of water in that area.
		• Visit an agriculture research institute and find out how the agriculture scientists involved in developing new varieties of high yielding crops.
		• Make a project report on agricultural landmarks and how they have helped to improve the country's economy.

Mathematics

The focus of Learning Mathematics at the middle school is to develop core mathematical skills in all learners. The curriculum will help students to develop strategies that improve their logical thinking and analytical ability. These include the ability to approximate and estimate, to use trial and improvement techniques, look for patterns and make hypotheses. The Mathematics Lab activities will be an integral and a compulsory part of the curriculum.

Specific learning objectives

Students will develop the ability to :

Number System

- ❖ Extend number systems to integers, understand integers as a position on a number line, understand its properties and perform operations

- ❖ Represent rational numbers on the number line, operations on rational numbers, finding rational numbers between two given rational numbers, understand the properties of rational numbers

- ❖ Make exponential notation for simple integral number powers of 10, (standard (scientific notation) laws of exponent

- ❖ Understand squares, square roots, cubes, cube roots: exponential notation and use of radical sign

- ❖ Make prime factorisization to find square and cube roots, division method for square roots, estimation of squares and cube roots

- ❖ Solve advanced problems on percentages including profit and loss, overhead expenses, discount, tax

- ❖ Apply divisibility rules

- ❖ Find percentages, knowing that percentage means `number of parts per 100', understand the multiplicative nature of percentages

- ❖ Solve simple problems involving ratio and proportion

- ❖ Solve simple problems using unitary method

- ❖ Solve simple problems on inverse variation including time and work, speed and distance

Algebra

- ❖ Understand the role played by symbols in algebraic expression

- ❖ Understand transformation of algebraic expressions; simplify by collecting like terms, by solving brackets, by taking out a single common factor, by expanding the product of two expressions

- ❖ Appreciate the differences between the words equation, formula, identity, and expression

- ❖ Set up and solve simple linear equations

- ❖ Use formula, substitute numbers into a formula, derive formula

- ❖ Understand and use algebraic identities to factorize, divide polynomials

- ❖ Calculate simple interests, compound interests as an extension of simple interest

Geometry

- ❖ Use notation and symbols and vocabulary related to line, line segment, ray, open and closed figures, interior and exterior of closed figures, curvilinear and linear boundaries, angles, triangles, quadrilaterals, circle, polygon

- ❖ Identify pairs of angles (linear, supplementary, complementary, adjacent, vertically opposite), use properties of parallel lines with transversal, properties and proofs of triangles

- ❖ Understand, prove and use Pythagoras theorem for right angled triangle

- ❖ Understand shapes: Cubes, cuboids, cylinder, sphere, cone, prism, pyramid. Visualise and draw 2D and 3D shapes, visualise 3D from 2D drawings and draw. Apply Euler's formula

- ❖ Understand and use properties of different types of quadrilaterals

- ❖ Construct line segment, circle, perpendicular bisector, construction of angles, angle bisector, making angles of 30°, 45°, 90°, 120°, angle equal to a given angle, drawing a line perpendicular to a given line from a point on the line, outside the line, line parallel to given line from a point outside it, simple triangles, construction of quadrilateral

- ❖ Understand the concept of perimeter and area: rectangle and square, triangle, parallelogram, trapezium, rhombus and conversion of units to area measure

- ❖ Acquire knowledge about volume and surface area cube, cuboid, cylinder

❖ Convert area measures including cm^2, m^2 and km^2 and volume measures cm^3 and m^3

Data Handling

❖ Interpret tables, lists, charts and graphs, explaining and justifying inferences and deductions.

❖ Identify the primary data, collect, organize, tabulate data. Specify a problem and plan and carry out the four stages of the data handling process: plan, collect, organize, interpret; identify what further information may be needed to answer the enquiry

❖ Communicate / present findings mathematically making use of diagrams, charts and text

❖ Understand mean, median, mode of ungrouped data and discrete data : as a measure of central tendency

❖ Recognise and understand difference between grouped discrete data and continuous data

❖ Listing outcomes for single events in probability and notation of an event as P(E)

❖ Understand use of the probability scale, identify mutually exclusive events, studying the probability by aggregating numbers over a large number of repeated events

SYLLABUS BIFURCATION
Mathematics
CLASS-VI

S.NO.	TERM - I	S.NO.	TERM - II
1	Number System : Knowing our numbers	6	Basic Geometry
2	Number System : Whole numbers and playing with numbers	7	Understanding Elementary Shapes (2-D and 3-D)
3	Number System : Negative numbers and Integers	8	Mensuration
4	Fractions and Decimals	9	Data handling
5	Algebra		

Syllabus
Unit 1: Knowing our Numbers

Numbers up to 5 digits	Consolidating the sense of 5 digit numbers, place value of numbers, estimation of numbers to the nearest tens, identifying smaller and larger of the given numbers
Place value of numbers	Recapitulate the concept of place value and extend it to the use of large numbers. Use of connectives <,=,>
Application of number operations	Word problems on number operations involving large numbers up to a maximum of 5 digits in the answer after all operations
Approximation of large numbers	Introduction to the sense of largeness and familiarity with large numbers up to 8 digits

Unit 2: Whole Numbers and Playing with Numbers

Simplification of Brackets	To identify the types of brackets and apply the rules of the order of simplification of the brackets.

Multiples and Factors	Define and recapitulate the multiples and factors of numbers. To state with examples the divisibility rules of 2, 3, 4, 5, 6, 8, 9, 10, 11. The students may be asked to observe the patterns followed. They may be helped in deducing some and then asked to derive others that are a combination of the basic patterns of divisibility
Types of Numbers	Even numbers, Odd numbers, Prime numbers, Composite numbers, Co-prime numbers, Prime factorization. Verification of the fact that every number can be written as product of prime factors.
H.C.F. , L.C.M.	Finding out H.C.F. and L.C.M. of given numbers, prime factorization and division method, verification of the property H.C.F. x L.C.M. = Product of two numbers
Properties of various types of numbers	Recapitulate the concept of natural numbers, whole numbers, properties of numbers (commutative, associative, distributive, additive identity, multiplicative identity), Introduction to number line
Patterns	Seeing patterns, identifying and formulating rules to be done by students

Unit 3: Negative Numbers and Integers

Introduction to Negative Numbers	Introduction to the origin and need of negative numbers, models of negative numbers, its connection to the real life
Extending a Number Line	Extending a number line to represent the negative numbers, Ordering of negative numbers
Introduction to Integers	Introducing integers, identification of integers on the number line, addition and subtraction of integers
Operations on Integers	Addition and subtraction of integers, showing the operations on the number line, for example

| | addition of negative integer reduces the value of that number |
| | Comparison of integers and understanding the ordering of integers |

Unit 4: Fractions and Decimals

Definition of a Fraction	Defining a fraction as a part of the whole
Representation of a Fraction	Representing a fraction pictorially and on the number line Representing fraction as division
Types of Fractions	Define proper fraction, improper fraction, mixed fraction, equivalent fraction
Operations on Fractions	Comparison of fractions, addition of fractions, subtraction of fraction. Avoid large and complicated unnecessary tasks
Introduction to Decimals	Review of the idea of a decimal fraction, place value in the context of decimal fraction Representation of decimals on the number line Inter conversion of fractions and decimal fractions (Avoid recurring decimals at this stage)
Operations on Decimals	Comparison of decimals, addition and subtraction of decimals, multiplying and dividing fractions and decimals by a whole number. BODMAS with reference to fractions and decimals
Estimation	Estimation with fractions and decimals
Word Problems	Word Problems involving addition and subtraction of decimals on money, mass, length and temperature
Introduction to the Concept of Ratio	Introducing the concept of ratio and proportion as equality of two ratios. Use of unitary method (with direct variation only). Word problems on the above
Application of Decimals	Scientific notations, concept of significant figures

Unit 5: Algebra

Introduction to Variables and Constants	Introduction to the term variable through patterns and through appropriate word problems and generalizations
Introduction to Algebra	Introducing algebra through generalizations, patterns. Introduction to an algebraic expression, its terms and coefficients, like and unlike terms
Operations on Algebraic Expressions	Addition and subtraction of algebraic expressions. Value of an algebraic expression
Linear Equation in One Variable	Simple direct use of symbols in as variables in one term equations e.g., 5xa=10. Word problems on ratio and proportion using common sense strategies

Unit 6: Basic Geometry

Introduction to Geometry	Reflect and appreciate the application of geometry in everyday life
Introduction to a Line	Defining a line, line segment and ray. Drawing all of them. Pair of straight lines- intersecting and parallel; perpendicular lines
Introduction to an Angle	Defining an angle, its vertex, arm, interior and exterior. Types of angle: acute angle, obtuse angle, right angle, straight angle, reflex angle, complete angle and zero angle. Measure of angle, Angle bisector
Constructions	Drawing a perpendicular to a given line from a point on the line and outside the line Construction of angles equal to the given angle using compass. Construction of angles of measure 60,120,30,90,45 using compass
Defining a Triangle and its Components	Triangle — vertices, sides, angles, interior and exterior, altitude and median
Defining a Quadrilateral and	Quadrilateral — Sides, vertices, angles, diagonals,

its components	adjacent sides and opposite sides (only convex quadrilateral)
	Interior and exterior of a quadrilateral
Defining a Circle and its Components	Circle – Centre, radius, diameter, arc, sector, chord, segment, semicircle, circumference, interior and exterior
	Construction of circle

Unit 7: Understanding Elementary Shapes (2-D and 3-D)

Open and Closed Figures	Observe the shapes around. Talk about them in reference to their boundaries. Defining open and closed figures. Interior and Exterior of a closed figure
Defining a Polygon	Defining curvilinear and linear boundaries. Introduction to simple polygons, both regular and irregular (up to Octagons)
Triangle	Definition of a triangle, Classification of triangles on the basis of sides and angles
Quadrilaterals and Types of Quadrilaterals	Defining a quadrilateral and its types- Trapezium, Parallelogram, Rectangle, Square, Rhombus
Identification of 3-D Shapes	Identification of Cubes, Cuboids, Cylinder, Sphere, Cone, Prism (triangular), Pyramid (triangular and square); locating them in the surroundings
Elements of 3D Figures	Identifying the faces, edges and vertices of 3D figures
Nets of 3D Figures	Create solids namely cube, cuboids, cylinder, cones and tetrahedrons from their nets
Symmetry	Observe and identify the 2D symmetrical objects for reflection symmetry. Taking mirror images of simple 2D objects. Recognizing symmetry (identifying axes)

Unit 8: Mensuration

Concept of Perimeter and Introduction to Area

Introduction to Perimeter	Introdcuing perimeter using different shapes Understanding that shapes of different kinds may have the same perimeter through examples Perimeter of a rectangle and square as a special rectangle; deducing the formulae through patterns and then generalisation
Introduction to Area	Introduction to the concept of area. Area of a rectangle and a square. Counter examples to different misconcepts related to perimeter and area
Units of Measurement	Make sensible estimates of measures using standard units of length, mass and capacity

Unit 9: Data Handling

Data	Definition of data, representation of discrete data, collection and organization of data- examples of organizing it in tally bars and a table
Pictograph	Definition, need for scaling in pictographs, construction and interpretation
Bar Graphs	Construction of bar graphs for a given data and interpretation of bar graphs. Interpretation of tables, lists, charts and graphs

SYLLABUS BIFURCATION
Mathematics
CLASS - VII

S.NO.	TERM-I	S.NO.	TERM-II
1	Integers	7	Geometry: Understanding Shapes
2	Fractions and Decimal Numbers	8	Symmetry
3	Introduction to Rational Numbers	9	Representing 3-D in 2-D
4	Powers	10	Congruence (with constructions)
5	Algebra	11	Mensuration
6	Ratio and Proportion	12	Data handling

Syllabus
Unit 1: Integers

Content	Learning Objectives
Multiplication and Division of Integers	Introducing multiplication and division of integers through patterns. Showing that division by zero is meaningless
Properties of Integers	Properties of addition and multiplication of integers viz closure, commutative, associative, distributive through patterns Counter examples to show that the properties do not hold good for subtraction
Application of Number Operations	Word problems on number operations for integers
BODMAS	Recapitulating and applying the BODMAS rule

Unit 2: Fractions and Decimal

Content	Learning Objectives
Multiplication of Fractions	Recapitulate the concept of fractions and its types; addition, subtraction and comparison of two or more fractions. Multiplication of two given fractions

Fraction as an Operator	To apply fraction as an operator, to find part of a given quantity, reciprocal of a fraction
Division of Fractions	To define division of fractions, to apply division of fractions in terms of reducible to multiplication
Applications of Fractions in Problem Solving	Word problems involving fractions including mixed fractions; understanding the importance of fractions in real world problems
Multiplication of Decimals	Recapitulate the concept of decimals as a fraction; addition, subtraction of two or more decimals Multiplication and division of decimal fractions
Conversion of Units	Application of decimal fraction in conversion of units of length and mass
Applications of Decimals in Problem Solving	Word problems involving decimal fractions understanding the importance of fractions in real world problems. Application of the BODMAS rule in solving the problems involving fractions and decimals

Unit 3: Introduction to Rational Numbers

Content	Learning Objectives
Introduction to Rational Numbers	Introduction to rational numbers and its need as an extension of fractions
Operations on Rational Numbers	Addition, subtraction, multiplication and division of rational numbers with reference to the operations on fractions
Representation of Rational Number as Decimal	Represent rational number as a decimal, as an extension of representation of fraction, as decimal
Representation of Rational Numbers on the Number Line	Recapitulate the representation of fractions on the number line and extend the same for rational numbers (simple cases only)
Applications of Rational Numbers in Problem Solving	Word problems involving rational numbers using all the operations.

Unit 4: Powers

Content	Learning Objectives
Exponents	Defining an exponent for natural numbers only
Laws of Exponent	Arriving to the generalization of laws of exponents through patterns. Statements of the laws of exponents: (i) $a^m a^n = a^{m+n}$ (ii) $(a^m)^n = a^{mn}$ (iii) $a^m / a^n = a^{m-n}$, where m – n is a natural number
Applications of Laws of Exponents	Applying the laws of exponents to solve the problems with different operations. Writing large numbers in standard form using the laws of exponents and vice versa

Unit 5: Algebraic Expressions

Content	Learning Objectives
Formation of Algebraic Expressions	Recapitulate algebraic expressions and terms involved. Generate simple algebraic expressions involving one or two variables. Identify constants, variables, coefficients, powers
Like and Unlike Terms	Defining like and unlike terms through examples; defining degree of an algebraic expression (degree ≤3)
Operations on Algebraic Expressions	Addition and subtraction of algebraic expressions with integral coefficients. Multiplying single term over a bracket, taking out single term common factors, expanding the product of two linear expressions (binomial by binomial)
Define and Distinguish between Various Terms used with Algebraic Expressions	Distinguish between the terms equation, formula, expression and identity
Linear Equations	Simple linear equations in one variable with two operations (avoid complicated coefficients) Verification of the accuracy of the answer by

	substitution. To set up and solve simple linear equations in which unknown appears on both sides

Unit 6: Ratio and Proportion

Content	Learning Objectives
Definition of Ratio	Recapitulate the concept of ratio. Ratio in simplest form, comparison of ratios
Definition of Proportion	Recapitulate the concept of proportion. Continued proportion, Mean proportional
Unitary Method	To understand the concept of unitary method and apply it in various problems
Percentage	Introduction to the concept of percentage Understanding percentage as a fraction with denominator 100. Converting fractions and decimals into percentage with denominator
Conversions Into/from Percentage	Converting fractions and decimals into percentage and vice-versa
Applications in Problems Solving	Applications of ratio and proportion, and percentage in profit and loss (single transactions only). Applications to simple interest (time period in complete years)

Unit 7: Understanding Shapes

Content	Learning Objectives
Angles	Understanding the concept of an angle, pairs of angles viz. linear, supplementary, complementary,adjacent, vertically opposite (Verification of these angles)
Parallel Lines	Properties of parallel lines with transversal; alternate angles, corresponding angles, interior and exterior angles
Triangles	Properties of triangles; angle sum property (with notions of proof and verification through paper folding)

	Exterior greater then the angle property. Sum of two sides of a triangle is >third side
Pythagoras Theorem	Verification of Pythagoras theorem and its applications

Unit 8: Symmetry

Content	Learning Objectives
Definition	Recapitulate symmetry and various lines of symmetry, recalling reflection symmetry
Introduction Rotational Symmetry	Introduction to the concept of rotational symmetry, observations of rotational symmetry of 2-D objects (90°,120°,180°). Operation of rotation through 90° and 180° of simple figures. Examples of figures with reflection and rotational symmetry

Unit 9: Representing 3D in 2D

Content	Learning Objectives
2D and 3D Figures	Drawing 3D and 2D figures in 2D showing all the faces
Identification 3D figures	Identifying 3 D pictures of various objects and matching them with their names
Components of 3D figures	Identification and counting of vertices, edges and faces; nets(for cubes, cuboids, cylinders and cones)

Unit 10: Congruence

Content	Learning Objectives
Introduction to the Concept	Introducing the concept of congruence through examples of superimposition. Extend congruence to simple geometrical shapes e.g., triangles, circles
Properties of congruence	Introduction to the properties of congruence viz. SSS, SAS, ASA, RHS. Verification of the properties
Constructions	Constructions using scale, protractor and compass: Construction of a line parallel to a given line and from

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	a point outside it (Simple proof as remark with the reasoning of alternate angles)
	Constructions of simple triangles
Please note: Constructions to be included simultaneously in chapters where they appear.	

Unit 11: Mensuration

Content	Learning Objectives
Perimeter	Recapitulate the concept of perimeter. Introduce the idea of Circumference of a circle
Area	Recapitulate the concept of area, introduce area of a circle, square, rectangle, parallelogram
Area Bounded between two Figures	Area between two rectangles and two concentric circles

Unit 12: Data Handling

Content	Learning Objectives
Collection and Organisation	Collection and organization of data- choosing the data to collect for a hypothesis testing
Mean, Median and Mode	Mean, Median and Mode of an ungrouped data- understanding what they represent
Bar Graph	Constructing bar graph and reading the same
Case Study	Specify a problem; plan and carry out the four stages of data handling process: Plan, collect, organize and interpret. Identify what further information may be needed to answer the enquiry
	Identify the primary data that needs to be collected in discrete data: collect, organize and tabulate data
Probability	Informal introduction to probability using data through experiments. Notion of chance in events like tossing coins, dice, etc. Tabulating and counting occurrences of 1 through 6 in a number of throws. Comparing the observation with that of a coin. Notion of randomness

SYLLABUS BIFURCATION
Mathematics
CLASS - VIII

S.NO.	TERM-I	S.NO.	TERM-II
1	Rational Numbers	7	Algebraic Expressions, Identities and Factorization
2	Exponents and Powers	8	Ratio, proportion and percentage
3	Squares and Square Roots, Cubes and Cube Roots	9	Direct and Inverse Proportion
4	Linear Equations in one variable	10	Representing 3D in 2D
5	Understanding Quadrilaterals and Constructions	11	Playing with Numbers
6	Mensuration	12	Data Handling

Syllabus
Unit 1: Rational Numbers

Content	Learning Objectives
Definition and operations on rational numbers	Recapitulate the definition of rational number; addition, subtraction, multiplication and division of two rational numbers.
Properties on Rational Numbers	State and verify the properties of addition, subtraction, multiplication and division of rational numbers.
Representation of rational numbers on number line	Representing a given rational number on the number line; representing the sum and difference of two rational numbers (with same denominator) on a number line.
Finding two or more rational numbers between two given rational numbers	Given two rational numbers, find another rational number between them by mean method and more than two by the method of equivalent rational

	numbers.
BODMAS	Recapitulating and applying the BODMAS rule
Applications of rational numbers in problem solving	Word problems involving rational numbers using all the operations.

Unit 2: Exponents and Powers

Content	Learning Objectives
Exponents	Recapitulate an exponent for natural numbers only.
Laws of exponent	Arriving to the generalization of laws of exponents through patterns. Statements of the laws of exponents: (i) $a^m \times a^n = a^{m+n}$ (ii) $(a^m)^n = a^{mn}$ (iii) $a^m / a^n = a^{m-n}$, where m – n is a natural number Extending the above laws for negative exponents and large exponents. Defining Multiplicative inverse w.r.t. exponents.
Applications of Laws of Exponents	Applying the laws of exponents find an unknown exponent. To solve the problems involving exponents with different operations. Writing very large and small numbers in standard form using the laws of exponents and vice versa.

Unit 3: Squares and Square Roots; Cubes and Cube Roots

Content	Learning Objectives
Introduction to squares	Recapitulate the concept of squares of numbers in reference to the powers of 2. Defining a perfect square number.
Properties of squares of	Through examples, generalize the properties of

natural numbers	square of natural numbers. Introduce Pythagorean Triplet
Square Root of a given number	Recapitulate the term prime factors and find the square root of a perfect square (natural numbers and non negative rational numbers) by prime factorization method. Through examples generalizing the number of digits in a perfect square number. Finding the square root of a perfect square and non perfect square by long division method. Square root of a decimal number.
Estimation of square root	Estimating the square root of a given whole number to the nearest whole number
Applications of square and square root of a number	Word problems involving squares and square roots; understanding its importance in real world problems.
Introduction to Cube of a number	Recapitulate the concept of cubes of numbers in reference to the powers of 3. Defining a perfect cubic number.
Properties of cubes of natural numbers	Through examples, generalize the properties of cube of natural numbers.
Cube Root of a given number	Find the cube root of a perfect cube (both positive and negative numbers) by prime factorization method.
Applications of cubes and cube root of a number	Word problems involving cubes and cube roots; understanding its importance in real world problems.

Unit 4: Linear Equations in One Variable

Content	Learning Objectives
Linear equations	Recapitulation of Linear Equations in one variable. Solution of a linear equation with linear expression on one side and numbers on the other and extending the concept to variables on both sides of the equation.
Solution of Linear Equations	Extend the concept to solution of linear equations expressed in terms of rational expressions. Solution of equations reducible to linear form.

Applications of Linear Equations	Applying linear equations in one variable to solve the real life problems.

Unit 5: Linear Understanding Quadrilaterals and Constructing Quadrilaterals

Content	Learning Objectives
Introduction to term polygon and its types	Explain the difference between polygons and non polygon figures; convex and concave polygons through examples. Classification of the types of polygons, with their names up to 10 sided polygons with a special reference to quadrilateral and its types.
Angle sum property of a polygon	Generalizing the angle sum property of a polygon from that of a triangle through paper folding.
Types of Quadrilaterals with their properties	Definition of trapezium, kite and their properties. Definition of parallelograms and its properties as a recapitulation of parallel lines and its properties with the transversal.
Types of parallelograms	Defining a rhombus, rectangle and a square as a special parallelogram. Properties of the above.
Construction of Quadrilaterals	Construction of a Quadrilateral when i. Four sides and one diagonal are given ii. Two diagonals and three sides are given iii. Two adjacent sides and three angles are given. iv. Three sides and two included angles are given

Unit 6: Mensuration

Content	Learning Objectives
Area of 2-dimensional	Recapitulate the concept of area, area of a square,

figures	area of a rectangle, area of a circle and area of a parallelogram. Introduce area of a triangle, trapezium, quadrilateral, parallelogram and regular polygon.
Area of 3 dimensional figures	Lateral/ Curved Surface Area of a cuboid, cube, right circular cylinder.
Volume of 3 dimensional figures	Volume of a cuboid, cube, right circular cylinder (solid right circular cylinder and hollow right circular cylinder)
Applications of volume and surface area	Apply the formulae of the volume and area of a cube, cuboid and right circular cylinder in practical problems

Unit 7: Algebraic Expressions, Identities and Factorization of algebraic expressions

Content	Learning Objectives
Algebraic expression	Recapitulate an algebraic expression, constant, variable, like and unlike terms. Addition and subtractions of algebraic expressions
Multiplication of algebraic expressions	Multiplication of two monomials, a monomial with a binomial, a binomial with a binomial and a trinomial with a binomial.
Algebraic Identities	Defining an Identity through examples. Arriving at the formulae through paper cutting lab activities for the following identities: $$(a + b)^2, (a - b)^2, a^2 - b^2$$ Applications of the above identities to solve numerical and algebraic problems
Factorization	Recapitulate factorization of natural numbers. Factorization of monomials, finding the H.C.F. of monomials. Factorization of the expressions which are other than monomials by

	i. the method of common factors and by regrouping ii. as an application to the above identities and iii. factorization of trinomials of degree 2 by the method of splitting the middle term (simple cases only)
Division of two algebraic expressions	Dividing two polynomials by factorization method (simple cases only)

Unit 8: Comparing Quantities

Content	Learning Objectives
Ratio and Proportion	Recapitulate ratio and proportion. Recapitulate the applications of the above in daily life problems.
Percentage	Recapitulate the concept of percentage. Introduce increase or decrease of percentage
Profit and Loss	Application of percentage to find the profit percentage and loss percentage
Sales Tax and Value added tax (VAT)	Application of percentage to find Sales Tax and Value added tax (VAT)
Compound Interest	Recapitulate the concept of Simple Interest. Introduce compound interest as an extension to simple interest. Calculation of compound interest with rate of interest compounded annually and semi annually.

Unit 9: Direct and Inverse Proportion

Content	Learning Objectives
Direct Proportion	Introduction to direct Proportion. Application of direct Proportion in real life situations
Inverse Proportion	Introduction to inverse Proportion. Application of inverse Proportion in real life situations

Mixed problems	Identifying the questions on direct and inverse Proportion and application of the same.

Unit 10: Representing 3 D in 2D

Content	Learning Objectives
Identification of 3-D objects	Recapitulation of the components of various 3- D objects including prisms and pyramids
Different views of 3 –D objects	Finding out different vies of 3- D objects from different positions
Introduction to Map	Identify different symbols in a given map, draw simple route maps
Polyhedron	Introduction to polyhedron with a special reference to prism and pyramid and its components
Euler's Formula	Introduction to Euler's formula through activities

Unit 11: Playing With Numbers

Content	Learning Objectives
General form of a number	Writing the expanded form of a number and the that of the number formed by reversing its digits.
Letters for digits (decoding the digits from letters)	Using letters for digits to solve puzzle games
Divisibility tests	Applying the divisibility rules to find the value of unknown number

Unit 12: Data Handling

Content	Learning Objectives
Graphical representation of data	Recapitulate the representation of ungrouped data in a bar graph. Introduction to double bar graph and reading the same

Grouped data	Grouping data by frequency distribution table. Frequency distribution table for ungrouped data and grouped data. Class interval, upper and lower limit class size (continuous class intervals only)
Histogram	Graphical representation of grouped data using frequency distribution table. Concept of Jagged line to be introduced
Pie Chart	Construction of pie chart using central angle of a sector as a fraction of the area of the circle
Probability	Recapitulate the concept of probability. Formal introduction to probability using the terms random experiment and equally likely outcomes. Building the definition through examples.

Information and Communication Technology

Globalization and technological change processes have created a new global economy "powered by technology, fueled by information and driven by knowledge." The emergence of this new global economy has serious implications for the nature and purpose of educational institutions. As the half-life of information continues to shrink and access to information continues to grow exponentially, schools cannot remain mere venues for the transmission of a prescribed set of information from teacher to student over a fixed period of time. Rather, schools must promote "learning to learn,": i.e., the acquisition of knowledge and skills that make possible continuous learning over the lifetime. "The illiterate of the 21st century," according to futurist Alvin Toffler, "will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn."

Information and communication technologies (ICTs)- have been touted as potentially powerful enabling tools for educational change and reform. When used appropriately, different ICTs are said to help expand access to education, strengthen the relevance of education to the increasingly digital workplace, and raise educational quality by, among others, making teaching and learning into an engaging, active process connected to real life.

ICT Policy

Integrating ICT in a school environment is a mindset towards preparing students for the global challenges of life. It is an approach and a strategy which equips a learner with a tool to learn. The effective integration of ICTs into the educational system is a complex, multifaceted process that involves not just technology but also curriculum and pedagogy, institutional readiness, teacher competencies, and long-term financing, among others.

Implementation of Technology

- providing a time-table for the subject called technology, which is taught by teachers with particular knowledge and skills. These teachers may come from a range of disciplines;

- developing a school approach which integrates units of study, or modules, of technology education in a systematic, co-ordinated way, across the curriculum, involving teachers from a range of disciplines.

Four principal rationales for introducing computers in schools:

- The pedagogic rationale asserts that computers assist the teaching-learning process and enhance the instruction of traditional subjects in the curriculum.

- The catalytic rationale sees the introduction of computers as improving the overall performance of schools, thus giving a positive impact to the education system in general.

- The social rationale is concerned with the overwhelming importance of the computer in modern society that seems to make it imperative for all students to become familiar with it and accept it in everyday use.

- The vocational relates the need for computer education to the possibility of better access to the job market. This sees the teaching of computer applications or programming as providing skills vital for employment.

How can Computers be used in classrooms?

School computers are being used in many different ways. Educational leapfrogging, however, is only possible if the potential of hardware and software is fully exploited. Computers can be used as:

- **Teaching tool for the development of intellectual and thinking skills -** Computers may be used for interactive games and real world simulations i.e., Interdisciplinary comprehensive explorations that cannot be provided by any medium other than the computer.

- **Communication tool -** The use of computers in the classroom help students get used to email and facilitates communication among students, teachers, etc., both within the class and outside the class. They learn to communicate via Internet, be it for emailing with another class working on similar subjects/projects, especially if a school network exists, or be it for consulting an expert or another "significant person" on issues that arise during coursework.

- **Gaming tool -** Computers are used for games, especially in primary education where a playful approach to computers helps students prepare for future computer use and stimulates their creativity and imagination.

- **Research tool -** Computers are used to provide students with access to information on the Internet. The Internet facilitates gathering data for class projects, taking online excursions to travel reports and photos from various countries, reading work written by other students, following up on current news and issues, reading fiction, taking virtual field trips to institutions such as museums on the Internet, etc.

- **Training tool for repetitive tasks -** This includes the use of drill and practice programmes in the fields of reading, grammar, or simple arithmetic. This also includes solving equations, studying irregular verbs, learning vocabulary in a foreign language, spelling, recalling historical dates, etc.

- **Administrative Tool -** Teachers themselves may use computers for administration tasks, production of documents, and the creation of lessons.

  This includes keeping of records, manipulating information, producing individual letters to parents or a class newsletter, creating customized follow-up work for lessons, making personalized certificates of achievement, creating student lists or name tags, etc.

- **Teaching tool for computer use in itself -** Students have to be prepared for computer used in their future lives, i.e., develop easiness in dealing with both software and hardware tools. The former includes word processing, and dealing with spreadsheets, databases as well as graphics applications that they are likely to encounter at their future work place.

The curriculum for Classes VI to VIII includes the basics of computer science, understanding of the paid and free software along with the Website Designing, Photo Editing Software, Animation Software and Programming Languages such as QBasic and Visual Basic. Moreover, student will be apprised with the networking technologies and societal impacts of ICT.

The contents are based on extensive feedback from teachers and on the latest trends in computer education. A special care has been taken to update facts and figures and to include information about latest terminologies, packages and technologies. We have included presentations to aid the teachers in delivering the content. For students there are assignments at the end of each unit. Moreover, different kinds of activities such as transdisciplinary activities, Life Skill activities and Critical Thinking activities are included to enhance the logical understanding of the concepts.

Class VI
Information and Communication Technology
Term-wise Syllabus

Term I		Term II	
Unit	**Name of the unit**	**Unit**	**Name of the unit**
1	Let us Explore	5	Animations in Slides
2	Operating Systems	6	Reviewing Presentations
3	Application Software	7	Problem Solving
4	Learning Impress	8	Project

Class VII
Information and Communication Technology
Term-wise Syllabus

Term I		Term II	
Unit	**Name of the unit**	**Unit**	**Name of the unit**
1	Let us Explore	5	Spreadsheets-I
2	Identifying Networked Resources and Computers	6	Editing and Formatting
3	Programming with QBasic-I	7	Project
4	Programming with QBasic-II		

Class VIII
Information and Communication Technology
Term-wise Syllabus

Term I		Term II	
Unit	**Name of the unit**	**Unit**	**Name of the unit**
1	Let us Practice	5	HTML-I
2	Network security	6	HTML-II
3	Cyber World	7	Let us Integrate
4	Spreadsheets – II	8	Create the Future

Information and Communication Technology Class VI			
ICT Course Learning Outcomes (Knowledge (30%), Skill (70%)) + Aptitude	**Pedagogy**	**Tools**	**Technology**
Abilities • Build "MyComputer" and specify hardware and software. • Operating System to manage computer resources. • Application Software – TuxPaint,-Writer, Impress, and more (explore). • Impress: Design • Impress: Animation – Custom Animation Effects, Advance slide on click, automatically after specified time. • Review Presentation – Spell Check, Insert Comments, Protect presentation with password. • Elementary Problem solving skills using Flowcharts. • Creating a project using-Impress and E-mail to a friend for peer review and collaboration.	1. Creative thinking 2. Psychometric Progression 3. Exploratory learning 4. Communicating with ethics 5. Logic for problem solving 6. Project based learning	1. Topic based educational software 2. Tuxpaint software 3. Writer 4. Impress 5. Sample creative works	Computer System with 1. Internet connecti-vity 2. Preloaded OS and requisite software Smartboard+ Projector

Information and Communication Technology Class VII			
ICT Course Learning Outcomes (Knowledge (35%), Skill (65%)) + Aptitude	**Pedagogy**	**Tools**	**Technology**
Abilities 1. Networking computers- wired, wireless. Networking devices- Modem, Ethernet card, Router, switch, Repeater. Connectivity: Wi-Fi, Wimax, Broadband, leased line 2. Use domain name, URL, Mac Address, IP Address, 3. Programming skills using QBasic – PRINT, REM, LET, INPUT, IF, IF ELSE, FOR. 4. Use QBasic for Graphics – SCREEN, LINE, PSET, PRESET 5. Use Calc - Creating and Saving a workbook. Working with a worksheet: entering numbers, text, date/time, series using AutoFill. 6. Using - Calc - Editing and formatting a worksheet - changing colour, size, font, alignment of text, changing cell contents, Inserting or Deleting cells, rows and columns, Formula-Entering a formula in a cell, using operators(+,-,*,/) in formulae, , Printing a worksheet. 7. Creating a project using Calc/QBasic and E-mail to a friend for peer review and collaboration.	1. Creative thinking 2. Psychometric Progression 3. Exploratory learning 4. Communicating with ethics 5. Logic for problem solving 6. Data Planning 7. Project based learning	1. Topic based educational software 2. Tuxpaint software 3. Writer 4. Impress 6. QBasic or equivalent such as FreeBASIC, QB64 5. OoCalc 6. Sample creative works	Computer System with 1. Internet connectivity: wired and wireless 2. Preloaded OS and requisite software Smartboard+ Projector

Information and Communication Technology Class VIII			
ICT Course Learning Outcomes (Knowledge (40%), Skill (60%)) + Aptitude	**Pedagogy**	**Tools**	**Technology**
Abilities 1. Formatting computer, defragmenting a disk, scanning for malware. 2. Securing network operations: Firewall, Antivirus, Authorization and authentication. 3. Explaining basic Cyber crimes and cyber laws. 4. Calc: Relative, Absolute, and mixed referencing. Use simple Statistical functions: SUM(), AVERAGE(), MAX(), MIN(); IF()(without compound statements); Creating Charts (Line, Pie, Bar) in a worksheet. 5. Designing web pages using HTML elements: HTML, HEAD, TITLE, BODY (Attributes: BACKGROUND, BGCOLOR, TEXT, LINK, ALINK, VLINK), FONT(Attributes: COLOR, SIZE, FACE),	1. Creative thinking 2. Psychometric Progression 3. Exploratory learning 4. Communicating with ethics 5. Logic for problem solving 6. Data Planning 7. Integration Skills 8. Project based learning	1. Topic based educational software 2. Tuxpaint software 3. Writer 4. Impress 7. QBasic or equivalent such as FreeBASIC, QB64 5. OoCalc 6. Sample creative works	1. Computer System with Internet connectivity wired and wireless 2. Preloaded OS and requisite software Smartboard+ Projector

BASEFONT(Attributes: COLOR, SIZE, FACE), CENTER, BR, HR (Attributes: SIZE, WIDTH, ALIGN, NO SHADE, COLOR), COMMENT, ! for comments, H1..H6, P, B, I, U, IMG 6. HTML elements: A, UL and OL (Attributes: TYPE, START), LI. 7. Photo Story 3: Image / picture editing tool. 8. Create a presentation using Impress with content created in TuxPaint, Writer, and Calc. Create a web page with a link to this integrated document. 9. Build "MyFutureComputer-2020" specifying hardware and software requirements and features.			

Class VI Information and Communication Technology - Syllabus			
Unit	Topic(s)	Learning Objective(s)	Estimated Time (Periods)
1 Let us explore (Term I)	1. What a computer does 2. What a computer needs 3. Hardware and Software	• Learn to think independently and innovate • Learn the concept of hardware and software	6
2 Operating Systems (Term I)	1. What is an OS 2. Why an OS	• Operating System to manage computer resources	6
3 Application Software (Term I)	1. What is Application Software 2. Examples of Application software	• Application Software – TuxPaint, -Writer, Impress, and more. • Differentiate between Application software and other software	6
4 Designing in Impress (Open source) / MS PowerPoint***		• Impress: Design	12
5 Animations in slides (Open source) / MS PowerPoint***	1. Custom Animation 2. Controlling the slide movement	• Animation – Custom Animation Effects • Advance slide on click, automatically after specified time	12
6 Reviewing presentations (Open source) / MS PowerPoint***	1. SpellCheck 2. Comments 3. Protecting presentations	• Using SpellCheck • Inserting Comments • Protect presentation with password	6
7 Problem Solving (Term II)	1. Defining a problem 2. Steps to solve the problem 3. Introduction to	• Elementary Problem solving skills • Basic symbols used in flowcharts • Drawing flowcharts to	12

	Flowcharting 4. Standard Flowcharting symbols	solve simple problems	
8 Project (Term II)	1. Sample Projects	• Creating a project using Impress and E-mail to a friend for peer review and collaboration	10

*** Oo Impress is available as open source. Schools may choose between Oo Impress or MS PowerPoint as per availability in their country. However if schools intend to cover both they may take up both software and do the comparative study.

Class VII Information and Communication Technology - Syllabus			
Unit	Topic(s)	Learning Objective(s)	Estimated Time (Periods)
1 Let us explore (Term I)	1. What is a computer network 2. Networking devices 3. Connectivity	• Networking computers- wired, wireless • Networking devices- Modem, Ethernet card, Router, switch, Repeater • Connectivity: Wi-Fi, Wimax, Broadband, leased line	8
2 Identifying networked resources and computers (Term I)	1. Domain names and URLs 2. MAC address and IP address	• Learn the concept and use of domain name, URL • Learn the concept and use of Mac Address, IP Address	4
3 Programming with QBasic-I (Term I)	1. Introduction to programming 2. QBasic o PRINT o REM o Concept of variables and constants o LET	• Concept of programming • Concept of control flow • Decision making in a program • Loops in a program	18

	o INPUT 3. Control flow in a program 4. Decision making: IF and IF..ELSE 5. Loops: For		
4 Programming with QBasic-II (Term I)	1. Graphics 2. Screen modes 3. SCREEN 4. LINE 5. PSET 6. PRESET	• Concept of graphics • Concept of screen modes and resolution • Graphics in QBasic – SCREEN, LINE, PSET, PRESET	12
5 Spreadsheets-I (Term II)	1. What is a spreadsheet 2. Why a spreadsheet 3. Calc – Workbook and worksheet 4. Entering data in a spreadsheet	• Using Calc - Creating and Saving a workbook • Working with a worksheet: entering numbers, text, date/time, series using AutoFill	10
6 Editing and Formatting (Term II)	1. Formulae in a worksheet 2. Editing a worksheet 3. Formatting a worksheet 4. Printing a worksheet	• Formula-Entering a formula in a cell, using operators(+,-,*,/) in formulae • Editing a worksheet - Changing Cell contents, Inserting or Deleting cells, rows and columns • Formatting a worksheet - changing colour, size, font, alignment of text • Printing a worksheet	12
7 Project (Term II)	1. Sample Calc projects 2. Sample QBasic projects	• Creating a project using Calc / QBasic and E-mail to a friend for peer review and collaboration	6

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Class VIII Information and Communication Technology - Syllabus			
Unit	**Topic(s)**	**Learning Objective(s)**	**Estimated Time (Periods)**
1 Let us practice (Term I)	1. Formatting a computer 2. Disk management 3. Protecting Computer	• Formatting computer • Defragmenting a disk • Scanning for malware and removing it	6
2 Network security (Term I)	1. Threats to networks 2. Firewall 3. Antivirus 4. Authorization and authentication	• Securing network operations: Firewall, Antivirus, Authorization and authentication	6
3 Cyber World (Term I)	1. Cyber crimes 2. Cyber laws	• Explaining basic Cyber crimes and cyber laws	6
4 Spreadsheets – II (Term I)	1. Cell references 2. Functions 3. Decision making 4. Charts	• Relative, Absolute, and mixed referencing • Use of simple Statistical functions: SUM(), AVERAGE(), MAX(), MIN() • Condition checking in Calc: IF()(without compound statements) • Creating Charts (Line, Pie, Bar) in a worksheet	16
5 HTML-I (Term II)	1. Websites and WebPages 2. Creating webpages using HTML 3. HTML elements and tags 4. Tags and attributes 5. Inserting images in a web page	• Concept of web sites and webpages • Designing web pages using HTML elements: HTML, HEAD, TITLE, BODY (Attributes: BACKGROUND, BGCOLOR, TEXT, LINK, ALINK, VLINK), FONT(Attributes: COLOR, SIZE, FACE), BASEFONT(Attributes: COLOR, SIZE, FACE), CENTER, BR, HR (Attributes: SIZE, WIDTH, ALIGN, NOSHADE,	16

		COLOR), COMMENT, ! for comments, H1..H6, P, B, I, U, IMG	
6 HTML-II (Term II)	1. Creating hyperlinks 2. Creating lists 3. Unordered lists 4. Ordered lists 5. Nested lsits	• HTML elements: A, UL & OL (Attributes: TYPE, START), LI.	12
7 Let us integrate (Term II)	1. Use of available resources 2. Creating presentations with resources from other software 3. Exporting presentations as HTML or PDF document	• Importing contents from other software • Exporting a presentation an HTML or PDF document • Creating web pages with links to presentations	6
8 Photo Story 3	1. Photo Story 3 as image editor. 2. Editing Pictures/images. 3. Creating stories through Photo Story 3. 4. Inserting stories in the webpage.	• Editing pictures/images using Photo Story • Applying special effects	2
9 Create the future (Term II)	1. Let us think 2. "My Future Computer-2020"	• Creative thinking to build the future	2

Assessment: *1 period at the end of each month is reserved for assessment based on the unit/topic covered in that month.*

Physical Education

Introduction to School Health

Rationale

For most children, going to school' is a historic milestone in their lives. It is a place that plays one of the most important roles in their physical, mental and emotional development. Schools are settings where children learn, where character is moulded, where values are inculcated and where the future citizens of the world are groomed to face life's challenges.

Schools can be dynamic settings for promoting health, for enabling children to grow and mature into healthy adults, yet the potential of the school to enhance health is often underutilized. 'School Health' has largely remained confined to medical check-ups of children and / or some hours of health instruction in the curriculum.

Today, schools present an extraordinary opportunity to help millions of young people acquire health supportive knowledge, values, attitudes and behaviour patterns. The students can serve as a means of promoting health of other children, their families and community members. Health is a multidimensional concept and is shaped by biological, physical, psychological, social, economic, cultural and political factors. There is a growing recognition that the health and psychosocial well-being of children and youth is of fundamental value and that the school setting can provide a strategic means of improving children's health, self-esteem, Life Skills and behaviour.

There are various initiatives in school health at present, but most of them are topic based and age group specific and often rely on the initiative of the individual school or an agency. The comprehensiveness and sustainability in these initiatives are not clearly laid out.

The need of the time is a Comprehensive School Health Policy integrated within the educational system at the National and State levels. This will harmonize the effective partnership of health and education sectors to facilitate the holistic approach to child and adolescent development in schools.

Historical Review to School Health

It has long been recognized that schools provide the most appropriate setting for both health services and health education for children and young persons. Globally, 'school health' has been an important initiative for several decades, comprising largely of school health services and school health education.

In 1960, the Government of India set up a Committee on School Health (Renuka Ray Committee) which recommended that "Health education should be included as part of general education in the primary, middle and secondary schools." The report of the Renuka Ray Committee (1961) provided guidelines and recommendations for both the content and the appropriate transaction of health education at various stages of schooling. In the wake of the National Policy on Education (1986, Revised 1992) and the National Health Policy 1983, steps were initiated to look at school health education in a more comprehensive manner. The National Health Policy, 2002 envisages giving priority to school health programmes which aim at preventive-health education, providing regular health check-ups, and promotion of health-seeking behaviour among children. The policy suggests that school health programmes can gainfully adopt specially designed modules in order to disseminate information relating to 'health' and 'family life'. This is expected to be the most cost-effective intervention as it improves the level of awareness, not only of the extended family, but the future generation as well. The noteworthy initiatives under this 2002 policy were setting up a well-dispersed network of comprehensive primary health care services linked with extension and health education. It is widely accepted that school students are the most impressionable targets for imparting information relating to the basic principles of preventive health care. The policy attempted to target this group to improve the general level of awareness with regard to 'health promoting' behaviour. The girl child in the rural belt needs to be targeted right from school level. The policy recognized that the overall well-being of the citizen depended on the synergistic functioning of the various sectors in the society. The health status of the citizens would, inter alia, be dependent on adequate nutrition, safe drinking water, basic sanitation, a clean environment and primary education, especially for the girl child.

The National Curricular Framework 2005 by NCERT has categorically stated that health is a critical input for the overall development of the child and it influences significantly enrolment, retention and completion of school. It advocates a holistic definition of health within which physical education and yoga contribute to the physical, social, emotional and mental development of a child. Undernutrition and communicable diseases are the major health problems faced by majority of children in this country from pre-primary through to the higher secondary school stage. Thus, there is a need to address this aspect at all levels of schooling with special attention to vulnerable social groups and girl children. It has proposed that the mid-day meal programme and medical check ups be made a part of the curriculum and education about health be provided which address the age specific concerns at different stages of development.

Introduction to a Comprehensive School Health Programme

The idea of a Comprehensive School Health programme, conceived in the 1940's, included the following major components viz., medical care, hygienic school environment, nutritious school lunch and health and Physical Education. These components are important for the overall development of the child and hence need to be included as a part of the curriculum. The more recent addition to the curriculum is yoga. The entire group must be taken together as a comprehensive health and Physical Education curriculum, rather than the current fragmentary approach used in schools today. As a core part of the curriculum, time allocated for games and for yoga must not be cut down or taken away under any circumstances.

Given the interdisciplinary nature of health, there are many opportunities for cross curricular learning and integration. Activities such as the National Service Scheme, Bharat Scouts and Guides and the National Cadet Corps, are some such areas. The Sciences provide opportunities to learn about physiology, health and disease and the inter-dependence between various living organisms and the physical habitat. Social Science could provide insights into communities, health as well as understanding the spread, control and cure of infectious diseases, from socio-economic and global perspectives. This subject lends itself to applied learning and innovative approaches can be adopted for transacting the curriculum. The importance of this subject to the overall development needs to be reinforced at the policy level with the health department, administrators, other subject teachers in schools, the health department, parents and children. Recognizing health and Physical Education as core and compulsory, ensuring that adequate equipment for sports and yoga instructors are available, and that doctors and medical personnel visit schools regularly, are some of the steps that can be taken. Further this subject could be offered as an elective at the +2 level.

The 'need based approach' could guide the dimensions of physical, psycho-social and mental aspects that need to be included at different levels of schooling. A basic understanding of the concern is necessary, but a more important dimension is that of experience and development of health or skills and physique through practical engagements with play, exercises, sports and practices of personal and community hygiene. Collective and individual responsibilities for health and community living need to be emphasized. Several national health programmes like the Reproductive and Child Health, HIV AIDS, tuberculosis and Mental Health have been targeting children as a focus with prevention in view. These demands on children need to be integrated into existing curricular activities rather than adding on.

Yoga could be introduced from the primary level onwards in informal ways, but formal introduction of Asanas and Dhyana should begin only from class VI onwards. Even health and hygiene education must rely on the practical and experiential dimensions of children's

lives. There can be more emphasis on the inclusion of sports and games from the local area. Indigenous knowledge in this area must be reflected at the local level.

Policies make a difference. Appropriate and effective school health policies can have an impact on health behaviors, short-term health outputs, learning/academic achievement and social development. There is a need to develop a uniform, effective code of practice for school administrators and educators undertaking health promotion in schools.

Comprehensive School Health Policy

The WHO defines a health promoting school as one that is constantly strengthening its capacity as a healthy setting for living, learning and working. It focuses on creating health and presenting important causes of death, disease and disability by helping school children, staff, family and community to care for themselves, take informed decisions over circumstances that affect their health and create conditions that are conducive to health.

School health education is comprehensive and meaningful when it;

● views health holistically, addressing the inter-relatedness of health problems and the factors that influence health within the context of the human and material environment and other conditions of life.

● utilizes all educational opportunities for health: formal and informal, standard and innovative approaches in curriculum and pedagogy.

● strives to harmonize health messages from various sources that influence students, including messages from the media, advertising, the community, health and development systems, family and peers and the school.

● empowers children and youth, as well as their families to act for healthy living and to promote conditions supportive of health.

For Whom is the School Health Policy?

This policy is for the Central Board of Secondary Education and its affiliated schools and educational organizations. The policy will provide useful information to the community sector and other organizations that also have an interest in engaging in school based health initiatives.

What Does this School Health Policy Aim to do?

The policy aims to :

● provide an effective guide for school administrators/educators to assist them in developing Health Promoting Schools.

- ensure that school health programmes are based on formally assessed and evidence based practice.

- advocate the value of a comprehensive and planned approach to school health through education sector.

- encourage partnerships for school health promotion with key stakeholders, viz., students, parents, health professionals, teachers and counselors.

The overall objective of the Policy is to equip the educational sector to develop Health Promoting Schools.

Components of the Policy

The eight components of the Comprehensive School Health Policy are :

1. A school environment that is safe; that is physically, socially, and psychologically healthy; and that promotes health-enhancing behaviors;

2. A sequential Health Education curriculum taught daily in every grade, pre-kindergarten through twelfth, that is designed to motivate and help students maintain and improve their health, prevent disease, and avoid health-related risk behaviors and that is taught by well-prepared and well-supported teachers;

3. A sequential Physical Education curriculum taught daily in every grade, pre-kindergarten through twelfth, that involves moderate to vigorous physical activity; that teaches knowledge, motor skills, and positive attitudes; that promotes activities and sports that all students enjoy and can pursue throughout their lives; that is taught by well-prepared and well-supported staff; and that is co-ordinated with the comprehensive school health education curriculum;

4. A nutrition services program that includes a food service program and employs well prepared staff who efficiently serve appealing choices of nutritious foods; a sequential program of nutrition instruction that is integrated within the comprehensive school health education curriculum and co-ordinated with the food service program; and a school environment that encourages students to make healthy food choices;

5. A School Health Services Program that is designed to ensure access or referral to primary health care services; foster appropriate use of health care services; prevent and control communicable disease and other health problems; provide emergency care for illness or injury; and is provided for by well-qualified and well-supported health professionals;

6. A Counseling, Psychological, and Social Services Program that is designed to ensure access or referral to assessments, interventions, and other services for student's mental,

emotional, and social health and whose services are provided for by well-qualified and well-supported professionals;

7. Integrated Family and Community Involvement activities that are designed to engage families as active participants in their children's education; that support the ability of families to support children's school achievement; and that encourage collaboration with community resources and services to respond more effectively to the health-related needs of students; and

8. A Staff Health Promotion Policy that provides opportunities for school staff to improve their health status through activities such as health assessments, health education and health-related fitness activities.

How to implement the policy?

Key Messages for Plan of Action	
Strategy for action at national, state, district and community level	A. Form interfaces / Action Groups B. Review current situation for School Health Promotion C. Plan and Implement School Health Policy D. Monitor and evaluate activities E. Share experiences / lessons with others

The school administration should provide the lead for health promotion as a major initiative and should include all the stakeholders including parents, teachers, students and the community.

The Global School Health Survey aims at providing the profile of the students as Baseline in the following areas;

• Respondent demographic • Hygiene • Clean drinking water • Protective factors • Tobacco use and smoking • Sleep patterns	• Dietary behaviors • Personal health • Physical activity • HIV Infection or AIDS Awareness • Alcohol and Drugs • Leisure Activities

The Central Board of Secondary Education is involved with a Comprehensive School Health Programme and has collaborated with WHO on a Global School Health Survey. A total of 75 schools under various categories were selected under this scheme by WHO on a random sampling basis.

The Survey was conducted through a questionnaire which had various components related to physical growth, drinking and eating habits, personal health, safety concerns feelings and emotions, substance abuse, physical fitness and personal experience.

The school administration can then take up various initiatives as per the Health Promotion Manual specifically designed for the three major age groups, classes 1-5, 6-8 and 9-12. The checklist can be used to understand the current status and to guide the activities. A School Health Club can be formed and can become the focal point of school health promotion. In addition to specific classroom based activities and revising school health curriculum, the health promotion programme should encompass the entire school environment and should become a school campus activity. The health promotion programmes should inspire and motivate the teachers, students and parents, and should be conceived in a participatory manner. The school should also strive to provide healthy living habits through a conducive environment. The health promotion initiatives can be assessed and based on a scoring system and the school can be declared as a Health Promoting School.

Once the school achieves the status of a Health Promoting School, it should strive to maintain and excel in its initiatives and should become a model for other schools .

Checklist for Situation Analysis of School Health

- What is the status of health education activities in the classroom, school and community?
- Does the school have a clear policy on health promotion, jointly prepared by staff and parents?
- Is health education imparted effectively across the curriculum? In particular, if the following topics are covered:
  - ❖ environment health
  - ❖ personal health
  - ❖ safety and accident prevention
  - ❖ drug abuse
  - ❖ physical education
  - ❖ emotional health
- Are the health topics taught at school based on the needs of the community?
- Are teaching methods learner-centred using the environment as well as the school?
- Are educational materials including visual aids and books available and are they based on health topics?

- Are the water and sanitation facilities adequate, clean and well maintained?

- Is there at least one teacher in the school trained to give first aid, detect simple health problems and refer children to health services?

- Is there an effective and committed school health committee?

- Are parents involved in health promotion activities in the school?

- Are there well-developed links with the community and local health workers?

- Do policy makers within health, education and other services provide support to school health promotion?

Responsibilities of the School

Responsibilities of Administrators/Principals:

The Administrators / School principals shall be responsible for:

- Preparing a Comprehensive School Health Plan using eight elements of the co-ordinated School Health Program with input from students and their families;

- Ensuring that the various components of the School Health Program are integrated within the basic operations of the school, are efficiently managed, reinforce one another, and present consistent messages for student learning;

- Developing procedures to ensure compliance with School Health Policies;

- Supervising implementation of School Health Policies and procedures;

- Negotiating provisions for mutually beneficial collaborative arrangements with other agencies, organizations, and businesses in the community; and

- Reporting on program implementation, results, and means for improvement (to whom and how) regularly.

Responsibilities of the School Health Co-ordinator / Teachers / Counsellor

Each school shall appoint/designate a school health co-ordinator to assist in the implementation and co-ordination of School Health Policies and Programs by:

- Ensuring that the instruction and services provided through various components of the School Health Programme are mutually reinforcing and present consistent messages;

- Facilitating collaboration among School Health Programme personnel and between them and other school staff;

- Assisting the administrator/school principal and other administrative staff with the integration, management, and supervision of the School Health Program;
- Providing or arranging for necessary technical assistance;
- Identifying necessary resources;
- Facilitating collaboration between the school and other agencies and organizations in the community who have an interest in the health and well-being of children and their families; and
- Conducting evaluation activities that assess the implementation and results of the School Health Program, as well as assisting with reporting evaluation results.

Monitoring and Evaluation

Obtaining baseline data on the health of the children, the quality of school health services, the environment of the school and health knowledge, skills and practices of students are essential for evaluating the effectiveness of a planned intervention.

The nature and quality of School Health Education Programmes should be evaluated by(the):

a) Instruction intended to motivate health maintenance and promote wellness and not merely the prevention of disease or disability.

b) Activities designed to develop decision-making competencies related to health and health behaviour.

c) A planned, sequential pre-school to end-of-school curriculum based on student needs and current and emerging health concepts and societal issues.

The content and terminology of the training curriculum for both students and teachers need to be made region-specific and resource-sensitive. Attractive and interesting communication methods should be used.

Strategies in Schools to promote healthy habits :

To be effective, strategies need to be individualized, made context specific, sensitive, within a broad framework using modern day marketing techniques and strategies.

- The mobilization of local resources
- Ownership of the programme by the school
- Training of teachers and health workers
- Participation by parents and the community

- The shared involvement of Government and NGOs from health education and other community services

The main resource comes from teachers, children and parents. There is no school, however poor, that lacks the resource of children.

Promoting School Health

A Health Promoting School is promoting health if it:

- fosters health and learning with all the measures at its disposal.

- engages health and education officials, teachers, all students, parents, health providers and community leaders in efforts to make the school a healthy place.

- strives to provide a healthy environment, school health education and school health services along with school/community projects and outreach, health promotion programmes for staff, nutrition and food safety programmes, opportunities for physical education and recreation, and programmes for counselling, social support and mental health promotion.

- implements policies and practices that respect an individual's well being and dignity, provide multiple opportunities for success and acknowledge good efforts and intentions as well as personal achievements.

- strives to improve the health of school personnel, families and community members as well as pupils; and works with community leaders to help them understand how the community contributes to or undermines health and education.

A School promoting health focuses on :

- Caring for oneself and others.

- Making healthy decisions and taking control over life's circumstances.

- Creating conditions that are conducive to health (*through policies, services, physical / social conditions*).

- Building capacities for peace, shelter, education, food, income, a stable ecosystem, equity, social justice and sustainable development.

- Preventing leading causes of death, disease and disability: tobacco use, *HIV/AIDS/STDs, sedentary lifestyle, drugs and alcohol, violence and injuries, unhealthy nutrition*.

- Influencing health-related behaviours: *knowledge, beliefs, skills, attitudes, values and support.*

Why should we become a Health Promoting School ?

The Health Promoting School's framework or model provides the most effective way that schools can promote health and well being for all members of the school communities: students, teachers, parents and the local communities around it. It's a global movement with a local focus.

The model recognises the importance of the participation and consultation of all stakeholders in a school community. Priority is given to the specific health issues and needs of the school. There is an inbuilt reflection and evaluation process to effectively review and align programs within the setting of the school.

A Health Promoting School encourages planning and co-ordinated action and use of resources rather than a reactive response to crises. It involves curriculum planning, whole school organisational alignment and partnerships with people and agencies to support programs and projects.

When can we call ourselves a Health Promoting School ?

A Health Promoting School is on a continuous and deepening journey. When a school has formed a representative committee, surveyed the school communities to clarify the needs and established an implementation plan with a timeline for action, then it could be said to be a Health Promoting School.

One off projects can initiate the process of becoming a Health Promoting School but one off projects do not make a school health promoting. One or two people in a school community may get things started but forming a committee, setting up structures for communication and procedures, writing policies and implementing them are important parts of the process towards becoming a Health Promoting School. Internal partnerships become crucial for integrating the health promoting school framework into school culture. Even if the enthusiastic energy of one or two goes then the framework for health promotion is better able to continue and be taken up by others.

Why are partnerships so importan t in Health Promotin g Schools ?

The important feature of Health Promoting School is shared responsibility: the whole school needs to work in a collaborative way to implement projects and programs. Internal partnerships become crucial again. Teachers, parents and students need to communicate, reach across and support the school. Health agencies can provide support for school program where it is required, delivering their support in relevant and effective ways.

There are numerous community health issues that loom large: mental health increasing

weight and physical inactivity, sun protection and risks of skin cancer, drug and alcohol abuse, bullying and violence, etc. A planned and co-ordinated approach to tackling any of these is crucial. Resources need to be better designed and utilised, funds must be targeted and spent effectively. Projects and programs need to be co-ordinated, linked or joined together. An issue can galvanise a team into action but instead of being in a reactive mode, a planned and co-ordinated co-ordination approach is far better. You could say that the Health Promoting School approach is an organisational tool.

How can we encourage parents/guardians to get involved in our School Health Programmes ?

Being a Health Promoting School is a great way to involve parents with the school community. Requests for support for tailored programs that fit with a bigger plan or goal can be drawn for parents. Whereas some may not come to a meeting, they may be happy to help set up a vegetable patch or talk to adolescents. Parents/ guardians do like to be consulted and participate in a vision of the school community when the health and well being of their children is concerned. The activities such as writing a policy or volunteering on a project can provide an opportunity for parent participation.

Communication through newsletters, noticeboards and displays, information at PTM's (Parents Teacher Meetings) and conferences can help keep parents/guardians in touch.

How can we involve students in shaping our School Health Programmes ?

Student Representative Council and Student Health Committees are excellent teams who can help survey students about their health concerns and needs. Teachers, parents/guardians and students may have very different ideas about what is the most important health issue to address and the way that health activities are implemented.

Consultation and the resulting discussions create the best foundation for student engagement, ownership of the process and student participation in the health issues relevant to their lives.

Which organisations in the local community can help with our health programmes and plan ?

Through the links to local health promotion sites you can find contacts to a wide range of organisations and agencies that support School Health Programs. The Health Promotion Schools Officers can help too with contact information if you don't know where to start.

How can we get funding to support new ideas and initiatives?

Depending on your project, funding through partnerships with community organizations

and businesses can be a source of support. Staying in touch with information through the networks can keep you abreast of current funding opportunities.

Implementation of School Health Programmes

The three main areas of a Health Promoting School are :

- The Curriculum
- The School Ethos (Physical and Social Environment)
- School-based health programmes can be Environment-Centred or Child-Centred.

1. Environment-Centred Approaches

In this approach, the aim is to improve the educational climate of the school and to provide opportunities for child to utilize the School Health Programme. The positive mental health atmosphere includes the amount of time spent in school, the structuring of playground activities, the physical infrastructure of the school and the classroom decoration.

What kind of programmes can the school conduct?

a   Programmes/workshops can be organized to enhance the ability of administrators, teachers and support staff to deal with specific areas of emotional or behavioural disturbances that they encounter.

b   Programmes for improving teachers' capacity to understand how to make use of other agencies providing mental health services for children.

c   National campaigns to reduce the incidents of certain mental health damaging behaviours e.g., bullying, ragging, corporal punishment etc.

d   Improvement in the school's social environment can be brought about by encouraging parent participation through parent programmes in support of school activities.

e   A multidisciplinary mental health team can be established in the school to provide consultation in the management of student behaviour problems.

f   The mental health team can include representatives from the governing body, teachers, support staff and parents. The governing body can identify problems and opportunities within the school.

g   The school mental health team can monitor and evaluate the outcome and provide feedback so that appropriate modifications can be made to the programme.

h   School can be the centre for community enhancement projects including programmes to improve physical and emotional health. They can serve as training centres for parenting skills where parents learn more about child development and parent effectiveness skills and receive support to enhance feelings of self worth and competence.

Such a programme provides a co-ordinated, collaborative effort to improve communication, understanding and respect between staff, students and parents. This provides a sense of direction and ownership of the programme.

2. Child - Centred Approach

Child-centred approach includes individual mental health consultations and specific problem-focused interventions as well as more general classroom programmes to improve coping skills, social support and esteem.

What kind of programmes can the school conduct ?

a   A particular child who exhibits difficult behaviour can be referred to the school counsellor or mental health professionals.

b   The counselor is involved in giving recommendations to the parents, the teachers and in some cases referral for treatment outside the school.

c   Maladjustment can be prevented by locating children at-risk and involving them in an intensive goal-directed intervention that should include close contact with special educators, nodal teachers, counsellors and peer mentors.

d   The use of parents as teacher's aides can be a helpful learning experience for the parents, the teacher and the child. Working in the classroom provides parents with perspective of their child as they observe other children and talk with other parents and the teacher.

e   Early intervention programmes with high risk behaviours such as aggressiveness, smoking, excessive shyness, worsening of interpersonal relationships, poor school attendance, declining academic performances, irritable and fluctuating moods and changes in peer groups can prevent serious consequences.

f   School can also use screening tools for identification of psycho-social problems and mental disorders. This can help the schools in determining if children have (or are at risk of having) significant mental health problems. Although, there is a danger of labelling and stigma nevertheless the instruments can be very useful in planning management strategies.

g School based Health Centres located within the school have an important role in supporting better health care for children and adolescents. The mental health services in these school-based health clinics can provide screening, counselling for common adolescent concerns, information about substance abuse, HIV / AIDS, reproductive health, depression, stress, anxiety, etc. Because these clinics are located within the daily environment of the children mostly youth, they offer particular benefit to young people who might not otherwise receive assistance.

Steps in Setting up School Health Programme

Step 1: Establishment of a Team

Planning for a Comprehensive School Mental Health Programme begins with the collaboration of school personnel, family members, community members, health professionals and students who come together to create an environment that is productive, positive and supportive.

Step 2: Assessment of School and Community Environment

Basic information regarding regional demographics, health risks and resources should be available for the team to consider. When possible, an assessment focusing on community strengths and available resources, as well as needs should be done to provide the planning team with the information they need to develop objectives.

Step 3: Development of a Plan

Once the need and potential for a mental health programme are assessed and most suitable elements of the model framework are chosen after discussions with parents, educators, student community members and mental health professionals, the next task is to develop a specific plan of action including clearly stated objectives, assignment of responsibilities, a time-line and a co-ordinating mechanism with an outside agency.

Step 4: Monitoring and Evaluation

Obtaining baseline data on the physical and emotional health of children, the quality of school health services, the environment of the school and the health knowledge, skills and practices of students are all essential for evaluating the effectiveness of a planned intervention.

One approach to measuring outcomes which may be particularly useful for school-based health programmes utilizes goal attainment changes as the unit of measurement. Initially the team of school professionals, students, parents and community members meet with professionals, skilled in outcome research, to define how successful outcome will be defined

in a way that can be measured reliably. The evaluation process is then planned, implemented and the outcome data analyzed and disseminated. The initial planning team meets again and discusses whether or not the goals were met and makes appropriate modifications.

Health Intervention is Accepted and Most Effective if it is:-

- Part of the general educational system.

- Implemented through Health Care in the school.

- Supported and developed by families and parent groups.

- Brought in and through the support of school counsellors and/teachers who recognize that poor social functioning interferes with learning.

- Brought in through School management or which recognizes that schools are a good setting to foster overall health and wellness among school going children.

- Attractive pictorial stickers which communicate nutritional messages can be put in sections which sell nutritious foods. Healthy attractive posters in the canteen can reinforce the nutrition related messages

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A Health Promoting School

Health is the responsibility of all. The lesson and experiences gained as children stay with us throughout life. So there is a need to develop a uniform effective code for school administrators and educationists to promote health in schools. This will harmonize the effective partnership of health and education sectors to facilitate a holistic approach to children and adolescent development in schools.

Many of today's and tomorrow's leading causes of death and disease can be significantly reduced by preventing behaviour that is initiated during youth, through education, understanding and motivation, and fostered by social and political conditions.

A Health Promoting School is a setting where education and health programmes create a health promoting environment which in turn promotes learning. It constantly strengthens its capacity as a healthy setting for learning and preparing for life.

A School fostering health :

- Fosters health and learning with all the measures at its disposal.

- Engages health and education officials, teachers, teachers' unions, parents, health providers and community leaders in efforts to make schools a healthy place.

- Strives to provide a healthy environment, school health education health services along with school/community projects and outdoor promotion programmes for staff, nutrition and food, safety opportunities for Physical Education and recreation and programmes for counselling, social support and mental health promotion.

- Implements policies and practices that respect an individual's welfare, dignity, provide multiple opportunities for success and acknowledge intentions as well as personal achievements.

- Strives to improve the health of school personnel, pupils as well as families and works with community leaders to understand how the community contributes or undermines education.

- Cares for oneself and others.

- Makes healthy decisions and takes control over life's circumstances.

- Creates conditions that are conducive to health.

The Physical Education curriculum

- Is compulsory from Classes I to X

- Will not be formally examined

- Graded across the year based on student participation and teacher observations

- Physical Education Cards (PEC) will be a part of the curriculum from Classes I – V

During middle school years students become more able in their skills and techniques. They also learn to apply them to different activities and sports. Having experienced all the games till junior school, this is the time when they begin to lean towards specialization.

They start to understand what makes a performance effective and how to evaluate not just their performance but that of their peers as well. They learn to take the initiative and make decisions for themselves about what to do to improve performance. They start to identify the types of activity they prefer to be involved with, and to slowly begin to take on leadership roles.

Scope of study

During middle school, students will do the following games/activities (this is essential and compulsory)

At least three out of the following four options should be taken by students:

| gymnastic activities | swimming activities |
| athletic activities | outdoor and adventurous activities |

Teacher should ensure that, while evaluating and improving performance, connections are made between developing, selecting and applying skills, tactics and compositional ideas, and fitness and health.

Acquiring and developing skills

1. Students should develop the ability to:

   a) refine and adapt existing skills.

   b) develop them into specific techniques that suit different activities and perform these with consistent control.

Selecting and applying skills, tactics and compositional ideas

2. Students should develop the ability to:

   a) use principles to plan and implement strategies, compositional and organisational ideas in individual, pair, group and team activities.

   b) modify and develop their plans.

   c) apply rules and conventions for different activities.

Evaluating and improving performance

3. Students should develop the ability to:

   a) be clear about what they want to achieve in their own work, and what they have actually achieved.

   b) take the initiative to analyse their own and others' work, using this information to improve its quality.

Knowledge and understanding of fitness and health

4. Students should develop the ability to:

   a) prepare for and recover from specific activities.

   b) understand how different types of activities affect specific aspects of their fitness.

   c) know the benefits of regular exercise and good hygiene.

   d) involve in activities that are good for their personal and social health and well-being.

Games activities

5. Students should develop the ability to:

   a) play competitive invasion, net and striking/fielding games, using techniques that suit the games.

b) use the principles of attack and defence when planning and implementing complex team strategies.

c) respond to changing situations in the games.

Gymnastic activities

6. Students should develop the ability to:

a) create and perform complex sequences on the floor and using apparatus.

b) use techniques and movement combinations in different gymnastic styles.

c) use compositional principles when designing their sequences [for example, changes in level, speed, direction, and relationships with apparatus and partners].

Swimming activities

7. Students should develop the ability to:

a) set and meet personal and group targets in swimming events, water-based activities, personal survival challenges and competitions.

b) use a range of recognised strokes, techniques and personal survival skills with technical proficiency.

Athletic activities

8. Students should develop the ability to:

a) set and meet personal and group targets in a range of athletic events, challenges and competitions.

b) use a range of running, jumping and throwing techniques, singly and in combination, with precision, speed, power or stamina.

Outdoor and adventurous activities

9. Students should be taught to:

a) meet challenges in outdoor activities and journeys.

b) use a range of orienteering and problem-solving skills and techniques in these challenges.

c) identify the roles and responsibilities of individuals within a group when planning strategies.

d) respond to changing conditions and situations.

Time Allocation : One period per week must be allocated.

Assessment : Grades will be given based on descriptive indicators for the performance through the year by the teacher.

Visual and Performing Arts

Visual and Performing Arts

Visual and Performing Arts is given a significant role to play in the curricular architecture of CBSE-*i*. The role of art as an expression of human ingenuity, creativity and innovation can hardly be debated. The last few decades have witnessed an over-emphasis on science and technology, marginalizing the role of arts especially at the school curriculum though there are some isolated evidences to the contrary. The utilitarian demands of existence have underplayed the role of aesthetics, appreciation and expression. It is in this context the curriculum envisages a more meaningful role of *Visual and Performing Arts* in the classrooms so that the future generation is able to balance between tacit knowledge and external knowledge. The schools need to liaison with institutions of *Visual and Performing Arts* and bring home the nuances of the subjects right from the primary level. The classrooms for these subjects should not be deemed as add-ons to a curriculum, but as centers which appeal to the inner spirit of every learner yearning for an expression.

A. VISUAL ARTS

At this stage of school education, the students develop reasoning abilities, therefore they look forward for help from the teachers. The children are to be encouraged to mobilize their own resources and creative expressions. A wide variety of media and techniques are to be provided at this stage for exploration and experimentation for various permutations and combinations. Indirect and inductive guidance in various art techniques through the discovery, exploration, improvisation and experimentation on methods are to be provided. Through these methods, gradual awareness of aesthetic and expressive qualities of various art media and techniques could be developed. Some preliminary rudiments of formal art forms in visual arts, may be introduced indirectly.

Students need the opportunity to work together collectively to foster team spirit and to build a sharing and caring society. Instead of selecting a few students with special talents, the interests of all students must be identified and they must be encouraged to participate in various art activities in one way or the other. At this stage, students can handle a little more complex materials and themes. So far whatever they have grasped, developed and experienced earlier can be developed further.

The aim of visual arts education is to develop aesthetic sense among the school children, so that they may creatively respond to the beauty in lines, forms and colours.

OBJECTIVES

- To encourage students for free expression and creativity.

- To help them understand the basic characteristics of different techniques, mediums and its practical applications.

- To sensitize the students to keep their materials in order and to organize their Art activities systematically, which will become a habit in due course.

- To acquaint students with the grammar of visual arts i.e., fundamentals of Visual Arts (Elements and Principles).

- To develop an insight towards sensibility and aesthetic appreciation.

- To work together on small and large projects.

- To make children understand cultural diversity by recognizing different traditional classical and folk forms prevalent in India as well as in the country concerned so that they may achieve a balanced growth as a social being in tune with Indian as well as local culture.

SYLLABUS

What is taught at this stage has a particular significance bearing in mind the rapidly changing physical and intellectual development of students of this age and the mass culture to which they are extremely vulnerable. The aims and objectives of Art work need to be thought out very clearly and realization carefully planned in relation to the administrative support and physical resources that can be obtained. The purpose of providing a wide variety of activities which are to be offered as a means of reaching the objectives, is to provide opportunities to develop the ability to perceive and interact with varied situations. The creative art activities should provide opportunities to students to come out with their day-to-day experiences, inner emotions and feelings. This will lead them to be articulate in expression and their presentation to reflect the cultural, moral and social values of the time.

CLASS - VI

PRACTICALS

1. **Drawing and Painting:**

   Drawing from imagination with pencil, crayon, charcoal, chalk, dry brush on different surfaces e.g., papers with different textures and colours, chalk-board, old newspapers, takhti, slate etc. Indoor and outdoor pencil sketching of static and moving objects, both natural and man-made. Progressively, sketch pen, brush and paint, pen and ink to be introduced.

2. **Crayon Resist:**

   Drawing picture or design with wax crayon and applying water colour over it. Water colour painting with wet colours (powder, poster, etc.) felt pens, crayons and also its combination to be attempted.

NOTE FOR 1 AND 2:

   Topics for art work are to be suggested from ideas gained earlier from daily experiences, simple stories with bird flowers, animals as characters, folklore, improvised stories, poems, stimulation from music, dance and drama, etc.

3. **Printing and Designing:**

   (a) Printing (stamping) with the help of small carved clay-box, wood-blocks, plain or carved cut vegetables and other similar material and objects having low-relief, surfaces e.g., tree-leaves, bottle caps made of cork, wood or tin; keys of different designs, buttons and coins, etc., threads and chords of varied thickness dipped in colours and pressed between two papers, etc., and combination use above.

   (b) Mono-printing i.e., making drawing or design by applying or spreading, filling poster colours or printing inks on a glass sheet or similar smooth surface. Taking out print(s) on paper of above mentioned things.

   (c) Paper marbling/dyeing i.e., crumpling the paper into a ball, dipping it in colour(s) made in shallow plates for colouring the outer surface, unfolding paper ball thus coloured and allowing it to dry. The process may be repeated for further interesting effects.

   (d) Stencilling i.e., cutting form or pattern on paper cardboard sheet. Obtaining its print(s) in various formations. Colour application by spraying with tooth brush or dabbing with cloth/cotton ball.

THEORY

(a) Identification and appreciation of some selected famous forms of visual arts (painting, sculpture, architecture and Handicrafts, etc.) including the art forms covered in the curriculum of India and the country concerned, through the study of reproductions, collections and other reference material.

(b) A general introduction to the History of Indian Painting, Sculpture and Architecture of India (classical and folk forms) in brief by the Art teacher through story-telling method.

(c) Understanding important terms used in the field of Visual Arts during the process of practical activities.

(d) A general awareness of the Fundamentals of Visual Arts (Elements - space, point, line form, colour, tone and texture).

(e) Some reproductions/photographs/prints of the famous Visual Arts forms (paintings, sculptures, graphic-prints, monuments/buildings of cultural and historical importance) must be displayed in the Visual Arts studio as well as in the main corridors/places in the school building prominently alongwith some text required for their appreciation.

(f) Verbal-appreciation of art works created/produced by learner (her/himself) and by others.

(g) Visit programme of local museum, art galley, zoo, monument/building of cultural and historical importance.

Note: *There shall be no written examination/oral-test in Visual Arts (Theory).*

CLASS VII

PRACTICAL

1. **Collage:**

   (a) Paper-collage by tearing and pasting of various kinds of coloured papers, printed papers from magazines, etc., on paper selected as background.

   (b) Mixed collage composing pictures on paper/card board by introducing textured material such as cloth pieces, thin buttons, threads and strings, etc., alongwith a variety of coloured papers.

2. **Applique and Embroidery:**

Cutting of various forms and shapes from cloth pieces, pasting/stiching on suitable cloth surface. Enriching it with embroidery work and with other material like beads, buttons, laces, etc.

3. **Applied Designing:**

(a) Designing of personal books and note-books, covers, book-marks (indicators), greeting cards, etc., to be made in the techniques learnt.

(b) Freehand writings and calligraphy to be practiced by use of ink and different pens, ribs or brushes. The exercises are part of designs made for personal use of belongings.

THEORY

(a) Identification and appreciation of some selected famous forms of Visual Arts *(painting, sculpture, architecture and handicrafts, etc.)* including the art forms covered in the curriculum of India on the country concerned through the study of reproductions, collections and other reference material.

(b) A general introduction to the History of Indian painting, Sculpture and Architecture *(classical and folk forms)* in brief by the Art teacher through story telling method.

(c) Understanding important terms used in the field of Visual Arts during the process of practical activities.

(d) A general awareness of the Fundamentals of Visual Arts *(Principles - unity, harmony and contrast, balance, rhythm, ratio and proportion and dominance/emphasis).*

(e) Some reproductions/photographs/prints of the famous Visual Arts forms (painting, sculptures, graphic prints, monuments/ buildings of cultural and historical importance) must be displayed in the Visual Arts Studio as well as in the main corridors/places in the school building prominently alongwith some text required for their appreciation.

(f) Verbal appreciation of art-works created/produced by the learner her/himself and by others.

(g) Visit progamme of local museum, art gallery, zoo, monuments/buildings of cultural/historical importance.

Note: *There shall be no written examination, oral-test in Visual Arts(Theory).*

CLASS VIII

PRACTICALS

1. **Clay-Work (Forms and Shapes):**

    (a) Rendering simple forms based on nature and man-made objects and carving designs on them in low-relief. The work should have a limit of one or two forms or figures. The topic for clay-work should be such that it should not cause frustration to the learner by having to make many figures or panoramic scenes with too many details.

    (b) Hand pottery by pressing coil and slab method.

    (c) Carving out patterns or simple forms from clay, plaster of paris , wood or soft stone blocks, etc.

2. **Constructions:**

    (a) Making stables and movables by using collected thrown away three-dimensional materials or scrapes e.g., wood scrap, empty small cardboards or light wooden boxes, wire, bamboo-cuttings or strips, straw, worn-out toys and games materials, sea shells, coconuts and other nut shells and many other terms.

3. **Masks and Puppets:**

    Making of masks and puppets from paper, card board sheets, unused garments and materials, etc., representing different cultures.

THEORY

    (a) Identification and appreciation of some selected famous forms of Visual Arts *(painting, sculpture, architecture and handicrafts, etc.)* including the art forms covered in the curriculum of India and the country concerned, through the study of reproductions, collections and other reference material.

    (b) A general introduction to the History of Indian painting, sculpture and Architecture *(classical and folk forms)* in brief by the Art teacher through story telling method.

    (c) Understanding of important terms used in the field of Visual Arts during the process of practical activities.

    (d) A general awareness of the Fundamental of Visual Arts (Elements and Principles).

    (e) Some reproductions/photographs/prints of the famous Visual Arts forms

(painting, sculptures, graphic-prints, monuments, buildings of cultural and historical importance) must be displayed in the Visual Arts Studio as well as in the main corridors/places in the school building prominently alongwith some text required for their appreciation.

(f)   Verbal appreciation of art-works created/produced by the learner her/himself and by other fellow children.

(g)   Visit programme of local museum, art gallery, zoo, monuments/building of cultural and historical importance.

Note: There shall be no written examination/oral test in Visual Arts (Theory).

IMPORTANT: Since all the above mentioned activities in Visual Arts are practical in nature, so it is imperative to the school administration to provide a proper VISUAL ARTS STUDIO/LABORATORY suitable for these practical works, display of some reproductions/photographs/prints of selected examples from the Art world as well as of India and especially the country concerned.   Hence provision/allocation must be made in school building.

II.   PERFORMING ARTS

Objectives

As students enter the middle school they continue their engagement with the Performing Arts and build on all the basic concepts that they have learned throughout the junior school.   Each student can opt for one of the Performing Arts options, i.e. Music, Dance or Drama.   The learning now becomes more rigorous and there is a greater emphasis on the application of skills.

Students begin to acquire the skills of self confidence, creative expression and increase their understanding of culture and arts.   They learn more about the nuances of aesthetics and through the arts achieve a balance leading to a healthy and creative transition to the increasingly complex academic life in the years ahead.

The focus now shifts to greater specialization since students will be instructed by arts specialists.   Wherever possible, the performing arts need to be interrelated with various subjects, and students begin to appreciate the role the arts have played and indeed continue to play in various cultures and at different times in history.

Over the three years of middle school students learn to explore the arts in depth and to express their opinions as individuals.   They also learn to evaluate, critique their work and that of others and learn to work in ensembles and groups.   By continually reflecting

on their work and providing valuable feedback to other members of their group they learn the valuable skills of giving and taking feedback which will hold them in good stead through their lives.

They now engage in much more detailed research and analysis and examine different dance styles, musical traditions and theatre traditions. They also learn to analyze the elements of performance in music, dance and theatre. As they move through middle school their repertoire of dance movements, theatre techniques and musical styles continue to grow.

1. **MUSIC**

Music is an incredibly vital part of society, and everyone has the potential to 'be musical', i.e., understand the basic principle of music and the confidence to perform, analyse or discuss music. All students, therefore, must be able to have a basic understanding and appreciation of music in many cultures, both Eastern and Western.

In Eastern music traditions, the focus could be on Indian music and the syllabus would include both vocal and Instrumental music. Vocal music would include the introduction of basic terms like raga, swara and the student would be introduced to voice modulation techniques. The students would study rhythm and taal and understand the differences in the Western music approach and the Indian music approach to rhythm. The students would also be introduced to the notation system of Indian classical music and enjoy learning different songs relating to different occasions/festivals.

Whilst learning about the Western classical tradition, students would be able to name the notes on a piano, have an understanding of the principles of Rhythm, Melody, Harmony and Texture. In addition, students would be encouraged to talk about music and explain what is happening in a piece of music, describe why they like (or dislike) it and have some idea of the history behind the style.

The teaching therefore could be divided into Music Theory, Music Appreciation and Musical Performance. Over the three years students understand the differences between Western music notation and Indian music; begin to improvise short, simple melodies and understand how music can convey emotions, feelings and images. As they gain experience in performance, they gain greater self confidence and hone their abilities. They are also able to distinguish between exemplary works of music across different cultures and at different times in history. This study becomes more complex as they progress through middle school. They also begin to apply their skills of aesthetic evaluation and artistic perception.

Through the Music program students will develop the ability to:

- listen to music and be able to describe the instruments and the elements.

- understand how musical elements differ from culture to culture.

- identify musical instruments from different cultures both visually and aurally.

- appreciate the difference between musical notation in the western tradition and the raga system of India.

- analyze the role of music in certain points in our history.

- learn about the lives and music of selected composers.

- listen to and describe the role of music in ancient civilizations - Chinese, Indian, Greek, Roman and Egyptian.

- learn a repertoire of songs from local musical traditions.

- understand different genres of music, styles and the cultures within which they operate.

- perform on an instrument, understanding technical accuracy, good posture, clarity of tone.

- improvise melodies on an instrument of choice which must grow in complexity as the student progresses through middle school.

- understand the criteria for evaluating the quality and excellence in musical performance and composition and apply this while performing or listening.

- appreciate how music can convey feelings, emotions and images.

- understand how music is composed and used in film, radio and TV.

- learn about career paths in the field of music and explore their interests in pursuing any of them.

CLASS VI

S.NO.	TOPICS	SUB-TOPICS
1.	Introduction of Indian Music tradition and its definition • Music in vedic period • Music, dance and instruments Classification of Indian Music • Classical, folk and light music	
2.	Terminology of Music • *Naad*	
3.	• *Shruti* • *Swar-Shudh and Vikrit Swar* • *Saptak - Madhya, Mandra and taar* • *Aaroh Avroh* • *Varjit Swar* • *Alankaar* • *That* • *Rag* • *Jati-Audav,Shadav, Sampoorna* • *Vadi, Samvadi* • *Pakad*	Sa Re Ga Ma Pa Da Ne Sa
4.	Introduction of 7 swaras	Sa Re Ga Ma Pa Da Ne Sa / Sa Ne Da Pa Ma Ga Re Sa
5.	Alankar	Sa Re Ga ,Re Ga Ma/Sa Ne Da, Ne Da Pa Sa Re Ga Ma, Re Ga Ma Pa/Sa Ne Da Pa, Na Da Pa Ma Sa Re Sa Ra Ga, Ra Ga Re Ga Ma/Sa Ne Sa Ne Da, Na Da Na Da Pa Sa Ga, Re Ma, Ga Pa/Sa Da, Ne Pa, Da Ma
6.	One simple composition in the Raags	Bhopali, Yaman
7.	*Taal* with keeping hand beats	Kaharva, Dadra, Teentaal with Theka, Sam, Tali, Khali
8.	*Vande Matram* National Anthem, One folk song, patriotic song and a flag song. In addition a local language song.	• Vande Mataram • Jan Gan Man • Vijayi Vishwa Tirana • Ghir Ghir Aai re

CLASS VII

S.NO.	TOPICS	SUB-TOPICS
1.	Definition of *Raag*	
2.	Definition of *Alaap*	
3.	Definition of *Taan*	
4.	Definition of *Sthai* in a composition	
5.	Definition of *Antara* in a composition	
6.	Definition of *Swarmalika*	
7.	Definition of *Lakshan Geet*	*Laya, Thekha, Matra, Vibhag, Avartan, Sam Khali.*
8.	*Taal*	
9.	*Alankaar*	Sa Re Ga Ma Pa Da Ne S'a/ S'a Ne Da Pa Ma Ga Re Sa
		Sa, Sa Re Sa, Sa Re Ga Re Sa /S'a, S'a Ne S'a, S'a Ne Da Ne S'a
		Sa Re ,Re Ga, Ga Ma /S'a Ne, Ne Da, Da Pa
		Sa Re Sa, Re Ga Re,/S'a Ne S'a, Ne Da Ne
		Sa Re Ga Sa Re Ga Ma, Re Ga Ma Re Ga Ma Pa/S'a Ne Da S'a Ne Da Pa
	One composition in Madhya Laya in *Raag Kafi, Raag Des*	Ne Da Pa Ne Da Pa Ma
		Sa Ga Re Sa, Re Ma Ga Re/S'a Da Ne Sa, Ne Da Da Ne
	To be able to recognize *Shudh* and *Vikrit Swar*	Sa Re Sa Ga, Re Ga Re Ma/S'a Ne S'a Da, Ne Da Ne Pa
	One *Swarmalika* and one *Lakshangeet* in the above Raags.	Alaap, Taan
	One bhajan, folk song, local song, finding a film song based on the *Raag* of the syllabus.	*Taal*
		Jhaptaal, Ektaal with Thekha, Sam, Tali, Khali

CLASS VIII

S.NO.	TOPICS	SUB-TOPICS
1.	Notation system of Indian Music/western Music	• *Bhatkhande* notation system • *Vishnu Digamber Paluskar* system • *Western* beats and writing the staff notation
2.	Classification of musical instruments and comparison	• *Ghan Vadya* • *Avanadh Vadya* • *Sushir Vadya* • *Tat Vadya*
3.	Embellishments of Indian Music	Meend, Gamak, Kann, Murki, Zamzama
4.	Definitions and similiarity with forms of Music	• *Dhrupad* • *Dhamar* • *Khyal* • *Tarana* • *Thumri* • *Dadra* • *Ghazal* • *Lok geet* *Alaap, Taan*
5.	One composition in Madhya laya in Raag Vrindavani Sarang, Raag Bhairavi, one swarmalika and Tarana	• Sa Re Ga Re Ga Sa Re, Re Ga Ma Ga Ma Re Ga/ S'a Ne Da, Ne Da S'a Ne, Ne Da Pa Da Pa Ne Da • Sa Re Ga Re Sa, Re Ga Ma Ga Re/S'a Ne Da N'e Sa, Ne Da Pa Da Ne
6.	Alankaars	• Rupak • Chautaal
7.	Taal	

Music teaching in both vocal and instrumental should be supported by audio and visual recordings in the full duration of the course. There should be a rich collection of pictures of singers, instruments and performance. There should be facility to visit museums and music schools.

2.   DANCE

Dance is a form of art that uses the body in movement to the rhythm of music and beat. Dance is a predominant expression through the body performing series of movements in response to music. The movements vary in tempo and to different melodies. There are many forms of dance which follow a system of set rules for hand movements and body postures. Students who opt for dance will learn the skill of performing within different rules of the dance forms. The curriculum would aim to orient the body to movement, mood and rhythm possible to create images that capture the eye, and are aesthetically pleasing. In the primary school, children experience the joy of rhythm by dancing to music in slow and fast speed. The experience of free association of the body with music allows children a focus in the use and coordination of movements. Further exposure to dance and its classical and folk traditions will give students opportunity to understand that dance is a part of heritage and requires training and practice besides joyful choreography. The performing art of dance has two major forms, the classical and the folk.

Students will learn about classical Indian dances and performers. They will learn skills of movements and the basic grammar of hand gestures with body movements. The dancer develops grace, rhythm and expressions which are essential parts of this performing art. Students will also learn that there are different styles and how to identify the features of specific dance forms. Along with appreciation of dance and how different dances differ, the many similarities in the performing arts will become clear.

The lessons will also provide information about how the different dances are spiritual, originated in temples and have a history of growth, progress and change.

Dance in India has a rich past that has given many styles with strong roots in the Natya Shastra, that is a book about the different arts written in ancient times. This book is a treatise for all the performing arts and contains information about grammar of the arts, where to perform and how to perform. In contemporary times the classification of classical Indian dances has been endorsed by the Sangeet Natak Academy. The different names of the dances are:

Bharatnatyam

Kathak

Manipuri

Odissi

Kathakali

Kuchipudi

Mohiniattam

While classical dances are spiritual, folk dances are intricate part of people's everyday lives and provide celebratory moments. Folk dances are related to festivals and rituals and are direct expressions of people's collective joy. Folk dances also will enable students to work in a team and learn to work together. Since folk dances are largely group performances, students learn that to put together a well coordinated dance, practice and cooperation is very necessary. Most regions and communities have their own traditions of folk songs, dances and different instruments that relate to specific occasions. Often students are able to learn small details about customs, traditions of community life through folk dance and songs.

In fact classical dancers also use poetry as part of *abhinaya* dance. Dance is the able use of the body as well as a course of expressing and learning to give meaning to expressions. The students will also learn some aspects of modern and contemporary dance.

The following objectives of the course in dance will enable the students to:

- understand beat and how to keep step with changing pace.
- appreciate dance and know its history, growth and progress.
- learn hand gestures used in dance to convey meaning.
- know the different forms of classical dances of India.
- appreciate the universality and diversity in the different classical dances.
- learn that all dances have a language of dance and specific body positions.
- understand that most communities have a system of folk dances and folk songs.
- learn that classical dances are more often spiritual while folk dances are linked with people's lives.
- appreciate the role of dance for people and society.
- know famous dancers and dance Gurus.
- be aware of organizations that are spreading knowledge about dance.
- comprehend the processes in learning to be a skilled dancer and performer.
- learn basic steps and positions of any one dance style.

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- create simple stories in dance form conveying meaning through hand mudra and dance positions.
- perform simple folk dances.
- understand the role of practice for a skilled performance.

CLASS VI

	TOPIC	ACTIVITY
1	*Introduction to dance:* Definition of dance Different kinds of dances such as classical, folk, popular, modern and contemporary Familiarity with the names of the classical dances and place of origin in five lines each Basic movements and relation to beat Understand how to begin dance and the concept of respect for the Guru, mother earth and the audience	See pictures of dances or a film and be aware of different styles of dances Demonstrate simple movements Make children listen to music with changing beat and ask them to move in the way they like to respond Learn the steps of bhumi pranam
2	*Movements and body posture:* Basic movements and relation to beats: slow, medium and fast Understand the concept of taal and the cycle of beats.	Play music and ask the children to walk to the beat. Vary the beats in the music Children can clap in cycles of 123 in slow and fast pace varying the claps to 12,123 or 1..2-12

3	*Different parts of dance:*
	 Understanding the elements of dance such as
	 Mudra (hand gestures): single hand
	 Basic steps of dance forms such as
	     Kathak: *tukda, toda, tatkar*
	     Odissi: *arasa*
	     Bharatnatyam: *Adavu*
	 Body positions in dance such as
	 Tribhangi, chaulk, or aramandi
	 Familiarity and knowing of the processes in the teaching-learning of dance
		Learn the *Asmyukta mudra* (single hand) 10 at least
		
		 Learn basic steps of any one dance form
		
		 Practice the use of body in the tradition of the dance form
		
		 Create simple sequence using hand gestures to convey a two line story
		
		 Watch a film about how children learn dance

4	*Dance and Society:*	Watch films about different folk dances
	Understand what folk dances are	Gather folk songs and learn at least one full dance with meaning
	Know the local dances and popular dances	
	Learn about folk songs and dances in different regions, their costumes and culture	Visit or see a film about a dance school
	Identify famous dance schools	

CLASS VII

	TOPIC	ACTIVITY
1	*Different elements of dance :*	Watch films of famous dancers and the different items that comprise a performance
	Understand that dance has several parts such as nritta, nritya and bhava	
	Appreciate the costume, make up and the dancer's skill in steps, hand and body coordination, eye movements and expressions.	Attempt to use hand gestures with feet movements
		Learn more single hand mudra and smayukta mudra
2	*Fundamentals of classical dance:*	Learn the steps and build skill to change with increasing speed of the percussion instrument.
	Learn the basic steps of a classical dance form in slow, medium and fast beat	
	Coordinate the steps with basic hand movements	Practice using the hands and feet together to beat
	Learn the use of hand gestures and feet and body movements to convey meaning of simple story	Create a story of three to four lines and use the mudra with dance steps in beat
	Build skills to orient the body to positions of dance while keeping in step	Practice the dance positions and steps build coordination. Learn the names of different items and how they are different
	Understand the sequence in dance.	
3	*Dance and different cultures:*	Watch pictures or a film to note differences
	Learn about classical dance such as ballet	
		Collect pictures about dances in few cultures and make a booklet
4	*Dance and musical accompaniment:*	Name musical instruments with pictures and create a record
	Learn about the musical instruments in dances both classical and folk	
	Learn a folk dance for any local festivity and about folk dances in different regions of India	Learn a local folk dance, Practice to be in coordination with music and team members

5	*Dance and Themes:*	Listen to a song, its beat and use appropriate hand gestures and expressions to strengthen the meaning
	Learn about role of songs, story and skill in conveying meaning and the importance of expressions	

CLASS VIII

	TOPIC	ACTIVITY
1	*Dance and its history:* Study the history of dance and influences that brought changes Know about famous GURUS and performers of some schools where dance is taught	Watch a film on dancers and read their biography Talk with famous dancers and understand their journey in learning dance
2	*Skill building in dance:* Learn a simple item with classical mudra and position Understand the role of facial expressions to convey emotions in dance Understand the difference between pure dance and dance with emotions Understand to express emotions while dancing to a song or poem	Learn one item of the dance form with appropriate mudra and steps Learn eye movements and practice anger, happiness, sadness through facial expressions Practice the item with appropriate steps and eye movements to learn the technique Learn a small item with bhava understanding the meaning of the song or poem
3	*Comparative understanding of dance:* Understand that all dance styles have elements of pure dance, emotions and movements Familiarity with costumes and jewellery in different dance forms	Compare different dance styles through watching films and enhance skill to identify the variations in movements Collect pictures of different costumes used by different dance forms
4	*Modern dance:* Knowledge about contemporary dances such as Salsa, hiphop and jazz Learn more about different folk dances	Watch film clippings and if a classmate is familiar, learn as a team Prepare a folk dance as a class project

Dance teaching should be accompanied with film and video recordings as well as a rich collection of pictures of dances.

Encourage interviews with performing artistes.

3.   THEATRE

Students who opt for drama at this stage will develop their understanding and appreciation of theater as an art form which gives us the critical skills of observation, empathy, analysis, communication, and control over our physical movements and voice modulation.

Students also learn the vocabulary of drama, understand its elements, learn to describe their theatrical experiences and hone their performance skills.

They develop the additional skills of improvisation leading to writing short pieces for performance, understanding the nuances of character and plot and appreciating the role that the technical elements like stage, costumes, props, sound and light play in a successful performance.

As in all other art forms they learn the skills of evaluation and are able to develop a vocabulary to be able to critique performance, their own and live or recorded performances as well.

They begin to understand how drama plays a vital role in many cultures and study a few dramatic forms starting with any that might be a feature of the country they live in, either folk or classical. They begin to understand different styles of theatre and why certain forms originated in certain pars of the world.

They also work on cross curricular links across subject areas particularly English and Social Studies. For example, they would be dramatizing poems, and studying the drama and dramatists of certain periods in history.

They develop a portfolio of work which includes their script notes and directorial instructions, drawings of set design and written assignments which are a reflection in their work.

The students will learn to:

- understand vocabulary of drama - voice projection, modulation, action/reaction; improvisation, movement, etc.

- understand the roles of playwright, actor, choreographer, designer, director in the context of performance.

- understand how different settings are used for staging a play, from proscenium, to a thrust stage, to theatre in the round, and what effect this has on the performance and those who are viewing it.

- participate in theatre games to build skills of empathy, response, group work, focus and concentration.

- understand how to develop characters and use a combination of physical gestures, voice and expressions to convey their characterization.

- write and perform small playlets that have been prompted by stimuli such as a short story, a poem, an event, an emotion, etc.

- appreciate that drama originated in different parts of the world and there is a richness of diversity in the dramatic styles that we can study and enjoy.

- understand presence of drama in the local culture, either folk or classical, this will be the first area of study.

- view both live and recorded performances and learn to appreciate them.

- develop criteria to evaluate dramatic performance and apply that over the years in middle school.

- understand how drama is a complete art form that uses all the skills of design, carpentry, lights, sound, props, make up and production management.

- design stage sets, masks, puppets, costumes and props.

- appreciate how masks and puppetry are used in certain cultures.

- understand how theatre is a strong tool of communication and is used to communicate a political/educational message-as in street theatre.

- research career opportunities which link to theatre arts such as director, writer, actor, cinematographers, stage manager, arts administrator and the associated career paths in the areas of radio, film, television, advertising and marketing.

Class-VI

UNIT	SUGGESTED ACTIVITIES

I. *Introduction to Theatre*
  • What is Theatre?
  • Elements of Theatre
  • Drama and People
	• Definition of theatre
	• Local drama styles (to be explored by children)
	• Collect pictures of stage, costumes and different drama styles

II. *Mime and Movement*
  • Use body to express
  • Body movement with voice
  • Body, mime and expression
	• Body controlling exercises such as, walking in different patterns
	• Non-verbal Interactive games mirror game, action reaction game
	• The world of sounds - observing, imitating and creating sounds
	• Exercises of volumes, pitch and intonation

III. *Learning Skills of Drama*
  • Enacting a story
  • Features of different characters
  • Use of simple props
  • Appreciation of Drama
	• Selecting a theme
	• Scripting dialogues and presentation
	• Narrating a story or an incident
	• Reciting a poem
	• Presenting different characters (an angry teacher, surprised child, etc.) - using physical gestures, voice modulation and expression to convey characterization
	• Presenting news/cricket commentary (Individual/in pairs/ in groups)
	• Viewing a piece of drama/ Live recorded performance
	• Discussions about story, period, acting, direction, costume, light and sound effects

IV. *Puppetry and Theatre*
  • Puppets - An Introduction
  • My Own World of Puppets
  • Expression Through Puppets
	• Viewing a puppet show/recording
	• Puppet traditions in India and local puppets
	• Materials used for making puppets
	• Collecting material
	• Creating rod and finger puppets
	• Learning to manipulate puppets
	• Presenting text content through puppets (group work - topics from history, science and languages)

Class-VII

UNIT	SUGGESTED ACTIVITIES
I. *History and types of Drama* • Origin of drama in different parts of the world • Richness and diversity of dramatic styles (a study) • Distinguishing between folk and classical styles of drama	• Study, search and exploration work • Power point presentation • Comparative study
II. *Drama, Acting and Emotions* • Building the characters • Props and their role • Teamwork and rehearsals	• Warm up exercises and games of movement, mime and sounds • Exploring emotions • Noticing the change in breathing patterns with changing emotions • Mimicry • Mono-acting • Role play - playing a king or humorous character • Beware of errors
III. *Appreciation of Drama* • Different roles in making of drama • Features of a good play • Evaluating a Performance	• Viewing live theatre/ recorded drama • Discussion on role of playwright, actors, director, choreographer, designer, makeup artist and technical assistant • Select a theme and develop a story, write dialogues , add movements and sound • Aspects to be looked at to judge/ evaluate a performance, preparing rubrics for evaluating different performances
IV. *Puppetry and Theatre* • Puppets - An Introduction • My Own World of Puppets • Expression Through Puppets	• Viewing a puppet show or recording • History of puppets around the world • Power point presentation on variety of puppets(Project for children) • Materials used for making puppets • Collecting material • Creating glove, string and shadow puppets • Search for a script • Music and rhythm • Stage set up for puppet show • Presenting a puppet show

Class-VIII

UNIT	SUGGESTED ACTIVITIES
I. *Exploring Different Forms of Drama* • Ancient and contemporary theatre styles • Some famous dramatist of the world • A study of a famous dramatist of your country (project)	• Study, search and exploration work • Power point presentation • Collecting information, pictures, videos and popular dialogues of famous dramas around the world • Comparative study on drama • Reading various skits, plays and dramas
II. *Social Role of Theatre* • Street Play - Theatre for a cause • Preparing and presenting a street play	• Using theatre to communicate social message • Focus on extempore, dialogues, popular tunes • Minimal use of stage, costumes and props • Selecting a theme (group work) • Scripting • Enactment
III. *Developing Skills of Stage Craft*	• Focus on skills of direction, compeering, design, carpentry, lights, sounds, props, makeup and production management and different stage set up • Scripts based on - period, environment, epics, famous drama, classical drama pieces, current affairs, self-composed and designed play on contemporary conventions • Division of work- assigning duties • Rehearsals • Audience and seating arrangements • Dress rehearsals • Final Presentation
IV. *Familiarity with Famous Theatre Artist*	• Visit to a cultural centre • Inviting a theatre person in school • Interviewing a famous dramatist/actor/ director / technician, etc. • Watching a film of famous actor/director/writer

Core Areas
SEWA
(Social Empowerment through Work and Action)

SEWA is an integral component of CBSE-*i*. All students from classes I to X will be part of a community service program of every year. This is an essential requirement for CBSE-*i*. The objective of this programme is to underline the significance of the interdependence of all human beings in this shrinking global village. Students must acknowledge that they have a responsibility towards the less privileged, the disadvantaged as well as towards the differently-abled. The principle of giving to society has to become second nature to them.

Several years ago the noted educationist *Paulo Freire* pointed out that there is no such thing as neutral education. Any education, to be meaningful, has to fit into the context of the society in which it is given and which is relevant to the times. In the context of the multiplicity and the rapidity of the changes that are taking place, the students need to be enabled to know and understand the contexts in which they are living today and the demands that will be made on them, in the immediate future, to fit into the changing patterns of society.

The SEWA Philosophy

SEWA is social or community service; it can include environmental and international projects. The word 'Sewa' to a large extent inspires SEWA *(Social Empowerment through Work and Action)* philosophy, which in the Indian environment refers to the concept of service to the community.

It enables and inspires each student to develop a spirit of discovery and initiative that has real benefits and consequences. It encourages students to develop a sense of responsibility and personal commitment to do what they can to improve the world around them and increase the well being of others. It prepares students to participate in and contribute to the local as well as global community by fostering the development of values and attitudes that transcend issues of politics, religion, class, race, ethnicity and gender. SEWA aims to abet students in becoming better persons, being more humane and committed citizens, and be future leaders working to create a harmonious and peaceful world.

Vision

SEWA will involve enhanced choice of engaging with the families and the community in creating lasting values in the mindset of the youngsters. The activity will give students robust

knowledge of centred ideas to implement in a relatively regulated setting. We might get to see different approaches that will give valuable insights to teachers, students and parents. Once we fine-tune ideas into educational experience through SEWA, it will attract quality education away from rote learning and would prove to be a catalyst for critical thinking. A project or module may culminate into other developmental opportunities.

Notes to Teachers

SEWA has been designed to integrate social awareness into the regular curriculum of the students. There is an urgent need to foster strong mental health amongst today's children so that they can connect with their peers as well as their elders. The main objective of the projects is to direct children's mind in constructive activities with positive outcomes. This would help them develop self-confidence and self esteem. The teacher must be very careful in facilitating the child's activities so as to provide a suitable learning environment to them. This in result would also give a boost to a positive school climate.

The teachers need to create opportunities for students to engage learning activities to develop core competencies such as:

a)   Social Awareness

b)   Self Management

c)   Relationship

d)   Interpersonal Skills and

e)   Responsible Decision-making

They need to be open-minded about errors committed by learners while implementing the SEWA programme. The learners may find themselves in ambiguous situations and sometimes suffer from moral conflicts. As adults we need to facilitate widening the scope for the child so that they find alternative ways of making informed decisions. Here, one cannot underline the responsibility of the school as a community. Thus one could develop and establish a caring community encouraging collaborative learning activities by weaving SEWA into their daily school activities.

The projects for Classes I-V are general by nature with many options being provided so that the teachers can plan according to the capacity of the group. The documentation for this group can be more visual- collection of photographs, scrap book and such tools can be used more explicitly. However, the activities planned for Class VI-X can be taken up with more seriousness and documented in proper formats. Teacher might modulate the project activities and provide creative freedom to learners to plan using other suitable ways without digressing

from the learning outcomes specified. Visual evidences and testimonials must be given due importance while compiling and documenting.

SEWA activities are bound to germinate some thought process in young minds.

Activities complying with SEWA criteria

SEWA activities require involvement and interaction. When students assume a passive role and no contributory service is performed, it cannot be defined as a SEWA activity/project. Activities which do NOT fall under SEWA:

- An activity through which a student attains financial or some other type of benefit *(unless this benefit is passed on in full to a worthy cause).*

- Getting involved in effortless, monotonous, and repetitive work – like returning library books to the shelves.

- Any activity or project, which is already part of the student's Academic Curriculum.

- Work experience that only benefits the student.

- Activities that cause division among different groups in the community.

- Activities with a bias to any religion or cultural sector which may hurt the sentiment of any other person in any form.

- Regular recreational or community activities like a visit to a museum, the theater, concert, or sports event unless it clearly inspires work in a related activity in which a student is already engaged.

- Any unsupervised or recorded activity where there is no guide or responsible adult on site to evaluate and confirm student performance and evaluate accordingly.

Guidelines for Students

- Students discuss how they can improve/impact the community and choose the focus area for the project.

- Students identify the causes they want to support and choose one/or more ways of carrying it forward.

- Students outline the objectives of the projects they have chosen and present plans for the implementation as well as ways of measuring the success of the project.

- Students seek guidance from the teacher when they need it.

- Students learn how to plan, implement, review and take responsibility for their decisions.

- Students examine the effect of their intervention and support for the causes they have chosen and present them to the rest of the class/school.
- The student Portfolio/dossier captures the hours spent as well as documents evidence of the impact of their work that is shared as Power Point with the school community and as part of a special exhibition at the end of the year.

Guidelines for Schools

- Design and announce school SEWA policy.
- Decide on yearly focus theme for SEWA and class-wise sub themes.
- Orient parents about SEWA and seek support from stakeholders.
- Appoint School SEWA Mentor and Class-wise SEWA Mentors.
- Arrange administrative support for the activities involving government and outside agencies.
- Dedicate day/s for SEWA exhibition or presentation day at the end of the year or as suitable.
- Arrange training and create support structure for all involved as required.
- Ensure 100% dedicated involvement.

Dear Mentors/Teachers,

The most challenging and important purpose of social empowerment even before we take up work and action is to hone Social Intelligence (SI) of students in today's electronically wired world and nuclear families. Social Intelligence world denotes and requires one to one introduction, real emotions, love, sentiments, caring, sharing compassion and concern in real situations whereas presently we are engrossed in the virtual world with internet, I-pads, Palmtops, mobiles and satellite T.V., etc. Let us remember, the human race is designed for face to face interaction. Such interaction simply perks and comforts us and SEWA activities are the right answer in that direction.

SEWA PLEDGE

"WE AS MEMBERS OF SEWA WILL WALK, TALK, THINK, FEEL, CARE AND SHARE THE ESSENCE OF SEWA IN MIND, BODY AND SPIRIT TO BRING POSITIVE CHANGES IN THE WORLD AROUND US. WE SHALL DO EVERYTHING WITHIN OUR ABILITY TO IMBIBE THE SPIRIT OF SEWA IN WHATEVER PROJECT WE UNDERTAKE FOR THE WELFARE OF ONE AND ALL."

Guidelines for Mentor Teacher for conduct of SEWA

- Support students in identification and selection of the causes they want to support and take up as projects.

- Provide supervision, consultation, guidance to students and create support structures required whenever they need it.

- Guide students on how to plan, implement, review and take responsibility for their decisions.

- Guide students on upkeep of Portfolio/dossier.

- Plan and prepare SEWA exhibition or presentation day at the end of the year.

Procedures

1. Fill out a *My SEWA promise* form. The description of the activity needs to be in complete simple sentences and describe the SEWA activity intended to be taken. The student in consultation with the teacher and parents decide and create an hourly schedule of activities. This form must be signed by a parent and submitted <u>before</u> the activity begins to the school's SEWA Mentor.

2. Fill out 'Reflective Musings' at the end of <u>every</u> 5 hours (approx.) given to the project and keep attaching it to the SEWA dossier. The hours stand here for the **clock hours** and not the regular 35-45 minute periods observed in school.

3. SEWA hours will be accounted for both in school as well as out of school activities.

4. It is expected from a SEWA volunteer that they'll be honest in recording their activities.

5. The minimum hours for different groups are as follows:

    a. Class 1-3   30 hours

    b. Class 4-5   50 hours

    c. Class 6-8   80 hours

    d. Class 9-10   100 hours

6. Complete your SEWA hours by the due date which should ideally be part of the <u>'My SEWA Promise Form'</u> or decide along with the initial hourly schedule plan. All the forms must be completed and signed attached with relevant evidences, together with a Self-Appraisal Form for classes IV-X and a summary list of the SEWA projects/hours as items of SEWA dossier/scrapbook (esp. for classes 1-3). The visual evidence (photographs, videos, etc.), testimonials and certifications must be there to support the project.

My SEWA Promise Form

Dear Student,

SEWA is a firm step to prepare you for life. It is a voluntary project experience. You have to complete **My SEWA Promise Form** and obtain prior approval for the activity/project. Selection of a SEWA activity, development, implementation of the proposal and evaluation of the activity is the responsibility of each student. Signature of the parent indicates review and approval of this proposal.

Student's Name: _____ **Class:** _____

(Print or type)

Brief Description of the Activity:

Duration (Days and Time): _____ Estimated Hours: _____

Name of Mentor Teacher: _____

Student Signature: _____ Date: _____

Parent Signature: _____ Date: _____

Approved ( )   Disapproved ( )

SEWA Mentor's Suggestions/ Comments:

Signature of SEWA Mentor: _____Date: _____

SEWA Hourly Schedule

Hour Count	Date and Day	Proposed Activity Plan
Hour 1		
Hour 2		
Hour 3		
Hour 4		
Hour 5		
Hour 6		

SEWA Hour Log

STUDENT NAME : _____

PROJECT : _____

Date	Activity	Hours	Mentor's Signature

Total Hours _____

SEWA Self Appraisal Form

The following questions should be addressed at the end of each activity/project. These are guiding questions. Candidates can either answer on this form or write a reflective, continuous text incorporating responses to these questions.

NAME OF THE STUDENT : _____

NAME OF ACTIVITY/PROJECT: _____

1)   Briefly state your experiences about this activity/project.

   _____
   _____
   _____

2)   What were your initial expectations from this activity/ project?

   _____
   _____
   _____

3)   How satisfied are you from the end results?

   _____
   _____
   _____

4)   What change do you see in yourself in terms of behaviour, life-skills, etc., after this project?

   _____
   _____
   _____

5)   How did this activity/project benefit others? How did you ensure they continue to get these benefits even after the project?

   _____
   _____
   _____

6)   Details of the beneficiary (ies.) Any significant comment received from them.

   _____
   _____

7)   What were the problems faced? What might you do differently next time to improve?

_____

_____

_____

Volunteer's Signature: _____ Date: _____

Mentor's Observation

Attendance: _____

Involvement: _____

Regularity: _____

Commitment: _____

Additional Comments: _____

_____

_____

The activity / project was (circle appropriate response):

Satisfactorily completed   Not Satisfactorily completed

_____   _____

Activity / Project Mentor's signature _____

We make a living by what we get, but we make
a life by what we give.

Winston Churchill

Projects

Project-1: "Cleanliness is next to Godliness"

Project Focus- **Cleanliness and Sanitation**

Duration- 10 hours

Target point-

- Our fundamental responsibility as citizens is cleanliness.
- Cleanliness is next to Godliness and hygiene is two-thirds of health.
- Off shoot of cleanliness is life that is well organized, systematic, healthy in mind and body.

Key Objectives:

Students will learn to:

- identify clean and dirty places.
- bring attitudinal change towards cleanliness and sanitation.
- be able to distinguish between benefits of cleanliness and the disadvantages of un-cleanliness.
- make students aware of the result of not practising cleanliness.
- know the importance of cleanliness in neighbourhoods, parks, market places, roads and cities.
- know how to appeal for neat and clean places.
- make children aware of unclean and unhealthy surroundings as breeding ground of epidemics and diseases.
- be able to highlight cleanliness as an important value, in day-to-day life.

SEWA Component

- To be able to take care of personal hygiene, being organized with belongings.
- To learn to keep household items and personal belongings in proper place.
- To be able to live life of cleanliness through word and example.
- To learn the art of proper waste disposal and be able to sensitize other people about it.

"We must get obsessed about the cleanliness of our city."

Role of Mentor/Teacher:

- Act as a role model and be vigilant in maintaining cleanliness at all public places such as Markets, Parks, Gardens, Bus Stands, Railway Stations, Movie Halls, and Malls, etc., as well as while using Public Transport, Public Utilities.
- Focus on the tidiness of Class Room, Library, Assembly Hall and Computer Room.
- Respecting National Property.
- Generating awareness of health and hygiene amongst the slum dwellers.

Project Process:

Prepare:

- Brainstorming and discussion sessions will be organised for the students.
- They will identify the area to focus on and prepare a road map to achieve targets.

The following areas can be focused on (indicative):

a) Disposal of human waste properly and safely

b) Creating sensitization amongst community members about personal hygiene

c) Spread awareness about sanitized and clean toilets and contribution required to maintain public utilities

d) Proper garbage disposal

- Collect the above data and read prepared report of the class, then segregate the areas where 'Mission Cleanliness' can be accomplished. Reflect and form groups and get the project rolling (6 hours).

Act:

Organize Cleanliness Month:

- For cleanliness drive arrange advertisement competition for students' in schools (4 hours).
- Identify surroundings or a locality which need assistance by doing a field survey of the surrounding community area(6 hours).
- Ensure cleanliness of water sources like lakes, rivers, ponds and other such bodies that are getting polluted due to insensitivity of human beings.
- Segregate groups with onerous tasks of finding solutions to most aspects of cleanliness through articles, TV programmes, and video on YouTube or by speaking to the authorities and residents (10 hours).

- Students can prepare Street Plays and present them to community members, they can also use creative medium like-posters, placards for slogan march to generate awareness about the same.

- Go for cleanliness drive to a nearby public place (12 hours).

- Don't miss to click the photographs of the area before the cleanliness drive and after that.

Reflect

- Discussions will be held in class on the activities of the project. The students will think, talk and write about what they have learned and observed.

- Questions will be discussed in class about their experiences and response of the community; e.g.,

    o Describe what have you learned and felt about your project?

    o How far was the activity beneficial for you?

    o What have you learned about yourself and your surroundings from this project?

    o How do you think we can solve problem of cleanliness and sanitation?

    o Where did you find maximum dirt and squalor?

    o How can we make the project more effective?

- The students will be given a Proforma to fill in so that they can assess their own learning from the project.

- Share and Celebrate

    o An assembly can be arranged to award the outstanding students.

    o The students will display the charts and models on school notice-board.

    o Certificates can be awarded to the outstanding students.

    o The students can make future plans about continuing the activities of paper picking in the school and the classroom.

    o The class room can also be decorated with charts and models.

    o The students can also keep imparting information regarding cleanliness through their practical demonstration to other students.

The report of the project will be published in the newspapers and the school's magazine.

Activity Report:

S. No.	Identified Locality	Steps taken for cleaning up	Awareness Generated	Solutions Recommended

Student to write and update their activity report:

Date	Activity	Learning Experience	Outcome

Evaluation of the students by the Mentor:

Scheduled Activity	Proposed date Month	Time Taken	Activities Outcomes	Developed View Points

Evaluation of the Activities:

- More effort required
- Satisfactory
- Very focussed
- Excellent

Students to give details of their learning experience:

Learning Outcomes

- The students will learn that they must keep their surrounding areas and themselves neat and clean.
- The students will raise awareness among other students and their community members about personal hygiene and keeping their surrounding environments clean.
- The students will become aware citizens and will be able to spread awareness amongst the people around them.

Key Messages

- Share your knowledge, experience and skills with others.
- Take utmost care of both personal hygiene and environmental hygiene.
- Do not throw garbage or litter at Public places.
- Keep your surrounding areas clean, in order to make your environment pleasant.

"It is very imperative to empower individuals, households and communities to associate with the common goal of maintaining cleanliness and sanitation."

Project-2: "Dignity of Labour"

Project Focus- Social Justice/ Human Rights

Target Point- As individuals we should encourage our students to respect all types of job and give value to each job but social norms are such that we judge people by what they are doing. Sweepers, shoe makers, laborers and launderers are looked down upon by the society. Each one contributes to our comfortable living. It is a false sense of pride in wealthy parents that they indulge their children without making them understand the value of money.

We should respect people for their perseverance, hard work and effort. If we have to accord dignity to labour, social services must be commended and community has to be sensitive to

individuals, understand and respect them. Ironsmith and mason are as important as T V anchors.

We want our children to grow into successful, confident and happy individuals. We wish to give them best of everything. We must foster good values and gratitude in them for what they have.

"Dignity is often a mask we wear to hide our ignorance."

Key Objectives:

- Students will be able to understand the value of toil against ease.
- Students will understand the importance of different occupations in our social system.
- Students will be able to respect people from different vocations of life.
- Students will be able to understand and value Human Rights.

SEWA Components

- Be able to respect people despite their nature of work involved in their vocations.
- Be able to instill love for labour.
- Get an overview of separate vocations and nature of work required for the occupation.

Role of mentor teacher:

- Deducing inferences from comparative study of life situations.
- Discussing consequences of disliking a type of work and attitudinal problems related to it. Suggest remedies.
- Instil respect for all types of work.
- Be able to support discussions with anecdotes and examples from the life of great people *(M.K. Gandhi, Abraham Lincoln, Martin Luther King, Lal Bahabhur Shastri)*, who believed in dignity of labour and practised it as well.

"Take the tools in hand and carve your own best life."

Project Process:

- Divide students in groups of around ten.

- Organise brainstorming sessions with the students.

- Collect quotations and quips.

- Collect Newspaper cuttings indicating both - respect for Human Rights and violation of Human Rights.

- Stories and anecdotes highlighting the theme.

- Prepare an action plan and roadmap to achieve it. Analyze the action plan.

- Collect views and review of elders.

- Organized outing in specific area to identify and correlate the project.

Act:

- One group could contribute to community work by regularizing and motivating the job of people from different walks of life in their respective areas/ apartment complexes. (14 hours)

- Collect funds in cash / kind to recognize and reward the contribution of helpers on special occasions like New Year / Labour Day.

- Organise a discussion in class where people were victimised due to their profession and how and which all Human Rights were violated in such situations.

- Celebrate World Human Rights Day (10th December) and Labour Day (1st May).

- Address the issue through creative arts perform street plays, interviews of the school helpers (getting to know them better).

Reflect:

- Discussion sessions will be organized to have a better understanding of Human Rights.

- Students can discuss about:
    o Importance of different vocations in a social structure.

    o Why must a human being be seen and treated beyond his/her occupation.

    o Basic courtesies that should be extended to one and all.

    o What do they need to change their attitude and behaviour to be more humane?

    o What are the social or manual problems that arise from lack of respect for labour in different categories?

    o How to appreciate the contribution of any helpers?

o   Develop a code of personal behaviour consistent with the social and physical aspects.

o   Write the life skill you have developed in the process.

- Elucidate the ideas you have gathered from your preparation on the value of the 'Dignity of Labour'.

- Creatively express their feeling for or against the topic of discussion.

"It is dignity for a man to labor in his vocation."

Interview questionnaires

- Understand the problems of ten different community helpers.

- Share experiences in class discussion and dissect problems and threats.

S. No.	Name and address	Occupational problems and threats	Assistance required	Suggestions

Activity reports (to be updated by students):

Date	Name and address	Activity	Outcome	Change in attitude

Evaluation of the students by the mentor:

S.No	Scheduled Activity	Time Limit	Time Taken	Achieved Outcomes	Developed View Points

Evaluation of the activities:

- Requires in-depth understanding
- Satisfactory
- Good initiative
- Praiseworthy effort
- Quality inputs
- Internalized behaviour
- Reasoning

"We are equal, therefore let's strive to attain prosperity."

Response from Family-

- Below 30%   In different
- Between 30-60%   Took interest
- Exceed 60%   Enthusiastic with better input

"Employers and employees are partners, not enemies. Their interests are common not opposed, and each is dependent on the other for success."

Project-3: "Empathy"

- Project Focus- Facilitating inclusivity
- Target Point-   The concern about the fate of others, the ability to realize other's

tensions, understand other's fears and ability to put oneself in their shoes and willingness to enter other's world with dint of sympathy and imagination makes us realize that we human beings are incapable of having any meaningful dialogue without empathy.

Our nations, communities, and individuals will not be able to get socially empowered without EMPATHY. Empathy is the ability to put oneself at other's position and understand what life is like for another person. The communication gets impacted. It is also the capability to appreciate, understand and accept other person's emotions. It improves inter-personal relations especially with the people of different abilities, backgrounds, regions and nationalities.

Key Objectives:

- To be sensitive to the needs of others
- To be able to support inclusivity and develop a positive attitude about it
- To develop compassion and value human life
- To console and empathise people in distress
- To develop a humane outlook
- To be able to express love, care and compassion towards disadvantaged

"Empathy is trying on someone else's shoes, Apathy - Wearing Them."

SEWA Component

- To be able to communicate the value of empathy
- To be able to develop empathy towards disabled
- To understand the importance of inclusivity and support it
- To be able to sensitize peers as well as community members about the inclusivity and help prepare a conducive environment for the same
- Self awareness, critical thinking towards under privileged

Role of Mentor/Teacher:

The mentor/teacher should:

- help students understand implication of life situations -discrete difference between sympathy and empathy;
- guide students to communicate value of empathy through examples;

- organize rotation mentoring of specially challenged children;

- support and create conducive environment for promoting inclusivity.

Project Process

Prepare:

- Organise brainstorming sessions with the students

- Discuss the scope of project and prepare a road map

- Draft an action plan

- Make 'who needs my help' worksheet

Act:

- Participate in prayer services. Express feelings in form of poem/ story.

- Write letters to sick or distressed.

- Role-play, creating situations which call for a manifestation of sympathy.

- Identify or compose a poem on the subject and read it to the class. (2 hours)

- Ask them to work on their 'who needs my help' worksheets prepared during the 'Prepare' phase. They can depict it through words or drawing thinking about the needs of others and to provide assistance without being asked. (Show the writings and pictures) (4 hours)

- Discuss how we can help children who are differently abled, fighting with terminal diseases like Cancer, belong to disadvantaged groups and with physical challenges.

(1 hour)

- Plan their interaction, on rotation, with differently abled children. (Continuous)

Reflect:

- Talk all about empathy with students, ask them to discuss it within their peer group and family.

- Discussions will be held in class on the activities of the project. The students will think, talk and write about what they have learned and observed.

- Questions will be discussed in class about their experiences and response of the community; e.g.

"I believe empathy is the most essential quality of civilization."

o Describe what have you learned and felt about your project?

o How far was the activity beneficial for you?

o What have you learned about inclusivity from this project?

• The students will be given a Proforma to fill in so that they can assess their own learning from the project.

• The teacher will also fill the Proforma to assess and rate the performance of the students.

Share and Celebrate

o Students get 'stars' awards from the class teacher for practicing the value after relating situations and elaborating on them.

o An assembly can be arranged to award the outstanding students.

o The report of the project will be published in the newspapers and the school's magazine.

Socio Metric Questionnaire:

S. No.	Name and address	What led to empathy	Immediate situation	Fulfillment quotient

Activity Report:

Date	Activity	Benefits	Realization

"To empathize means to share, to experience the feelings of another person."

Evaluation of the Student by the Mentor:

Scheduled activity	Time frame	Achievement	Imbibed the concept

Evaluation of the activity:

- Sensitive to the issue
- Paid attention
- Enthusiastic response
- Lukewarm response
- Exemplary effort
- Need more effort

"Empathy is the capacity of think and feel oneself into the inner life of another person."

Response from family:

- Below 30%   In different
- Between 30-60%   Took interest
- Exceed 60%   Enthusiastic with better input

"Leadership is about empathy. It is about the ability of empathy to relate to and connect with people for the purpose of inspiring and empowering their lives."

Project-4: Care for homeless children

Project Focus- Child Rights

Target Point- Students of Classes VI-VIII as community volunteers would participate in a programme to give happiness to children living in shelters. This would also increase awareness about the issue of homelessness. This SEWA project will also focus on every child's

right for special protection and care. Children have the right to an adequate standard of living, health care, education and services, and to play and recreation.

Key Objectives:

- To understand and appreciate every child's right to an adequate standard of living, health care, education and services, and to play and recreation. These also include a balanced diet, a warm bed to sleep in, and access to schooling.

- To increase awareness about issues of homelessness.

- To develop empathy for other children who may be less privileged than them but not less creative or talented.

- To expand their horizon of society.

- To assess impact of one's work.

SEWA Component:

- To develop an understanding of child rights.

- To support underprivileged children.

- To help create a social environment that supports and respects every child's rights.

- To develop deep insight into the living conditions of underprivileged children.

Role of mentor/teacher:

The teacher/mentor will

- help students develop an action plan.

- provide them with an understanding of Child Rights.

- help them with all support in terms of logistics.

- facilitate the process and provide them all scaffolding required.

Project Process:

The teacher/mentor will:

- help students in identifying a shelter for children.

- guide students to understand those children by a few pre-project activities.

- brainstorm the children and ask what they think their objective is.

- coordinate with the authorities concerned and complete any official formalities required in the school and in the shelter.

ACT

- Plan to paint a shelter. The improved aesthetics will add cheer to the House.

- Identify needs of various Shelters in the community (Read the concept and complete the Survey Form). Look up which Shelter has the direst need to be painted. Steps for painting the Shelter:

  a) A group of students may go and take measurement of the area to be painted-the rooms, the compound wall and the outside wall. (3-4 hours)

  b) Discuss the budget that will be involved in purchasing the paints and discuss how to arrange for any donation from the community. (1-2 hours)

  c) Organise a donation drive. (over 3-4 weekends)

  d) Chart out the theme of the painting. (3-4 hours)

  e) Purchase paints.

  f) The students would paint the walls (4-6 weekends). Plan the activity well enough so that it can be distributed among various groups in a planned manner.

Reflect

- Discussions will be held in the class on the activities of the project. The students will think, talk and write about what they have learned and observed.

- Questions will be discussed in class about their experiences and response of the community; e.g.:

  i.   Describe what you have learned and felt about your project.

  ii. How far was the activity beneficial for you?

  iii. What have you learned about child rights from this project?

- What can be your future plans about continuing to support such children in terms of their other basic requirements?

Share and Celebrate

- An assembly can be arranged to award the outstanding students.

- The students will display activity pictures (before and after) on school notice-board.

- Certificates can be awarded to the outstanding students.

- The report of the project will be published in the newspapers and the school's magazine.

1. Please read the following concept and complete the survey :

A group of students from _____(School's name) are interested in giving a makeover to a House like yours. These children have decided to bring happiness to a group of their friends by adding colour to their life and be friends with them. However, as the resource is limited, they are interested to find out which of the Shelters have the urgent need for it.

Survey form to identify Shelter for Makeover

i)   **Select how you feel about the qualities of your Shelter:**

Quality/Scale   Low_____High1, 2, 3, 4, 5

Maintenance of rooms

Maintenance of bathrooms

Number of games played

Colour of your room-wall

Classes conducted

ii) **After reading the above service description, how interested would you be in using the described service?**

- Not at all interested
- Not very interested
- Neither interested nor uninterested
- Somewhat interested
- Extremely interested

iii) **Which features are the most valuable in the above description?**

_____
_____
_____
_____
_____
_____
_____

---

iv) **Do you find anything unappealing in the concept? Please write.**

_____

_____

_____

_____

v) **How often do you get such opportunities from other community groups?**

- Once in a year

- Once in two years

- Less often

- Never seen

vi) **Do you want us to do anything more for you in addition to what we are offering? List any three in order of your preference.**

(This is the plan that is given while detailing SEWA initially, so no need to repeat the entire set.)

Evaluation of the Activity:

- Sensitive to the issue

- Enthusiastic response

- Exemplary effort

- Lukewarm response

Project 5: Being Safe and responsible

Project Focus - First Aid/ Health Club

Target point- To bring awareness in the society about dangers, reactions to different types of dangers and how to give first aid during emergencies.

Key Objectives

- Make students understand importance of being safe and responsible.

- Make the students understand the importance of first aid.

- Encourage the students to practice first aid skills.

- Teach the students, the basics of first aid in order to empower them to help people in emergencies.

Cross-Curricular Linkages

- The students will learn basics of first aid.

- The students will be trained practically about first aid skills.

Duration- 10 hours

SEWA Component

The project will create a sense of connection and empathy among students towards others.

The students will be able to provide first aid to those in need.

Project Process

Prepare

- The students will be provided tips for facing danger.

- Informative lecture-demonstration sessions will be arranged with doctors from different hospitals including a dentist.

- The students will be provided first aid boxes.

- The students will be divided into four groups for conducting the project. A group leader will be made who will lead the team. A project manager will also be made to check the progress of the students for their field work. The project manager will be told to bring a camera to make video of first aid provision to others.

Act

- After collecting data about the topic, the students will discuss various dangers in the classroom and will come up with life saving and precautionary reactions. They will be asked the following questions:

  o What is your very first response to danger?

  o Why is first aid not a common practice?

  o How can it be made common practice among citizens and people of the community?

  o Can you explain different situations in which first aid is required?

o   What can be your first reaction towards an injured person?

o   What will you do, if you see an unconscious person lying in a pool of blood?

o   What can be done to make first aid a common practice?

- The students will go to the hospitals in order to attend lectures of the doctors about first aid. Each group of students will visit 3 doctors. The students will also make videos of the sessions held with the doctors. First aid videos will be shown to students.

- Practice of first aid will be done in the classroom.

- The students will learn how to check temperature and blood pressure of a person.

- Charts and models will be prepared by students.

- The students will perform first aid in their real life. They will treat the injured students and their community members. They will keep a record of those who will be treated.

- The students will teach students of lower class about different first aid techniques.

Reflect

- The students will share their experience of working on the project with their teachers and class fellows.

- The students will be asked the following questions about their project:

o   What did you learn after conducting this project?

o   Did you feel that this project made a difference to your life and the lives of others?

o   What problems did you face during the project?

o   Do you think that the project is successful?

- The students will be given a proforma to fill in, so that they can assess and judge their performance.

- The teacher will also be given a proforma to assess and rate the performance of the students.

Share and Celebrate

- Health Mela: A Health Mela can be organised to sensitize people about the importance of first aid. Demonstrations and lectures on administering first-aid can be presented.

- Exhibition: An exhibition will be held during the Mela. Charts and models made by the students can be displayed in the exhibition.

- Speeches: Speeches/ Lecture-demonstrations can be done by the teacher/s and the students to spread awareness about first aid.

- Publicity: The report of the project will be published in the school's magazine and newspapers.

Learning Outcomes

- The students will learn the basics and importance of first aid.
- The students will become aware of first aid techniques.
- The students will teach other students and their community members about first aid.

Key Messages

- Empathize others who are in troubled state
- Save others lives by providing timely first-aid

Evaluation of the Activity

- Has deep understanding of the issue
- Good Initiative
- Quality inputs
- Luckewarm response

> *"The Desire for Safety Stands Against Every Great and Noble Enterprise."*
>
> *Publius Cornelius*

Project-6: Reduce, Recycle, Reuse (most important 3R's) and Now Respect

Project focus- Conservation

Target area- It enables children to learn about the original source of material and also which materials can be recycled.

Every living organism is important in this world an elephant, a banyan tree, a rabbit, an insect, a mustard plant, and so are inanimate water, air or soil. They are members of one or the other food chain and are dependent on one another. Every food chain starts from a plant source and man is the last consumer in almost all the food chains. But with increasing population the resources are depleting. We need to establish a balance between human populations and available resources so that renewable sources find sufficient time to renew themselves and others can be recycled and reused.

Key objectives:

- To learn about the original source of material goods such as glass, aluminium, iron, paper, plastic, petroleum, coal.
- To learn the importance of segregating the garbage.

- To learn which materials can be recycled.

- To learn to coordinate between plan and action, within the volunteer group as well as with the target group.

- To find new ways of cooperating with each other.

SEWA Component:

- Students will learn social skills and to solve problems in a group.

- Students will understand the importance of conserving the resources.

- Students will explore and internalize the importance of Reduce, Recycle, Reuse.

- Students will learn to use the resources judiciously.

Project Process:

Prepare:

- Students will make a rough layout and plan the activities stepwise to practically implement the project.

- Conduct a class discussion. Discuss the meaning of recycling. (The teacher may tell a story with a message - "There is enough for everyone's need but not for their greed)".

- Students will make a list of things that can be recycled at home or at school.

- Discuss the reasons for recycling. Ask students if they know what the source of the original material is.

- Many students do not know the actual origin of materials and how material is recycled. Prepare and use the resource sheets to sequence the steps from original product to recycling for each material.

- Draw story boards about where materials come from. Display stories.

- Identify locality or target area for the execution of the project.

Act:

- Form groups of 10 to 12 students and select a group leader for each group. The students in each group should preferably be from the same residential area to make it practically easy for them to target their project area. (2 hrs)

"One thing you can't recycle is wasted Time."

- Divide larger areas into smaller target areas, and allot them to each group accordingly. (2 hrs)

- Do a door to door survey to find out things that are needed to be recycled by the people living in the neighbourhood and collect data to fill in the provided survey sheet. (12 hrs)

- Talk to the local area welfare society and arrange a presentation. (2hrs)

- Prepare a presentation to :- (12 hrs)

  o spread awareness about Reuse and Recycling.

  o sensitize people about conservation of nature by recycling.

  o make the residents aware about the benefits of segregating the trash.

  o tell them about the various benefits of understanding the origin of various goods so that recycling becomes easy for them.

- Ask students to prepare two lists by following the steps given below:

  o Make a list of all man-made things around them.

  o Try to find out where they come from.

  o The materials, about which they have a doubt (its origin), will be marked in the list.

  o The teacher will help them find the origins of these materials.

- Share the list prepared by you with the residents and prepare a consent list of those who would agree to segregate the trash in order to facilitate the garbage disposal. (12 hrs)

- Prepare an evaluation sheet after monitoring and taking feedback from the residents to make a record of people to know how they have benefitted from the project. (12 hrs)

Reflect:

- After the collection of the data from survey, ask students to assemble all the collected data at one place.

We have to start caring about our planet. That is why we should recycle.
"Why should we recycle? To talk is good, to act is better."

- Guide students to use the information and prepare two lists- one with the materials that can be recycled and another one with the materials that cannot be recycled.

- Guide students to prepare a presentation highlighting the following:

  o Meaning of Recycling.

  o The need for reuse.

  o Does it help in easy disposal if the garbage is segregated?

  o Why do some materials need to be recycled while others cannot?

  o Why does man need to control greed and utilise Mother Earth's resources thoughtfully?

  o Why do we need to respect the resources provided by nature?

  o What should be reduced and why?

- Discussions will be held in class on the activities of the project. The students will think, talk and write about what they have learned and observed.

- Questions will be discussed in class about their experiences and response of the community; e.g.,

  o Describe what you have learned and felt about your project:

  o How far was the activity beneficial for you?

  o What have you learned about yourself and your surroundings from this project?

  o How do you think we can sensitize people about conserving and respecting resources?

  o How can we make the project more effective?

- The students will be given a Performa to fill in so that they can assess their own learning from the project.

Share and Celebrate

- An assembly can be arranged to award the outstanding students.

- The students will display the charts and models on school notice-board.

- Certificates can be awarded to the outstanding students.

- The classroom can also be decorated with charts and models.

- The students can also keep imparting information regarding cleanliness through their practical demonstration to other students.
- The report of the project will be published in the newspapers and the school's magazine.

Survey Sheet

S.No	Name	Residential Address	People who started segregating garbage	People who still didn't start segregating garbage	People Benefitted (Those who changed)

Student Evaluation Sheet to be filled by the mentor after the completion of each activity:-

Scheduled Activity	Proposed Date	Suggested number of hours	Hours invested	Date of completion of the activity	Learning objectives achieved	Skills developed

Evaluation of the activity:

- o Unsatisfactory
- o Satisfactory
- o Up to the mark
- o Excellent

Students will fill the following Questionnaire at the end of the project:-

1)   To what extent did the experience meet your expectations?

_____

_____

2)   What might have helped to make your experience better?

_____

_____

3)   What community needs did your service fulfil?

_____

_____

4)   What community needs was not addressed?

_____

_____

5)   What would you do differently next time?

_____

_____

6)   How could you be prepared better for future involvement in the community?

_____

_____

"We can help educate our families and communities about the importance of recycling for our environment, and how each of us can make a difference for a better world by recycling."

-Robert Alan

Project evaluation sheet (to be evaluated by the Mentor):-

Project Title: _____

Student's Name: _____

1) Learning objectives accomplished by the student:-

   o Less than 30%

   o 30% to 60%

   o More than 60%

2) Number of hours invested by the student:-

   o Less than 30 hrs

   o 30 hrs to 60hrs

   o More than 60 hrs

3) Number of people interacted with:-

   o Less than 30%

   o 30% to 60%

   o More than 60%

4) Number of people responded to the proposal of car pooling:-

   o Less than 30%

   o 30% to 60%

   o More than 60%

5) Number of people who switched over from personal vehicle to common transport / public transport:-

   o Less than 30%

   o 30% to 60%

   o More than 60%

6) Number of people benefitted by the community service:-

   o Less than 30%

   o 30% to 60%

   o More than 60%

Perspectives

Introduction

The introduction of Perspectives as a discipline of learning at the core of the curriculum indicates a need for a deep insight into the subject matter in a particular context. Perspectives would help schools to enable learners to constructively and critically evaluate events, materials, situations, ideas and other real life experiences and take their own stand. The objective of the discipline is to enable every learner develop competency of independent judgment and take meaningful position while dealing with other subjects. The students would connect their experiences to various issues and critically analyze, appreciate or review a subject matter and take a well informed and well considered position at the individual level. This can be done both individually as well as collectively in a group. The issues related to the society, the developments in the field of science and technology, environment issues or any other national, local or international issue may be considered as subject matter for perspectives. The issues must not hurt the sentiments of any sects of society.

The objective of this learning area is to encourage the children to have an independent approach to an issue by substantiating their views with an insightful study of the same.

The outcome of the study undertaken should act as a means of developing a child's analytical skills, original thinking, critical thinking and reflective thinking.

The connection between essential learning in the scholastic domain and the core which includes Perspectives, Life Skills, Research and SEWA **(Social Empowerment Through Work and Action)** would help in coherent organization of knowledge. The selection of content across all areas of pedagogy and assessment practices would be interconnected and aligned. Learning in this way will add value and meaning to students much beyond the classroom and the boundaries of the school.

Perspectives: Broad objectives

The study of 'Perspectives' will help learners to:

- scaffold learning experiences and to relate tacit knowledge with formal knowledge.

- provide an opportunity to students to think independently and form opinions beyond stereotypes.

- provide an opportunity to reflect, debate, concur and arrive at an informed decision.

- help develop research skills.

- allow opportunities for reflection on issues of relevance.

- encourage collaborative and reflective learning.

- provide an opportunity to initiate, conceive, plan and execute their work creatively.

Guidelines for Students:

- The student must responsibly use multiple sources to collect data or plan sufficient number of investigations before arriving at a view.

- They must present arguments reasonably and appropriately, and evaluate give suitability of conclusions drawn.

- They would be required to present their ideas in a format agreed by their teacher and themselves.

- If there is any piece of writing, it has to be original and expressed in maximum permitted words suitable for that particular grade:

  o Class VI - 400 to 500 words

  o Class VII – 500 to 600 words

  o Class VIII – 600 to 800 words

The teacher will facilitate the process in 'Perspectives', enable and empower the learners to present their point of view confidently, clearly and independently. The learners are expected to think over all the aspects before forming opinions and support their views with evidence.

The project should be initially guided by the teacher and then must be left to the students to work independently to encourage them to think and reflect on an issue critically with confidence. The teacher will act as facilitator and be there to provide guidance, providing the scaffolding required. The students may follow the basic guidelines:

  ➢ Choose a topic from the given choices.

  ➢ Make optimum use of teacher as a resource.

  ➢ Make a timeline for data collection/research.

  ➢ Make sufficient number of field trips /survey wherever required.

- ➢ Remain focused on the objective of the project.

- ➢ In case of group work take responsibility for his/her task.

- ➢ Work collaboratively.

- ➢ Build a consensus among a small group.

- ➢ Exhibit leadership skills.

- ➢ Do independent thinking.

- ➢ Acknowledge sources.

- ➢ Follow prescribed format and present accordingly.

- ➢ Submit by deadline.

Guidelines for Teachers:

- ➢ The students are from heterogeneous backgrounds and have varying learning styles. Teachers must be sensitive about student's needs.

- ➢ Motivate the students to think in an integrated manner.

- ➢ The logistics of the activity should be planned beforehand.

- ➢ Some activities require relatively less preparation, others need careful logistical preparation.

- ➢ Calculate the time required for the activity in two dimensions out of class preparation and the time required inside the classroom.

- ➢ Development of 'Perspectives' would require a deep insight into the subject matter under consideration and the ambience and environment in which it exists.

- ➢ Stimulate active participation and leverage learner ownership.

- ➢ Engage students in self–assessment.

- ➢ Emphasise useful advice and learning functions by discerning learning needs. Must be relevant to learning aims.

- ➢ Promote independent thinking. The teachers should allow students to work in their own way rather than re-orienting their thinking.

- ➢ Teachers should avoid giving their opinions and be non-judgmental.

- ➢ Provide the rubrics of assessment for every work undertaken by the student.

Notes to Teachers

The purpose of the given projects is to provide materials which teachers can use in their classrooms. The material is wide-ranging and it depends on the teachers to decide when and how to use the materials. They might be used as a routine exercise or may be used in club activities.

An earnest attempt has been made to make the subject matter comprehensive and all-encompassing so as to include various subjects that could widen pupils' horizon of critical thinking.

Teachers are required to take printouts of the assessment rubrics and distribute it amongst students before starting any activity. The CBSE-*i* gives priority to Peer assessment and Peer evaluation. The facilitators are encouraged to use them in their classes. This will in one way help the students internalize the characteristics of quality work by evaluating the work of their peers. In order to make the students understand this type of evaluation, the teacher may have a practice session with the students. Thus, students can benefit from using rubrics or checklists to guide their assessments.

The rubrics of assessment provided at the end cannot be claimed to be all exhaustive. The facilitator may improvise on it. However, they should not forget to link this to learning, which is the primary goal.

PROJECTS

PERSPECTIVES

Project 1: Exploring Economics Young

There is a need for children to recognize the value of money. With increasing disposable income, children too get more freedom to spend the money that their parents have given them. They get the independence to decide the desired goals for that money.

Time required: 90 minutes

Mode: Individual students

Learning Objectives:
- To enhance confidence in speaking out one's stand backed with reasonable and rational arguments.
- To make them aware of the importance of 'saving'.

Procedure:
- Ask the children to choose 'For' and 'Against' saving from the points given below in the hints and ask them to write in two different columns.

  Hints- 'For' and 'Against':

  - Children should know that money has to be earned.

  - Children need not know how money is earned.

  - Children should know what a bank is.

  - Children should know that they need to store their money safely and protect it .

  - Guardians/Parents are there to calculate the money, why to burden a child.

  - Children should know how their parents think about saving and spending money.

  - Elders are there to protect money.

  - Children should know that buying things cost money and they should know how to pay for something.

  - They don't need money, parents are there to spend for them.

  - They don't need to run to the bank, they have parents/guardians.

- Debate on 'Should kids be taught to save money?'

- Students can choose their side. They must add their own points and develop ideas. Give the topic 2-3 days before it is slotted to be discussed.

- On the declared day and in the slotted time, encourage children to debate 'For' and 'Against' the topic.

Useful Vocabulary
i.   I am listening to the other side…
ii.   I see your point, but I think…

- Provide the rubrics of assessment to children for post-debate discussion.

- After the debate there should be a general discussion on the topic for 15 minutes along with the rubrics for assessment.

- Prepare a video of the entire transaction and upload it in YouTube and share it with other CBSE-*i* schools.

Trans-disciplinary Approach:

The debate improves language competence and gives lessons in Economics, integrating the two disciplines.

Project 2: Food Habits-Why we decide on what we decide

In recent years there has been an increasing awareness about vegetarianism. People are encouraged to be vegetarians. The reasons vary from religious issues, environmental issues cruelty towards animals, to just the desire for a healthier lifestyle. Can we really safely follow vegetarian diet and still get all the nutrients necessary?

Time required: 90 minutes

Mode: Individual students

Learning Objectives:
- To enhance confidence in speaking out one's stand backed with reasonable and rational arguments.

- To make them critically think on various aspects of the type of diet.

Procedure:
- Ask the children to choose **'For'** or **'Against'** vegetarianism from the following points:

  Hints:

For

     i)   Natural detoxification

     ii)   Colourfully appetizing

     iii)   Good for digestion

     iv)   Boosts cardio-vascular health

     v)   Reduces risk of cancer

     vi)   Longevity

Against

     i)   Plants too have life.

     ii)   Plants too need to be given the dignity of a creature.

Many vegetarians argue that God's creatures shouldn't be sacrificed simply to appease our craving for a thick, juicy rib. While there may be some merit to their arguments, their rationale also reeks of hypocrisy. Although vegetarians openly decry the slaughter of animals, they think nothing of tearing carrots and spuds out of the earth or of sticking a zucchini into a high-speed blender. Like it or not, plants are also living organisms that respond to stimuli like light, gravity and touch. In fact, some groups even believe plants can feel pain. Take the Ethics Committee on Non-Human Biotechnology, for instance. This Swiss group recently came out in defense of our leafy green friends in a report on "the dignity of the creature in the plant world." They argued that plants deserve respect and that killing them arbitrarily is morally wrong.

(Excerpt of an opinion in 'How To: Argue against Vegetarians' in Source: http://www.askmen.com/money/how_to_400/477_how-to-argue-against-vegetarians.html)

- They must add their own points and develop ideas. Give topic 2-3 days before it is slotted to be discussed.

- On the declared day and in the slotted time, encourage children to debate **'For'** and **'Against'** vegetarianism and ask them to support their arguments with reasons.

- Children should be provided with the rubrics of assessment for post-debate discussion.
- After the debate there should be a general discussion on the topic for 15 minutes along with the rubrics for assessment.
- Prepare a video of the entire transaction and upload it in YouTube and share it with other CBSE-*i* schools.

Trans-disciplinary Approach:

Along with language competency the project cuts across Science and Social-Science. Technology know-how is weaved into the work.

Project 3: Pets as Succor

It is seen without doubt that some pets like dogs provide emotional and psychological succor to their owners. Therapy dogs have been used in various settings hospitals, rehabilitation centres, nursing homes, classrooms, psychiatric units, prisons and even workplaces in order to lift the spirits of people with whom the dogs come in contact. Dolphins have a therapeutic effect. **Would you really agree on such a view? Can animals be more trustworthy than close human relationships?**

Time required: 90 minutes

Mode: Group Discussion and Peer assessment

Learning Objectives:

- To develop communication skills, leadership skills, decision making skills, interpersonal relationship.

- To sensitize children about animals and treat them as living beings.

Procedure:

- Prepare chits of two opinions- **'For'** and **'Against'**. Whether animals are more trustworthy than close human relationships. Allow the students to pick the chits and group accordingly.
- Make groups of 6-8 students. There will be four groups-two groups speaking 'For' the topic and two groups speaking 'Against' the topic.
- Discuss with reasons on the changing dynamics where people receive comfort from pets. Lend your voice **'For'** and **'Against'** the topic.
- The students-audience should be given the rubrics for peer assessment during the discussion.
- Prepare a video of the entire transaction and upload it in YouTube and share it with other CBSE-*i* schools.

Trans-disciplinary Approach:

The work enhances language skills and IT skills, which is intertwined into values of life.

Project 4: Gaming Sites: The Game of it all

There are plenty of gaming sites for children as well as games are available in the market. These can be for fun as well as for learning.

Time required: 90 minutes

Mode: Group Discussion and Peer assessment

Learning Objectives:

- To develop communication skills, leadership skills, decision making skills and interpersonal relationship.

- To make children understand the need of physical sports vis-a-vis interactive video games, T.V. and computer usage.

Procedure:

- Read the following viewpoints given in different articles:

No doubt about it — TV, interactive video games, and the Internet can be excellent sources of education and entertainment for kids. But too much screen time can have side effects. According to the CDC (Centers for Disease Control and Prevention), obesity rates for adults have doubled and the rates for children have tripled just since 1980. I admit that we cannot blame this fact on video games alone. However, is it just a coincidence that it was during these same years that the market for video games began to boom? Allowing our children to sit and play video games for hours on end, in my opinion, cannot lead to a healthy lifestyle. The American Academy of Pediatrics suggests that people should spend at least sixty minutes a day exercising. As the obesity rates indicate, many children would rather play a video game than climb a tree. It was bad enough when television came out, but now we have another distraction from physical activity, video games. That's why it's wise to monitor and limit the time your child spends playing video games, [watching TV](), and on the computer and the [Internet](). The American Academy of Pediatrics (AAP) recommends that kids under the age of 2 have no screen time, and those kids older than 2 should watch no more than 1 to 2 hours a day of quality programming. If your kids want to watch TV but you want them to turn it off, suggest alternatives like playing a board game, starting a game of hide and seek, playing outside, reading, etc. The possibilities for fun without the tube are endless — so turn off the TV and enjoy quality time with your kids.

Should we deprive the child of his right to entertainment by restricting his video-game time? Discuss.

- Prepare chits of two topics-for and against. Allow the students to pick the chits and group accordingly.

- Make groups of 6-8 students. There should be four groups-two groups talking for the topic and two groups talking against the topic.

- The students-audience should be given the rubrics for peer assessment after the discussion.

- Prepare a video of the entire transaction and upload it in YouTube and share it with other CBSE-*i* schools.

Trans-disciplinary Approach:

The project highlights essential life skills of thinking along with learning the values of life.

Project 5: Alternative Therapies

Yoga Therapy: Under the supervision of a yoga therapist the patient learns to root out the imperfection in the body system to cure a specific disease.

The patient is actively involved.
Allopathic Medicine: The medical practitioner investigates and diagnoses a specific problem/ailment and prescribes appropriate medicines.

The role of the patient is passive and medicine plays its role to cure the disease.

Time required:

- 5-6 days for collecting information

- 100 minutes for the seminar- Presentation and Defense

Mode: Individual and Peer assessment

Learning Objectives:

- To develop interest in objective thinking and analysis of a problem.

- To augment ability to defend their argument.

- To make children aware of different types of treatment available across the world.

Procedure:
- Ask the students to collect information from Newspapers, Magazines, and Internet.

- Facilitate finding out resource and help them in developing ideas

- Conduct a seminar on the topic, 'Yoga Therapy vs. Allopathic medicine'.

- Ask the students to research the topic and present their views in their paper.

- The speakers should present their point of view in the presentation.

- The presentation should have an introduction and conclusion.

- Ensure that the content has a "flow".

- Add pictures and graphs.

- Encourage students-audience to participate after each presentation.

Trans-disciplinary Approach:

This project combines scientific research with societal relevance.

Project 6: Walk, Watch, Preserve and Conserve

Children need to be aware of their glorious past. But, at what cost? Can there be a fine balance between preservation and conservation, and the glaring stark reality of the large section of the global population which needs to be taken care of?

Time required:

- 5-6 days for collecting information

- 100 minutes for the seminar

Mode: Group/ Individual Peer assessment

Learning Objectives:

- To develop interest in objective thinking and analysis of a problem.

- To increase ability to defend their argument.

- To make children aware and appreciative of rich local cultural heritage.

Procedure:

- Select your city/local area and organize a heritage walk. The walk can be conducted around the monuments, buildings, museums, market places and residential areas. Children can be asked to perform a Road Show by visiting different classes highlighting its significance and creating awareness for its upkeep and therefore the need to preserve and conserve. One group can perform a **Vintage walk/ Road Show in the form of a skit. Another group would present an oration supporting that it is an unnecessary expense which developing countries can't afford.** The government should rather spend money eradicating poverty, providing better health facilities and arranging better infrastructure for their people.

Principles of oration
i.   Identify motive.
ii.   Use persuasion and passion.
iii. Use ornate language, wherever possible.

Features of Road Show

i. Arrange flawless services on every stop of itinerary.

ii. Plan local activity.

iii. Highlight your main purpose.

- Ask students to collect information from newspapers, magazines and internet.

- Guide the students to find out the resource and help them in developing ideas.

Trans-disciplinary Approach:

This is a unifying topic of enquiry for History, Art appreciation and Dramatics.

Project 7: Man's Relationship with Nature

Man has always looked at nature with awe. Nature has been benevolent in showering its endowment on man. Does man reciprocate Nature's generosity?

Time required:

- 100 minutes to prepare and finalise the script

- 60 minutes for role-play

- 30 minutes for feedback

Mode: Group

Learning Objectives:

- Develop interpersonal skills and solve problems.

- Make them aware about how Nature is vital for a human being's existence.

Procedure:

- Look at the given pictures

(Source : shutterstock.com)   (Source : austinchronicle.com)

- Prepare chits on the topics: 'Trees', 'Rivers', 'Earth', 'Sun', 'Birds and Animals'.
- Divide the class into groups of 4-6.

- Ask the team leader to pick up chits.

- Ask the children to Role Play on:

    a.   Their use

    b.   Their misuse

    c.   Their restoration

- After each participant has presented their viewpoint, invite the group to give feedback.

Trans-disciplinary Approach:

The project weaves a connection between Environmental Science, Social Science and Performing Arts.

Project 8: Junk Food vs. Balanced Meal

In this fast-moving consumerist modern world where people are increasingly getting dependent on canned and quick-fix foods, is balanced meal a distant dream?

Time required:

- 3-4 days for collecting information

- 90 minutes for designing the wall magazine

Mode: Group and Peer assessment

Learning Objectives:

- To develop collaborative skills, time management and develop sense of responsibility**.**

- To develop awareness of nutritious balance of food, keeping in view nutritious content and calorie content of different food products.

Procedure:

- Observe the following pictures:

(Source: rsbuddy.com)

(Source: sodahead.com)

- Divide the class into two groups.

- Make two chits –

    o Balanced meal

    o Junk food

- Choose team leaders from both the teams and ask them to pick up a chit.

- Ask students to collect information related to their respective topics.

- Help them collect information in form of pictures, cartoons, graphics, etc.

- Help students prepare posters, recipe of their favorite meals/dish or prepare punch lines/captions.

- Ask students to design a wall magazine showing their perspective in support of the topic chosen by them.

- Invite the students of both groups to exchange their views.

Trans-disciplinary Approach:

Through this project students will make use of their knowledge of Environmental Science, Fine Arts and Language.

Project 9: A Wheel-Deal

Are cycles a viable option in this jet age? Does speed matter more than health? Do cycles pose a challenge to road safety?

Time required:
- 3-4 days for collecting information

- 100 minutes for writing the article

Mode: Individual

Objective:
- To develop interest in objective thinking and analyse a problem.

- To build up ability of proper planning and coherent thinking.

Procedure:

- Look at the benefits of using a cycle as well as impediments of using a cycle.

> **Benefits:**
>
> - Keep fit - Cycling is a fantastic way to keep fit and can help reduce the risk of heart disease.
>
> - Save money - Riding a cycle is significantly cheaper than driving a car. Once you've bought your cycle it needs no fuel, insurance or tax...and it costs much less than a car.
>
> - Go faster! - Commuter in other UK cities have shown that the cycle is the quickest mode of transport in congested urban traffic.
>
> - Stay young! - Regular cyclists enjoy a fitness level equal to that of a person ten years younger. (Source: National Forum for Coronary Heart Disease Foundation, Sharp).
>
> - Free repairs – It is almost maintenance-free.
>
> - Trouble-free -No parking problem.
>
> **Impediments-**
> An impediment- It is an impediment, a form of traffic that interferes with the dominant and proper modes of traffic (vehicular and pedestrian) that rule the life of the city. Whatever benefits to health and wellbeing the bicycle might provide to the cyclist or whatever pleasure it might offer to the same, it is thought that they should be secured away from the main streets of the city as the streets are intended for the efficient flow of people and goods.

- Ask students to collect information from newspapers, magazines, and internet.

- Guide the students to find out resources.

- Facilitate the students in developing the article.

Trans-disciplinary Approach:
The project will engage children across Physical Education, Language Development and Health education.

Project 10: Going, Going, Gone

The fast depleting forest and wildlife reserves question the modern man's voracious appetite for natural resources. This is a huge challenge to the dichotomy of the two situations wherein conservation restricts development.

Time required:

* 10-15 days for collecting information

* 90 minutes for writing the letter

Mode: Individual

Learning Objectives:

* To develop analytical thinking.

* To build up ability to plan and coherent thinking.

* To sensitise and develop awareness among students about environment.

* To optimise students capability among interfacing with government policies worldwide.

Procedure:

* Read the following:

   The forests in Central India have a large population of tigers and other wildlife. They also support the livelihood of millions of people. With coal mining there is a threat for tigers, wildlife and livelihood. Coal available in existing mines, renewable energy and energy efficiency can give us sufficient electricity. The forests can be saved. **Write a letter to the editor of a leading newspaper.**

* Another group would present a perspective disagreeing with such a regressive paper. Development needs space and there can't be a debate about stopping mining. Tigers can be shifted to another wilderness. People may be given suitable compensation and rehabilitated. But there can't be an alternative to development. **Write a letter to the editor supporting this.**

- Ask the students to collect information from Newspapers, Magazines, Internet, Library, Journals, etc.
- Ask them to take a case study of any place/region in their area and provide facts.
- The teacher may guide the students for finding out the resources and help them in developing ideas.

Trans-disciplinary Approach:

The project inter connects Social Science, Science, Environmental Education, Language and Life skills.

Research

"In the broadest sense of the word, the definition of research includes any gathering of data, information and facts for the advancement of knowledge."

\- Martin Shuttleworth

Research can be termed as the methodical investigation based on certain premise. The word research is derived from the French word "recherche", which means "to go about seeking". It is used to ascertain or corroborate facts, endorse the results of work previously done, review new or existing problems, support theories, or develop new ones. The key purposes of research are documentation, breakthrough, analysis, or the research and development of methods and systems for the advancement of existing human knowledge.

According to Trochim, (2006) Research is often conducted using the hourglass model structure of research. The hourglass model starts with a broad spectrum for research, focusing on the required information through the methodology of the project (like the neck of the hourglass), then expands the research in the form of discussion and results.

There are several forms of research: scientific, humanities, artistic, economic, social, business, etc. The term "Research" is to be understood in a limited sense for school environment. The objective of this learning area is to provoke the curiosity of the learner to any subject matter/concept/product/ activity of his/her liking and pursue an insightful study of the same. It is to be understood that this term is not to be related to the discipline of science or technology, but all disciplines of learning yield themselves as instruments for such work.

Further, the Board does not expect the outcome to be the production of material but sees such a study as a means of developing the research skills that are an important requirement of the day and as an exercise in opening the vistas of human mind to enquiry and problem solving.

The Broad Objectives of Research Projects are to:

- provide an opportunity for the student to apply the skills learnt in different subject areas. Allows the student to work on an area/topic of choice.
- provide an opportunity for students to work at their own pace.
- allow students to focus and develop clear and achievable goals.

- provide an opportunity for students to express a truly personal point of view.
- provide an opportunity to conceive, initiate, plan , organize and create their own work.
- give a chance to reflect on special interests, hobbies, abilities and talents.
- help develop research skills.
- allow opportunities for self reflection.

Guidelines for Students

Research will include research or extended writing on a topic chosen by the student. This will be cross curricular in nature and will provide the opportunity to use experiences from Perspectives. This will be initiated from class VI onwards. Students may think on their areas of interest and choose the topic they would like to do research on. Choose a suitable partner for the project, bring in inputs from at least two other subject areas to formulate the aim of the research work independently on the timeline and adhere to interim deadlines. Divide tasks effectively, carryout own jobs responsibly, use multiple sources to collect data or plan many investigations if the topic is from Science. They have to:

- present data appropriately;
- process data correctly;
- infer correctly and evaluate suitability of sources/experiments effectively;
- suggest improvements;
- present in the prescribed format;
- answer questions effectively.

The students will record their observations and document them in a format agreed by the teacher and student. The project is required to be:

- Interdisciplinary – with inputs from more than one discipline/subject
- An original piece of writing
- Expressed in words –augmented with pictures, drawings, data, etc.(number of maximum permitted words will vary for different classes)

The Research item should be:

- Class VI – 500 words
- Class VII and VIII – 700 - 1000 words

Students will be provided with topics from a variety of subject areas and will be asked to choose. They will work under the guidance of a supervisor who will monitor progress closely, evaluate methods and suggest alternatives.

Teacher Guided Research

The research is to be teacher guided where teacher will be providing regular scaffolding to the student. It will be in the form of group work and the teacher's role here will be of a facilitator. The Students will:

- choose an idea or concept to work on from the given choices;
- make a timeline for research/experiment with the first draft, second draft and final draft under guidance;
- organize their time to ensure sufficient time for the review of data/literature;
- use sufficient number of data sources for gathering information;
- interpret the data/information correctly;
- voice their own opinion in the final evaluation;
- acknowledge sources, attach bibliography.

The research project should be present in the prescribed format.

The research that we are focusing here differs somewhat from the traditional approach to research. Rather than focusing on issues and questions of a broad or theoretical nature, this method is basically a classroom enquiry or teacher guided research and requires the researcher to identify and document the existence of a problem in his/her own setting. Based on a scholarly review of current literature, the researcher must then propose and implement a plan to solve or improve the problem. Finally, the researcher develops a system to evaluate the effectiveness of his/her solution. The process will be divided into the following parts:

Selection of a problem (Focus of research)

Collection of data (how can you prove a problem exists and what does the literature or other relevant data say about the problem?)

Organization of data (what is the most effective method for presenting your findings?)

Analyses and interpretation of data (what are some possible causes of the problem?)

Suggesting actions to be taken (what can be done to improve the problem?)

The span of research should be such that it can be improved within a realistic time frame; and the researcher (student) should keep in mind that he/she, personally, has the ability to make an impact.

Research Outline

Chapter I: Introduction

1. Problem statement

2. Purpose

Chapter II: Study of the Problem

3. Problem description

4. Problem documentation

5. Review of Literature

Chapter III: Outcomes and Evaluation

6. Goals and expectations

7. Expected outcomes

8. Measurement of outcomes

9. Analysis of results

Chapter IV: Solution Strategy

10. Statement of problem

11. Solution description

12. Conclusion

References

Writing the Problem Statement

Stating the Problem

Problem: What is?	What Should Be?	How Can it Be Documented?
Students with learning disabilities are receiving failing grades from regular classroom teachers.	Students with learning disabilities should be receiving passing grades from regular classroom teachers.	Documentation can be performed by either report card grades, grades on assignments and tests, or teacher/student surveys.
1.		
2.		
3.		

Refine the Problem Statement:

Primary school students with learning disabilities are receiving failing grades on assignments and report cards from regular education teachers involved in inclusive education.

1.

2.

3.

Planning Matrix

Problem	Goal
Primary school students with Learning Disabilities (L.D.) are receiving failing grades on assignments and report cards from regular education teachers involved in inclusive education.	Primary school students with Learning Disabilities (L.D.) will receive passing grades on assignments and report cards from regular education teachers involved in inclusive education.
Evidence	**Outcomes**
1. Twenty (20) of the 62 L.D. students are receiving failing grades on daily assignments and tests in one or more of their inclusion classes. 2. Thirty (30) of the 62 L.D. students complete less than half of their assigned homework. 3. Fifteen (15) of the 62 L.D. students received failing grades on their report cards in one or more inclusion classes.	4. Sixty (60) of the 62 L.D. students will receive passing grades (70% or above) on daily assignments and tests in inclusive classrooms. 5. Sixty (60) of the 62 L.D. students will complete an average of 75% of their homework as recorded by the regular classroom teacher. 6. Sixty (60) of the 62 L.D. students will earn passing grades on report cards (Pass/C or above) in all inclusion classes.
Causes	**Solutions**
7. L.D. students appear to lack organizational skills necessary for academic success. 8. Basic skill levels of L.D. students are below average. 9. Classroom teachers do not have information necessary to make curricular or evaluative modifications. 10. Classroom teachers do not want to participate in inclusive education.	11. L.D. students will receive direct instruction related to improving organizational skills. 12. Classroom teachers will modify evaluative expectations of L.D. students to compensate for their handicapping condition. 13. Classroom teachers will be provided in-service training on curricular modification techniques. 14. Classroom teachers will be provided with adequate support to properly facilitate the inclusion process.

Planning Matrix

Problem	Goal
Evidence	Outcomes
Causes	Solutions

PROJECTS
Understanding Peer Pressure and its Impact

Introduction: Peer pressure refers to the influence of the peer group that pressurises a person to change his or her attitudes, values, or behaviour in order to conform to the group norms. Among young people, peer pressure is considered as one of the most influential factors. It is particularly common because most of the young people spend considerable amount of time in fixed groups (schools, classrooms and subgroups within them). Generally they may lack the maturity to handle pressure from 'friends' and might not have an independent opinion in the group. Also, young people are more inclined to behave negatively towards those who are not members of their own peer groups. However, peer pressure can also have positive effects and youth may yield effective results conforming to groups.

Focal points:

A. Who are peers?

    (i)   Define peer pressure

    (ii) Types of peer pressure—Positive and Negative

    (iii) Need to conform

B. Reasons for growing peer pressure

    (i)   Changing family structures -Nuclear and Smaller families

    (ii) Working parents

    (iii) Spending large amount of time in fixed groups (School, Class, etc.)

C. Impact of peer pressure

    (i)   Positive - Participating in sports; Joining clubs; Trying new foods; Doing volunteer work; Getting good grades; Showing respect; Meeting new people; Doing the right thing; Being honest; Being Responsible

    (ii) Negative - Writing graffiti; Involving in drugs; Committing suicide; Bullying; Shoplifting; Vandalizing property; Drinking underage; Cheating; Bunking school

D. Dealing with Peer pressure

Presentation:

Panel Discussion, PowerPoint Presentation

Suggested Research Tools:

Interview/ Questionnaire/ Case Studies/Survey

Estimated time required:

- One period for discussion with teachers on focal points related to peer pressure.
- One week for completion of project.

Expected Learning Outcomes:
After completion of the project, learners will be able to:

- understand the influences exerted by 'Peers'
- develop skills related to collection of data
- develop Presentation Skills

Procedure:

- Discuss the focal points with learners.
- Brainstorm on topic addressing all focal points listed and also on points generated during discussion process.
- Get background information on topic through different sources.
- Identify the best sources to use and authenticate information being used.
- Select appropriate research tools like interviews, questionnaires and case studies.
- Analyse the collected data and responses.
- Organise data and prepare notes.
- Prepare PowerPoint Presentation to present project analysis.
- Compose bibliography or cite work used for research.
- Findings of the research can be presented in front of community as street play/poem.

Do Animals Have Rights?

Introduction: Animal rights is the belief that animals have an intrinsic value separate from any value they have to humans, and are worthy of moral consideration. They have right to be free of oppression, confinement, use and abuse by humans. They have life and hence right to be treated well. By respecting animal rights and having consideration for animal welfare we also support ecological balance.

Focal Points:

A.   Why Animal Rights?

    (i)   Ecological balance

    (ii)   Extinction

    (iii) Moral/ ethical issues

B.   Reasons of Animal exploitation

    (i)   Entertainment

    (ii)   Fur/ Skin

    (iii) Body parts

    (iv)   As domestic/ agricultural help

C.   Rising awareness

    (i)   Need

    (ii)   Methods

    (iii) Effects

D.   Role of individuals/ organizations

Presentation:
PowerPoint Presentation, Poem/ Street play for community sensitisation

Suggested Research Tools:

- Print and Electronic Media
- Interview/ Questionnaire
- Case studies

Estimated time required:

- One period for discussion with teachers on focal points related to animal rights and their welfare
- One week for completion of project

Expected Learning Outcomes:
After completion of the project, learners will be able to:

- understand clearly about 'Animal exploitation and their rights'
- be more compassionate and sensitive towards animals
- develop skills related to collection of data
- develop Presentation Skills

Procedure:

- Discuss the focal points with learners.
- Brainstorm on topic addressing all focal points listed and also on points generated during discussion process.
- Get background information on topic through different sources.
- Identify the best sources to use and authenticate information being used.
- Select appropriate research tools like Interviews, questionnaires and case studies.
- Analyse data and responses collected.
- Organise data and prepare notes.
- Prepare PowerPoint Presentation to present project analysis.
- Compose bibliography or cite work used for research.
- Research findings can be presented in front of community as street play/poem.

Life on a Planet

Introduction- Life can be found in almost every nook and corner of our planet Earth. Leaping, swimming, flying, sprinting, slithering, crawling or rooted firmly in place, organisms appear, die and are replaced by new generations and new species.

Whether a similar bounty of life exists elsewhere in the universe is one of the oldest and most tantalizing questions of science. Considering wide breadth of the universe and countless stars it contains, odds would seem in favour of answer being "yes." What is required for life to thrive and survive?

Let's explore that here and list out the possibilities.

Focal points:
Plan life on **ANY ONE** planet other than Earth.

A. Planet

    (i) Landform

    (ii) Temperature

    (iii) Atmosphere

    (iv) Flora/ Fauna

    (v) Inhabitants

B. For the Planet

    (i) Design a house/ city

    (ii) Design a flag, currency, newspaper

    (iii) Design a newspaper

Presentation:
Advertisement, Poster, Brochure, PowerPoint Presentation

Suggested Research Tools:
Interview/Questionnaire, Print and Electronic Media Support

Estimated time required:

- One period for discussion with teachers on focal points related to Existence of life.
- One week for completion of project

Expected Learning Outcomes:
After completion of the project, learners will be able to:

- understand about the 'Essential factors for life's existence'
- develop skills related to collection of data
- develop Presentation Skills

Procedure:

- Discuss the focal points with learners.
- Brainstorm on topic addressing all focal points listed and also on points generated during discussion process.
- Get background information on topic through different sources.
- Identify the best sources to use and authenticate information being used.
- Select appropriate research tools like Interviews, questionnaires and case studies.
- Analyse data and responses collected.
- Organise data and prepare notes.
- Prepare PPT to present project analysis.
- Compose bibliography or cite work used for research.
- Research findings can be presented in front of community as street play/poem.

The World of Magic

Introduction- Derived from a Latin term 'Magi' which was used to refer to Zorastrians in ancient times. Performance of magic and its practice is in fact historical and very ancient. There would be definite yet varied purposes for practice of Magic evolved where entertainment, tricks, deception, illusion, cheating in games, fun, etc., have been aimed. Sometimes, in religious context and purpose, it is meant to offer social education along with some kind of preaching and healing too. Here we shall explore about magic, magicians and try to establish their connection with real life.

Focal points:

A. Magic/ Magicians in life / Magicians in Fiction

B. Impact on life

   (i)   Entertainment

   (ii) As an art form

C. Skill and training

D. Magic as a Profession

Presentation:

Plan and Present a magic show/ an advertisement to promote a magician, Power Point Presentation

Suggested Research Tools:
Interview, Questionnair, Movies/Films, Print and Electronic Media Support

Estimated time required:

- One period for discussion with teachers on focal points related to Magic and Magicians.
- One week for completion of project

Expected Learning Outcomes:
After completion of the project, learners will be able to:

- understand about 'Magic and Magicians'
- develop skills related to collection of data
- develop Presentation Skills

Procedure:

- Discuss the focal points with learners.
- Brainstorm on topic addressing all focal points listed and also on points generated during discussion process.
- Get background information on topic through different sources.
- Identify the best sources to use and authenticate information being used.
- Select appropriate research tools like Interviews, questionnaires and case studies.

- Analyse data and responses collected.
- Organise data and prepare notes.
- Prepare PPT to present project analysis.
- Compose bibliography or cite work used for research.
- Research findings can be presented in front of community as street play/poem.

Impact of Films

Introduction- The impact of Films is tremendous in the life of human beings and no one can deny this. It is considered as the most powerful medium of communication. It is the most popular form of amusement. It is a universal teacher. It influences every aspect of a man's life. Sometimes it teaches great lessons of life. Our film producers have made very purposeful films to collect public opinion against some of the social evils such as dowry system, exploitation of the labourers, female foeticide, filial ingratitude, etc. It can teach us natural history, geography, botany, chemistry, etc. Documentary films lead us to a street in New York or to a park of Tokyo.

These films increase our knowledge and broaden our outlook. Cinema has a great commercial value also. It is a great industry in itself, hundreds of men and women are directly or indirectly employed in this industry. It is a good and easy means of advertisement. How anything or article is useful, can easily be shown through films.

Focal points:

A.   Growing Industry

    (i)   Increasing number of productions
    (ii)   Employment
    (iii) Money earned
    (iv)   Fashion industry

B.   Negative Impact of Films

    (i)   Increasing violence

    (ii)   Consumerism

    (iii) Erosion of values

C.   Actors as Role models

   (i)   Capable of positive influence

Presentation:

Powerpoint

Suggested Research Tools:

- Print and Electronic Media

- Interview/ Questionnaire

Estimated time required:

- One period for discussion with teachers on focal points related to Impact of films.
- One week for completion of project

Expected Learning Outcomes:
After completion of the project, learners will be able to:

- understand about the 'Impact of Films'
- develop skills related to collection of data
- develop Presentation Skills

Procedure:

- Discuss the focal points with learners.
- Brainstorm on topic addressing all focal points listed and also on points generated during discussion process.
- Get background information on topic through different sources.
- Identify the best sources to use and authenticate information being used.
- Select appropriate research tools like Interviews, questionnaires and case studies.
- Analyse data and responses collected.
- Organise data and prepare notes.
- Prepare PPT to present project analysis.
- Compose bibliography or cite work used for research.
- Research findings can be presented in front of community as street play/poem.

Unusual Plants

Introduction: In order to survive, every living organism must develop some sort of adaptation to their environment and plants are no exception. As a matter of fact, some plants have adapted so well that some of them are carnivorous, a phenomenon not usually associated with plants. There are many other strange kinds of plant adaptations like plants that can move, plants that are like stone and some other that can emit foul smell when required.

Focal points:

A.   Pick any f**ive plants** and discuss about

    (i)   Their unusual features
    (ii)   Place where they are found
    (iii)   Present status (extinct/endangered/safe)

B.   Plant adaptations

    (i)   Unique adaptations

    (ii)   Reasons for unique adaptations

Presentation:

Story, PowerPoint Presentation with lots of visual inputs

Suggested Research Tools:

Print and Electronic Media

Estimated time required:

- One period for discussion with teachers on focal points related to Adaptations in plants- Unusual Plants.
- One week for completion of project

Expected Learning Outcomes:
After completion of the project, learners will be able to:

- understand about 'Adaptations in plants- Unusual Plants'
- develop skills related to collection of data
- develop Presentation Skills

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Procedure:

- Discuss the focal points with learners.
- Brainstorm on topic addressing all focal points listed and also on points generated during discussion process.
- Get background information on topic through different sources.
- Identify the best sources to use and authenticate information being used.
- Select appropriate research tools like Interviews, questionnaires and case studies.
- Analyse data and responses collected.
- Organise data and prepare notes.
- Prepare PPT to present project analysis.
- Compose bibliography or cite work used for research.
- Research findings can be presented in front of community as street play/poem.

World News Coverage
Comparison of Print and Electronic Media

Introduction: News is the communication of selected information on current events which is presented by print, broadcast, internet, or word of mouth to a third-party or mass audience. Word "news" developed in the 14th century as a special use of the plural form of "new". Some say that it is an acronym standing for 'North, East, West and South'. Today journalism can be done from anywhere and done well. It requires no more than a reporter and a laptop. In that way, journalistic authority seems to have become more individual- and less institution-based. But does the individual reporter always have to be an actual journalist? Or can journalistic work be done from anywhere and by anyone? These are the questions that refer to the core of journalistic practice and the definition of "news" itself.

Focal points:

A.   Types of news—Content based on place

(i)   International

(ii)   National

(iii)   Regional

B.   Types of news—based on Coverage

    (i)   Political

    (ii)   Sports

    (iii) Human Interest

C.   Bias of coverage, if any

D.   Creating a weekly newspaper for your school

Presentation:

Newspaper (complete with Advertisements)

Suggested Research Tools:

Print and Electronic Media

Estimated time required:

- One period for discussion with teachers on focal points related to News Reports and News Media.
- One week for completion of project

Expected Learning Outcomes:
After completion of the project, learners will be able to:

- understand about 'News Reports and News Media'
- develop skills related to collection of data
- develop Presentation Skills

Procedure:

- Discuss the focal points with learners.
- Brainstorm on topic addressing all focal points listed and also on points generated during discussion process.
- Get background information on topic through different sources.
- Identify the best sources to use and authenticate information being used.
- Select appropriate research tools like Interviews, questionnaires and case studies.
- Analyse data and responses collected.

- Organise data and prepare notes.
- Prepare PPT to present project analysis.
- Compose bibliography or cite work used for research.
- Research findings can be presented in front of community as street play/poem.

Old Age Home/ Orphanage/ Homes for the Destitute

Introduction: Old age homes are meant for senior citizens who are unable to stay with their families or are destitute. Orphanages and destitute homes support children or disadvantaged people who don't have family members to take their responsibility.

There are thousands of such support homes in India. Most of them offer free accommodation and care. Some old age homes work on a payment basis depending on the type and quality of services offered. Apart from food, shelter and medical amenities, such homes also work towards making life better by providing educational and vocational support. These homes also create a family like atmosphere among residents. People living here experience a sense of security and companionship when they share their joys and sorrows with each other.

Focal points:

A.   Need for Support Homes

    (i)   Growing numbers of homes

    (ii)   Growing numbers of inmates

B.   Reasons

    (i)   Insensitivity

    (ii)   Decline in family bonding

    (iii) Growing material culture

    (iv) Western influences

Presentation:
Role Play, PowerPoint Presentation

Suggested Research Tools:
Interview/Questionnaire /Case Study

Estimated time required:

- One period for discussion with teachers on focal points related to Shelters and support homes for old, orphans and destitute.
- One week for completion of project

Expected Learning Outcome:
After completion of the project, learners will be able to:

- understand about 'Shelters and support homes for old, orphans and destitute'
- develop skills related to collection of data
- develop Presentation Skills

Procedure:

- Discuss the focal points with learners.
- Brainstorm on topic addressing all focal points listed and also on points generated during discussion process.
- Get background information on topic through different sources.
- Identify the best sources to use and authenticate information being used.
- Select appropriate research tools like Interviews, questionnaires and case studies.
- Analyse data and responses collected.
- Organise data and prepare notes.
- Prepare PPT to present project analysis.
- Compose bibliography or cite work used for research.
- Research findings can be presented in front of community as street play/poem.

Time Travel

Introduction- Time travel is concept of moving between different points in time in a manner similar to moving between different points in space. Time travel could hypothetically involve moving backward in time to a moment earlier than the starting point, or forward into the future of that point without the need for a traveller to experience intervening period (at least not at the normal rate). Any technological device – whether fictional or hypothetical -used to achieve time travel is commonly known as time machine. Let's do a research on an era 100 years before or after today, exploring it through time travel.

Focal points:

(At least 100 years back/ future)

A.   Discuss infrastructure

    (i)   Houses

    (ii)   Cities

    (iii) Roads

    (iv) Transport

B.   Discuss Family

    (i)   Structure

    (ii)   Size

    (iii) Living

C.   Culture

    (i)   Material

    (ii)   No-material

Presentation:
Story, PowerPoint Presentation

Suggested Research Tools:
Print and Electronic media

Estimated time required:

- One period for discussion with teachers on focal points related to time travel with around 100 years (before/after).
- One week for completion of project

Expected Learning Outcomes:
After completion of the project, learners will be able to:

- understand about 'time travel with around 100 years (before/after)'
- develop skills related to collection of data
- develop Presentation Skills

Procedure:

- Discuss the focal points with learners.
- Brainstorm on topic addressing all focal points listed and also on points generated during discussion process.
- Get background information on topic through different sources.
- Identify the best sources to use and authenticate information being used.
- Select appropriate research tools like Interviews, questionnaires and case studies.
- Analyse data and responses collected.
- Organise data and prepare notes.
- Prepare PPT to present project analysis.
- Compose bibliography or cite work used for research.
- Research findings can be presented in front of community as street play/poem.

Abacus to Computer

Introduction- Today, it's hard to imagine life without computers. They help us in every part of life — whether it's writing an assignment for school or buying things from grocery store. They are integral and important part of life. But it took thousands of years for humankind to develop sophisticated machines we take for granted these days. Abacus can be termed as world's first computer. This simple device was invented in China around 500 B.C., and was also used by the ancient Japanese and the Aztec civilisations. The abacus is still used by schoolchildren today around the world for mathematical calculations. Let's check the journey of mathematics from simple abacus to complex computers available these days.

Focal points:

A.   History of Computers

B.   Evolutionary stages of Computers

C.   Famous Scientists and Discovers

D.   Latest breakthroughs

E.   Impact on living today

Presentation:
PowerPoint Presentation

Suggested Research Tools:
Print and electronic media support

Estimated time required:

- One period for discussion with teachers on focal points related to journey/timeline from Abacus to Computers and the process of change and development.
- One week for completion of project

Expected Learning Outcomes:
After completion of the project, learners will be able to:

- understand about the 'Journey/timeline from Abacus to Computers and process of change and development'
- develop skills related to collection of data
- develop Presentation Skills

Procedure:

- Discuss the focal points with learners.
- Brainstorm on topic addressing all focal points listed and also on points generated during discussion process.
- Get background information on topic through different sources.
- Identify the best sources to use and authenticate information being used.
- Select appropriate research tools like interviews, questionnaires and case studies.
- Analyse data and responses collected.
- Organise data and prepare notes.
- Prepare PPT to present project analysis.
- Compose bibliography or cite work used for research.
- Research findings can be presented in front of community as street play/poem.

Evolution of the Early Human from Australopithecus to Homo-Sapiens

Introduction: The topic will enable learners to comprehend various stages of the evolution of humans. It will help learners to visualize wondrous journey of human through millions of years and also to appreciate the efforts of archaeologists, anthropologists, geologists and other scientists in constructing the history of remote past. Learners will be able to differentiate between mythological beliefs and scientific discoveries. This project will help learners to identify the legacy of remote past to modern human.

Mode of Presentation: Album / Scrapbook / Pictorial presentation

Time allotted:

(a) One period for discussion between teacher and learners for introduction, planning and clearing doubts. Explaining importance of the topic and expected learning outcomes.

(b) Seven to ten days for completion of project.

Learning Objectives:

After completion of the project, learners will be able to-

- comprehend the various stages of human evolution.

- identify the unique features of each stage of development.

- deduce information from the artifacts found in excavated regions.

- understand the reasons of slow progress of development in earlier stages than later.

- develop the concept of time span and visualize the remote past thus understanding legacy of the past.

- understand chronological and logical presentation of each stage of development.

Suggested Research tools

- Visit to museum or if possible to any excavated site.

- Explore the internet, Libraries and other information sources.

Procedure and strategy

- Use of encyclopedia and internet to collect information about early humans at various stages.

- Download pictures, graphs, etc., from internet to be used in the project.

- Visit to local museum to have first hand information about the various artifacts including beads, jewellery, utensils, etc., used by early humans, and to get an idea of physical features, bone, teeth, etc., of early humans.

- Compare the gradual changes in their physical features like size of the skull and change in the facial features.

- Trade the similarities between Cro-Magnon man and Homo-Sapiens and modern human.

- Analyze the gradual development of agriculture, art and painting as well as of technological processes.

- Compile all data and information in the form of a project with an analytical concluding report.

- Prepare bibliography.

Suggested criteria for Assessment

- Ability to comprehend the development of early humans at various stages of development.

- Ability to deduce the main features of the way of life of the early humans, from the available sources of information.

- Effective use of various tools of research.

- Ability to identify the specific features of Australopithecus, Cro-Magnons and Homo-Sapiens.

- Ability to appreciate creativity.

- Ability to compare life at each stage, analyse, draw conclusions.

- Quality of presentation of the project.

- Additional credit should be given to cross curricular references, e.g., carbon–14 dating used by physicists in determining the age of bones, skulls, etc., or for mentioning the role of archaeology, etc.

A Study of Court Etiquette and Social Norms introduced by the Mughals in India

Introduction: The topic will enable a learner to comprehend nature of Mughal splendour in India. Learners will be able to trace Persian influence on the etiquettes and norms of Mughal court in India. Topic would also sensitize learners to the nature of kingship in Medieval India as well as the process of assimilation that affected Medieval Indian society and set the style and standard of Indian elite and bureaucracy. This topic will introduce learners to Mughal chronicles which throw light on art, architecture and literature of this period.

Mode of Presentation: Album / Wall Magazine / PowerPoint

Time allotted

(a) One period for discussion with teachers on the main aspects of the topic, learning Objectives and guidelines for collating information and format of the project.

(b) Seven to ten days given to the learners for completion and submission of Report.

Learning Objectives

After completion of the project, learners will be able to:

- comprehend and understand nature of kingship, court etiquettes and norms of Mughal court.

- identify the Persian influence on Mughals, their court and way of life.

- trace process of assimilation of the two cultures in shaping medieval Indian culture.

- develop creative and analytical skills.

- determine the legacy of Mughals towards Indian culture especially in art, architecture, literature, calligraphy, etc.

Suggested Research Tools:

Encyclopedia/Journals, Mughal chronicles, Electronic Media like internet, Visit to museum/archives

Procedure

- Watch movies, films based on Mughal India such as Mughal-e-Azam, Anarkali, Jodha-Akbar, etc.

- For gathering information visit to museums, etc., can be organised e.g., National Museum in Delhi which displays original dresses, jewelleries etc., used by the Mughal Emperors and Nobles.

- Plan a trip to Delhi/Agra/Fatehpur Sikri, which were the sites where the Mugal Sultanate flourished.

- View the artifacts, vases, carpets, etc., used in Mughal court.

- Examine illustrations, original and maintained painting, etc., for first hand experience of Mughal courts.

- Visit archives to see original manuscripts, like *Ein-e-Akbari* of *Abul Fazl* which is the primary source of information about Mughal court.

- Make effective use of electronic media; explore the internet for relevant information.

- Compile data and information in the form of a project.

- Analyze the various aspects and write the concluding report with relevant bibliography.

Criteria for Assessment

- Assessment should be structured keeping the learning objectives in mind.

- Ability to comprehend the main aspects of Mughal court – nature of kingship, protocol, hierarchy of Mughal nobility, court etiquette and social means.

- Ability to trace the Persian influence on Mughal culture.

- Understanding the legacy of Mughal culture and its impact on literature, art, painting, architecture.

- Ability to analyze the process of assimilation between Persian and Indian culture.

- Creativity in presentation.

- Quality and presentation of concluding report.

- Extra credit should be given to learners who are able to establish cross curricular linkages for example the splendour of Mughal court can be related to the economic condition of the people at that time or to literature – emergence of a new language Urdu, Persian literature, etc.

Trading Similarities between the Nile and Indus Valley Civilizations

Introduction-The topic is important for creating awareness about the various aspects of ancient civilizations. Learners will be able to identify different factors responsible for the growth of civilizations. This would enable learners to analyze and compare ancient civilizations in terms of their geographical location, economy as well as technological, material and spiritual development. Finally this would also enable the learners to interlink various components of learning. For example, link the development of script and language while studying the hieroglyphics of Egypt and script of the *Indus Valley.* Indus valley script though not yet decipherable gives ideas about writing from right to left as in case of *Urdu.* Similarly the preservation of dead bodies in Egypt (Mummy) can be linked to the knowledge of anatomy of human body and chemistry. The knowledge of solar and lunar calendar, the seasons and the cycle of day and night, can be linked to modern solar system and astronomy. Egyptians also practised the earliest form of decimal system of mathematics.

Mode of presentation: Album / Comparative Analysis / Power Point Presentation.

Time allotted:

(a) One period for discussion in class with teacher for necessary guidelines and for clearing of doubts if any.

(b) Time for learners seven to eight days for completion and submission of the project.

Learning Objectives:

After completion of the project, learners will be able to:

- develop awareness about the ancient civilizations.

- comprehend about geographical factors responsible for the growth of a civilization.

- establish cross curricular linkages between various components of learning.

- appreciate the rich legacy of ancient past.

- compare and contrast various aspects of two ancient civilizations.

Suggested Research tools:

- Use of print and electronic media.

- Visit to museums.

- Using reference materials such as encyclopedia.

- Film strips or video prepared on the topic.

Procedure:

- Learner will plan the format of project in advance.

- Gather information from available resource materials and collate information from internet, encyclopedia or from a visit to museum.

- Compile the collected materials according to the prescribed format.

- Download illustrations from internet or collect pictures and illustration from journals / magazines in order to illustrate the project.

- After analyzing information and by observing original or source materials in museum, etc., the learners can prepare the concluding report and submit it as a complete project.

- The project should be accompanied with proper bibliography.

Assessment criteria

- The awareness and understanding of the various aspects of Indus valley and Nile valley civilization.

- Comprehension of various geographical and economic factors responsible for the growth of these civilizations.

- Ability to relate with other components of learning.

- Use of creative skills in presentation / maps, etc.

- Ability to analyze, compare and contrast.

- Quality of the project and its presentation.

Case study of an Important Landmark round, such as a Building / Temple/Monument

Introduction: This project is chosen particularly to familiarize learners with the technique and skill of making a case study and to lead towards building awareness about the learner's immediate environment. This project aims to develop the learner's individual effort and interest in a particular landmark. It would encourage independent research and ability to interact with local people to gather information.

Mode of Presentation: Case study

Time allotted:

(a) One day for discussion in class about the procedure, importance and requirement of a case study.

(b) Seven to fifteen days can be given to learners for the completion and submission of survey report in the form of a case study.

Learning Objectives:

After completion of the project, learners will be able to:

- carry out and develop an independent research.

- survey the locality and gather first hand information by exploring surroundings.

- prepare relevant questionnaire, interview the right people.

- analyse and make deductions from the findings.

- organize collected materials and information.

- examine data and present it logically.

Suggested research tools:

- Survey, questionnaire, interview

- Visit to local authorities

- Collection of data from any other available sources- Local newspapers, journals, documents

Procedure:

(a)   Selection of a suitable land mark.

(b)   Visit to the site determining the various aspects / features of the landmark under study.

(c)   Plan the steps to be taken for completing the task. Photographs can be taken of the site and building.

(d)   Preparation of questionnaire: If a temple or mosque or church is selected for the case study, then questions can be asked to the people in the vicinity about its origin such as:

     i.   Around which period and by whom was it constructed?

     ii.   Is there any mythical story related to it?

     iii.   How popular is the site – unique features if any?

     iv.   Historical importance (minimum of 10 questions).

     v.   Environment around the site – natural – manmade.

(e)   Selection of group of people to be interviewed belonging to different age groups, comprising of people belonging to different section and religion.

(f)   Visit local authorities to gather information about its maintenance and to find out about the style, material used.

(g)   After sorting the questionnaire, collect the information and opinion about the site. Compile the findings in the form of case study covering all aspects of the landmark site.

(h)   If possible, prepare a map showing the location of the monument.

Assessment criteria

- Ability to carry on research independently

- Ability to organize, collect material in a logical way

- Ability to deduce from opinions and findings

- Skill of drawing map and illustrating

- Critical thinking in determining new features about a common place building.

- Special credit may be given to learners who are able to relate their findings to history, geography or political ideas.

Evolution of New Style of Art after Renaissance

Introduction: The topic is chosen as Renaissance is one of the greatest cultural movements that revolutionized human existence on earth. The new ideas of humanism, scientific temper and the spirit of enquiry led to new experimentation in all fields of life including art and architecture. This project will enable the learners to know about the greatest artists like Leonardo da Vinci, Michelangelo, Raphael, etc., and the new styles and concepts introduced by them. The learners will be able to understand how humanism was reflected in Renaissance art. These would create awareness about the individualism and the spirit of the new age. The learners will be able to trace the impact of Renaissance on literature, art, science, and exploration.

Mode of Presentation: Album / case study on the work of a Renaissance artist / powerpoint / wall magazine.

Time allotted:

(a) One period for discussion with teacher, who will provide guidelines about procedure and for clearing doubts.

(b) 7 to 10 days can be given to the learners for completion and submission of the project.

Learning Objectives:

After completion of the project, learners will be able to-

- have awareness about Renaissance, the greatest cultural movement in Europe.

- comprehend the importance of the spirit of inquiry, humanism, individualism and scientific temper initiated by the movement.

- trace the impact of these spirit and thoughts on art.

- appreciate the new styles and forms introduced in the Renaissance.

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- differentiate between earlier and modern art.

- learn about the eminent artists of the period.

- analyze the effects of these ideas on the world today.

Suggested research tools:

- Print / electronic media, encyclopedia

- Visit to art museums

- Movies on the life of Renaissance artists (pictures of Sistine chapel depicting Michelangelo's painting 'Fall of Man', Louvre Museum where Leonardo-Da-Vinci's Mona Lisa is exhibited)

Procedure:

- Brainstorm and plan the aspects to be covered.

- Effective use of print and electronic media.

- Visit to art museum to have a first hand experience of Renaissance art (especially in Europe – Louvre Museum of Paris and Sistine chapel for Michelangelo's paintings, museums in Italy, Venice, Florence are all full of Renaissance paintings).

- To gather information about the new styles, new forms, etc.

- Download pictures for illustrating the project.

- Collate, compile and present the project.

Assessment Criteria

- Awareness about the main aspects of Renaissance.

- Understanding of the new concepts of humanism, scientific temper, etc., and its reflection in art.

- Knowledge about the contributions of various Renaissance artists.

- Establishing relationship with other subjects such as impact of Renaissance on science, discovery of new lands, literature, architecture and its impact on art.

- Analyze the importance of Renaissance art, cultural milieu of Europe.

Tracing the Relationship between Industrialization, Colonialism and Imperialism

Introduction: The topic will enable learners to establish relationship between industrialization, capitalism, colonialism and imperialism. Learners will also understand how the discovery of new sea routes and mechanization led to occupation of distant lands and exploitation of resources in the countries of Asia and Africa. Greed for more lands in the form of colonies led to the desire of imperialistic control over their possession leading to colonialism and imperialism. Learners will be able to analyze these processes and relationship of political motives with geographical and economic factors.

Mode of Presentation: Album / power point / wall magazine / case study

Time allotted:

(a) One period for discussion of learners with teachers regarding the procedure and for clearing doubts.

(b) 7 to 10 days are to be given to learners for the completion and submission of project.

Learning Objectives:

After completion of the project, learners will be able to:

- know about the drastic changes resulting from industrialization and discovery of new era routes.

- understand the concepts of industrial capitalism, colonialism and imperialism.

- identify the reasons for the spread of colonialism in the countries of Asia and Africa.

- comprehend the reasons for the growth of imperialism and for strengthening of colonialism.

- analyze and establish relationship between industrialism, colonialism and imperialism.

Suggested research tools:

- Print / electronic media, study of discovery of new era routes through the maps.

- Video, films, movies on the topic.

- Novels, stories, etc., about the exploration and exploitation of colonized countries.

Procedure:

- Learners to brainstorm, plan in advance and decide the format.

- Learners to go beyond text books and explore the internet as well as other media to gather information about the topic.

- Learners can watch movies / videos / read autobiography of explorers to get realistic information about colonial control.

- Learn about mechanization that helped the wealthy nations to control distant lands. Invention of war weapons, new ships and new communication systems strengthened imperial powers.

- Collate the information in a way to link industrialism with colonialism and imperialism.

- Compile and submit in the format decided in advance.

Suggested criteria for Assessment:

- Awareness about industrial capitalism, colonialism and imperialism.

- Understanding of the concepts.

- Clarity of thought.

- Ability to trace the relationship between industrialism and colonialism.

- Ability to comprehend the factors and forces responsible for the victimization of Asian and African countries.

- Comprehension of the nature of expatiation by imperial nations.

- Ability to identify the inventions that helped the imperial powers against the under-developed countries.

- Use of analytical skills.

The project may be linked to Geography, History, Economics, Political Science, Literature and Sciences etc.

Change in Religious Attitude after Renaissance

Introduction: The project is intended to create awareness about the practices of the medieval church and role of Renaissance ideals and thoughts in revolution, issues related to religious attitude of the people towards the Catholic Church. It would also explain how Renaissance posed a challenge to the blind faith, superstitious beliefs and ignorance of the people dominated by catholic religion. Renaissance led to the revival of learning and produced a number of scholars such as John Wycliffe, Thomas More, Erasmus and Martin Luther who dared to protest against the dogmatic doctrines of Catholic religion, condemned the supremacy of clergies, translated Bible from Latin to English and vernacular versions so that common people understand the real essence of religion. Through this project, the learners will be able to differentiate between truth and myth, thereby changing their attitude towards religion.

Time allowed:

    (a)   One period for discussion with teacher regarding guidelines, procedure and for clearing doubts.

    (b)   Learners will be given seven to ten days for completing the project and for submission.

Mode of presentation: Album / PowerPoint Presentation/ Wall Magazine

Learning Objectives:

After completion of the project, learners will be able to:

- develop understanding of the dogmatic and dominating beliefs of the Catholic Church in Medieval Europe.

- create awareness about the spirit of inquiry and freedom generated by Renaissance and its role in revolutionizing the attitude of common people towards earlier religious practices.

- develop the ability to analyze the forces and factors that inspired Renaissance scholars and reformers to protest against blind faith, superstitions and dogmas which formed the basis of medieval religion.

- develop the ability to differentiate between truth, reality and fanaticism.

- inculcate a spirit of enquiry in the mind of learners which will prompt them to explore more with a changed progressive attitude.

Suggested research tools:

- Print / electronic media

- Primary sources such as Martin Luther's 'Theses' which led to protestant reformation

- Movies, newspaper clippings, novels and original works of Renaissance reformers such as Utopia. Downloaded pictures and illustrations for illustrating projects.

Procedure:

- Brainstorm and plan the project in advance.

- Explore internet to collect relevant information from various websites / links.

- Download pictures of various religious reformers of Renaissance period.

- Read primary sources / original documents.

- Use relevant quotations, excerpts from writing of Renaissance scholars.

- Analyze the collated information and data to substantiate your opinion.

- Compile the materials in the project with concluding remarks and appropriate bibliography.

Assessment criteria

- Comprehension of the religious doctrines and beliefs of Catholic Church before Renaissance.

- Awareness about the teachings, ideals and spirit of inquiry of Renaissance scholars that revolutionized the attitude of people of Europe.

- Critical attitude and analytical skill in explaining the forces and factors responsible for the change in the attitude of people.

- Understand the need for protest against civil practices.

- Organization of thought and logical presentation highlighting the contribution of Renaissance scholars.

- Quality of the project and its presentation.

Interdisciplinary linkages can be traced to Literature, Philosophy, Science, History, Political Science and Geography.

Effect of Pollution on Flora and Fauna

Introduction: This project will enable learners to understand and comprehend the various forces and factors responsible for different forms of pollution. It will create awareness about the adverse effects of pollution on flora and fauna as well as on our immediate environment. This will sensitize learner to the threats posed to mankind by pollution such as acid rain, green house effect, diseases caused by water pollution, etc. The learners will realize the need of various movements for saving environment and need for better implementation of laws for environment protection.

Mode of presentation: Album / PowerPoint Presentation/Case Study

Time allotted:

(a)   One period is to be allotted for discussion with teacher on the topic and for clearing of doubts.

(b)   Seven to ten days for completing and submission of report.

Learning Objectives:
After completion of the project, learners will be able to:

- develop understanding about the various forms of pollution.

- comprehend the forces and factors responsible for pollution.

- create awareness about the threats posed by pollution to the existence of human life as well as to flora and fauna.

- identify the movements and efforts made by people to save environment, flora and fauna.

- develop analytical and critical thinking skills.

- develop skill of logical presentation of collated information and data.

Suggested Research Tools:

- Print / electronic media.

- Reports of various conferences on pollution, deforestation, environment, etc.

- Collection of information about individual and collective efforts of people for saving flora, fauna and environment.

- Facts and information about Chipko Movement, Narmada Bachao Movement, etc.

Procedure:

- Learners will plan the project in advance.

- Use internet effectively to collect information from relevant websites and organize these in a logical manner.

- Refer to research documents, reports of conferences, etc., related to the theme.

- Download pictures and illustrations for project presentation.

- Use details of movements like Chipko Movement or Narmada Bachao Movement as case study.

- Analyze the facts and information for writing concluding reports extending suggestion for saving environment, flora and fauna.

- Compile the report with relevant bibliography.

Assessment criteria

- Comprehension of the nature and forms of pollution that destroy flora and fauna

- Clarity of concepts such as acid rain, global warming, green house effects, etc.

- Understanding of the various efforts and movements made individually or collectively to save environment, its flora and fauna.

- Awareness about the need for preventing pollution.

- Critical and analytical thinking skills.

- Organization of thoughts and logical presentation.

- Quality of the project and presentation

Interdisciplinary linkages can be established with Geography, History, Physics, Chemistry, Biology, Literature and Mythology. Love of flora and fauna is closely associated with our religion and mythology. Indus valley people worshipped 'Peepal trees' which continues till date. The rivers like Ganga, Yamuna, Saraswati, and Narmada are considered sacred. Goddess Lakshmi carries lotus in her hand and so on.

Cultural Impact of Industrial Revolution

Introduction: The topic will lead to an understanding of the impact of industrial revolution on socio-culture milieu. The learners will be able to understand the reasons of the breakup of rural economy, leading to disintegration of joint family, urbanization and emergence of nuclear family and their impact on the life of people. Development of new ideologies like Socialism, Communism, Marxism, and increasing materialism are to be dealt with in this topic. Learners will also be sensitized to changes in post industrial revolution Literature and Art. The topic will create awareness also about the positive impacts such as improvement in standard of living, new technological inventions, development of Science, etc.

Mode: Album/Case Study / PowerPoint Presentation/ Wall Magazine

Time allotted:

   (a)   One period for discussion with teacher and for clearing doubts if any.

   (b)   Learners should be given seven to ten days for preparation, compilation and submission of the project.

Learning Objectives:

After completion of the project, learners will be able to:

- create awareness about the cultural impact of the Industrial Revolution.

- identify the changes post Industrial Revolution in fields of Literature, Art, Economy, Technology and Ideology.

- develop ability to comprehend the transformation in family structure as a result of urbanization and changing role of women.

- develop the analytical skills to determine advantages and disadvantages of culture impact of industrial revolution.

- develop ability to explore beyond prescribed text books to gather information.

- develop creative skills in compilation and presentation of project.

Research tools

- Print / electronic media

- Novels/films/video

- Original sources, if possible

Procedure:

- Make effective use of print / electronic media

- Explore different websites to gather information and pictures

- View relevant film strips, video, etc., to visualize the way of life of the people in post Industrial Era

- Make graphs, flow charts and compile factual data to substantiate the findings

- Analyse various factors and prepare a report

- Compile the report and submit in a creative way

- Attach bibliography

Assessment criteria

- Awareness about the cultural impact of industrial revolution

- Clarity of thoughts in communicating the findings

- Organization of facts in the form of a logical presentation

- Relevance of content

- Extent of independent research

- Quality of the project and presentation

- Extra credit for interdisciplinary linkages

The project can be linked with History, Political Science, Geography, Sciences, Literature, Sociology, Mathematics, etc.

The Role of Education in Promoting Gender Awareness

Introduction: The topic is chosen because of its importance and relevance in contemporary world. This project would create awareness about existing gender biases and discrimination against women in all parts of the world. It will sensitize learners about the important role of education in identifying causes of the bias and in bringing changes in society.

Mode: Survey / Case Study / Album / PowerPoint Presentation

Time allotted:

(a)   One period for discussion with teachers for understanding the procedure and clearing doubts if any.

(b)   About two weeks time is to be given for a survey otherwise 10 days time is to be taken by learners for preparation and compilation of report.

Learning Objectives:

After completion of the project, learners will be able to:

- create awareness about Gender Bias.

- identify the importance and role of education in changing attitude towards women.

- develop critical thinking skills in analyzing causes of bias and finding solution by educating the masses.

- develop the ability to interact with people, interview them and collate data about the problem.

- organize as well as develop mathematical/ statistical skills

- develop creative skills in presenting the report

Research tools:

- Case study

- Interview

- Print / electronic media

- Authentic sources documents, reports or research papers, etc.

- Questionnaire

Procedure:

Plan the task in advance. In case of survey, select group of men and women belonging to different age groups, income, and locality (rural / urban).

Prepare questionnaire having minimum of 10 questions. For example:

(a) What is your age?

(b) To which area (rural or urban) do you belong?

(c) How many members are there in the family – men / women / boys / girls etc.?

(d) Educational qualification of the members.

(e) At what age did you get married?

(f) (for girls) How are you treated in the family? Do you get same treatment / opportunities as male members of the family?

(g) What is the attitude of family members towards female members?

(h) Are female members allowed to take employment of their choice?

(i) Do female members enjoy freedom to express their views on family matters?

(j) What restrictions are imposed on female members of your family?

Note: These are just samples –learners are free to ask other relevant questions.

Interview people of your group and get the questionnaire filled. Sort out the collected information and place these in the right column prepared beforehand.

Sample

- Combination of data

- Preparation of survey report

- Presentation in the format planned in advance

Assessment criteria

- Awareness about gender bias, gender stereotypes, etc.

- Clarity of concepts

- Ability to interact and interview

- Skill of preparing relevant questionnaire

- Analytical skills for coming to conclusion

- Understanding role of education in solving problem of gender bias

- Ability to prepare the survey report presenting logical organization of facts

Rights and Responsibilities of Citizens in a Society

Introduction: This project is intended to create awareness about the fact in a democratic society how rights and responsibilities can go hand in hand – one is incomplete without the other. Every responsible citizen has duties towards the government, society and the nation. Performing these duties enables him/her to enjoy the rights guaranteed to him/her by the Constitution. The success of a democracy depends on the responsible behavior of every Citizen.

Mode of Presentation: Album/Wall Magazine / Chart

Time allotted:

(a)   One period for discussion with the teacher.

(b)   Seven days are to be given to learners for collecting information, compilation and submission of report.

Learning Objectives:
After completion of the project, learners will be able to:

- create an awareness about the role of a citizen in a democratic country.

- understand that rights and duties are two sides of the same coin. Rights can be enjoyed only when responsibility are shouldered by citizens.

- develop the ability to collect information about rights and duties specified or

expected by the Government of the country.

- comprehend the qualities of a good citizen.

- identify the problems caused by the lack of owning up responsibility on the part of the citizen.

Research tools

- Print / electronic media

- Primary source such as Constitutional provisions about Rights and Duties

- Reports of cases violating norms expected of a citizen

- Newspaper clippings – news reports of violation, destruction of public property

- Reports relating to corruption cases involving citizens

Procedure

- Plan the project in advance and brainstorm to generate ideas.

- Explore websites in the internet and collect information about cases where in the name 'Rights', citizen violated laws or misused public property etc.

- Collect newspaper clippings or pictures, etc., to make project authentic.

- Give examples where citizens took responsibility of spreading education or helping the government in meeting national or natural disasters, etc.

- Give examples of those who made supreme sacrifice for social or national cause.

- Analyze the collated facts and information and prepare a report.

- Compile and present project report.

Assessment criteria: The project displays:

- awareness about constitutional Rights and Duties.

- understanding of the fact that rights can be enjoyed only when the duties are performed and responsibilities are fulfilled by the citizens.

- ability to analyze the reason behind irresponsible behavior of citizens.

- relevance of collated data and content.

- creative skills in presentation of report.

Comparative Study of Advantages and Disadvantages of Rural and Urban Society

Introduction: The topic will provide opportunity to learners to engage in an interesting study to explore advantages and disadvantages of Rural and Urban society. It will create an understanding that nothing is an ultimate blessing. There are advantages and disadvantages associated with both kinds of set-ups. It is on the people to turn disadvantages into advantages. The study will help learners to explore rural and urban societies of some major countries and derive conclusion.

Mode of presentation: Comparative analysis. In case the analysis of just one country can be taken up as a case study.

Time allotted:

(a) One period for discussion with teacher regarding procedure and for clearing doubts if any.

(b) Seven to ten days may be given for preparation, compilation and submission of report.

Research tools:

- Inputs from print / electronic media

- Visit to some rural and urban places

- Interview people from sample localities

- Explore details given in various economic reports

- Facts collected from history of some countries

Learning Objectives:

After completion of the project, learners will be able to:

- understand advantages and disadvantages of both rural and urban societies.

- understand that both rural and urban locations have advantages and disadvantages.

- realize the fact that people live in these areas due to various reasons.

- analyze the factors which lead to migration from rural to urban and vice versa.

- comprehend about the life of the people in their society, economy, value system, etc.

- develop the skills for comparative analysis.

Research tools:

- Inputs from print / electronic media

- Visit to selected urban / rural locations

- Interview people with questionnaire prepared in advance

- Economic and other report prepared by governmental agencies

Procedure:

- Plan the project in advance and brainstorm to generate ideas.

- Comparative analysis – based on visit to different locations, interviews and interaction with people and understanding their experiences.

- Gather information from various reports and newspapers.

- Collection and compilation of available data.

- Analyzing data to prepare report.

- Support with Bibliography.

Assessment criteria: The analysis displays:

- awareness about advantages and disadvantages of rural and urban society.

- ability to analyze reasons for people to decide to live at these locations.

- ability to interview and interact freely with people and learn about their experiences.

- ability to explore beyond books and materials by visiting places, exploring various websites for collecting information.

- skill of preparation of comparative analysis by comparing and contrasting relevant points.

- ability of learners to make cross curricular reference.

Development of Transport System through Ages

Introduction: This is an ideal project for an illustrated flow chart with detailed description. This will help learners to understand about changes in the transport system through ages. This will help in identifying different modes of transportation, need for transportation, etc. Learners will be able to establish relationship between industrial revolution and invention of new modes of transport. S/he would be able to analyze changes in the modes of transportations and their impact on life of people across the world.

Mode of Presentation: Illustrated flow chart/Case Study

Allotment of time:

    (a)   One period for discussion with teacher and clearing doubts

    (b)   Seven to ten days for preparation, compilation and submission of analysis and report

Learning objectives:

After completion of the project, learners will be able to:

- create an understanding about the modes of transport through ages.

- create awareness about need of transportation for trade, travel, adventure, missionary activities, etc.

- establish relationship between industrial revolution and invention of new modes of transport.

- analyze impact of new modes of transportation on the life of people.

- develop ability to explore the information from various sources.

- develop skills of presenting information through flow charts and similar type of graphic organizers.

Research tools

- History of transport through ages

- Exploring various websites for collecting relevant information

- Encyclopedia and other books

- Visit to museum based on transport theme, e.g., Rail Museum (Delhi) or the one that show progression of transport through ages

Procedure

- Visit various museums.

- Explore various websites to collect relevant information.

- Refer to encyclopedias and other relevant texts to know about history of transportation through ages.

- Collect relevant data.

- Download pictures, etc., from the internet to illustrate the report.

- Sort out the data and arrange according to stages of its progression, e.g., ancient, medieval and modern.

- Present these in the form of flow chart with suitable and elaborate details for each stage, finally analyze the significance of each development and their role in trade, economy, travel, etc.

- Prepare a report to be submitted with bibliography.

Assessment criteria

- Awareness about the development of transport system through ages.

- Logical and chronological presentation of facts.

- Understanding of role of transportation in development of trade, economy, travel, etc.

- Clarity of thought exhibited in the presentation of information.

- Analytical skills in presenting facts and establishing relationship between forces and factors that helped in development of transport system.

- Relevance and authenticity of collated materials.

- Skill of presenting information through flow charts.

- Cross curricular linkages with Geography, History, Economy, Political Science, Science, etc.

Identify Different Types of Angles

Introduction: Following this research, the students shall find how mathematics is applied in their lives everywhere. The students not only learn different types of angles, but are able to identify these angles present all around them. From Google Maps/ Bing Maps, they shall capture a map of any area of their choice and shall identify the names of five roads which make:

i) Acute angle with a particular road
ii) Obtuse angle with a particular road
iii) Roads making a straight angle
iv) Parallel roads
v) Perpendicular roads
vi) Roads making reflex angle
vii) Roads that form a pair of complimentary angles
viii) Roads that form a pair of supplementary angles
ix) Roads that form a pair of vertically opposite angles

The students will then draw these angles (one of each type) using Geogebra.

Suggested Research Tools: Internet access, Encyclopedia defining various types of angles

Mode of Presentation: Access to internet for net surfing, powerpoint presentation, project report

Time Requirement:

- One period for explanation and demonstration of the example.
- Two days to complete the report

Expected Learning Outcomes:

The students will be expected to:

i) understand the definitions of various types of angles.
ii) identify and differentiate between various types of angles.
iii) draw various types of angles.
iv) appreciate the application of mathematical concepts in real life.

Procedure: The students may carry out this project individually. Ask the students to capture the map of any area they wish from Bing Maps/ Google Maps. This image shall be pasted in the Geogebra page (download geogebra from http://www.geogebra.org/cms/). Use the line segment tool to make the angles and text tool to mark the angles. Multiple sheets of geogebra may be used to represent different angles. An example of the project is given below for the map of Connaught Circus, New Delhi, India.
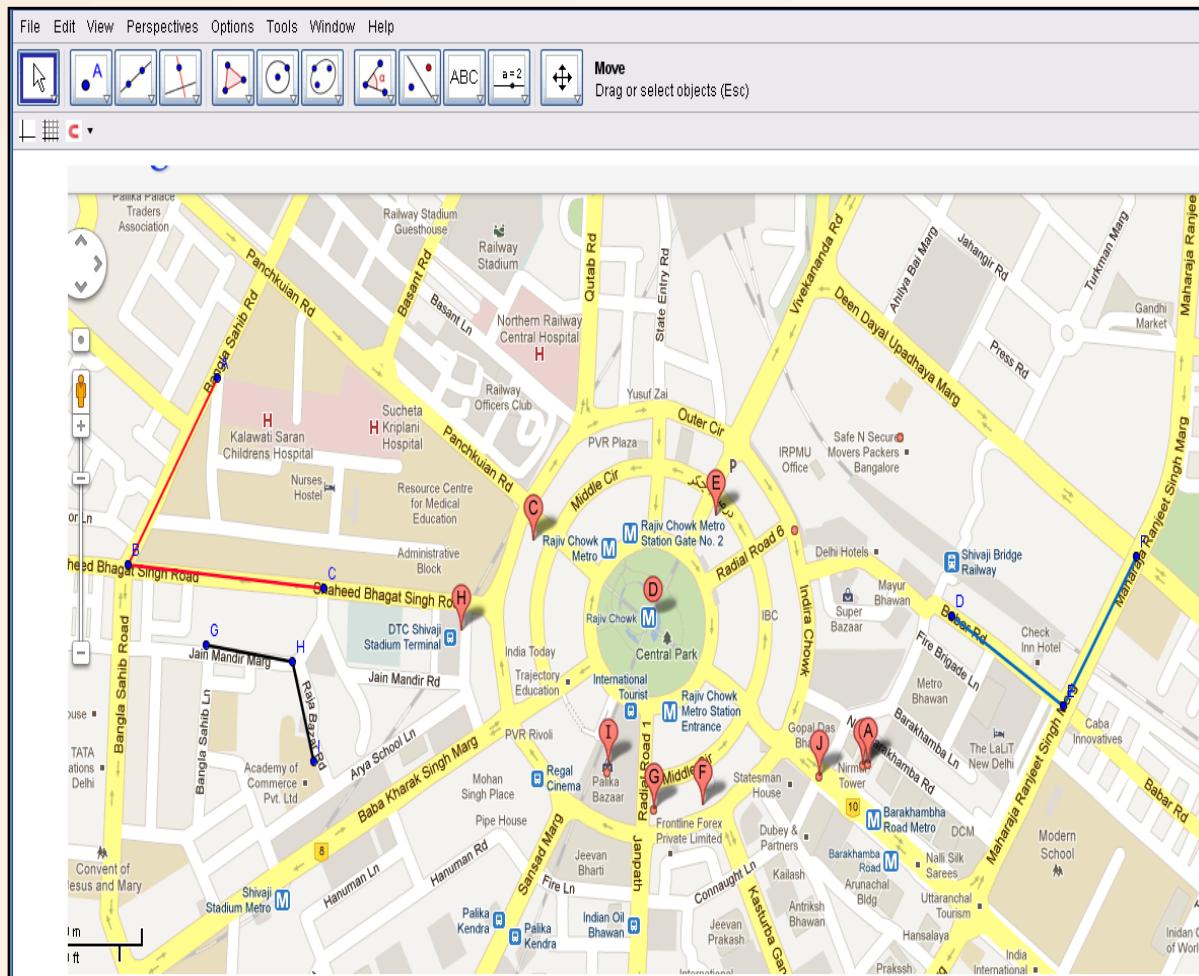
Now tabulate the names of the roads as below:

Angle	Names of roads
Acute angle with a particular road	Bangla Sahib Road and Shaheed Bhagat Singh road (list 5)
Obtuse angle with a particular road	Jain Mandir Marg and Raja Bazaar road (list 5 pairs)
Straight Angle	Sansad Marg and Vivekanand Road
Perpendicular Roads	Maharajah Ranjeet Singh Road and Babar Road
Parallel Roads	Bangla Sahib road and Basant Road

The students are expected to list down five pairs for each set of angles. They may choose the area of their convenience.

Trans-disciplinary Approach:

- Geography: The students get to know about the geography of their area and learn to read a map. They can make a virtual tour of their city.
- History: Students may be asked to find out the history of any one of the roads they choose.
- English: The above can be discussed in the class in groups.

Identify the Patterns in the Areas and Perimeters and Introduction to Fractals

Introduction: The students shall be informally introduced to the term fractals through Sierspinski's Carpet. The students shall draw a square of dimension 6″ and make the Sierspinski's carpet till stage 3. They shall explore more about different types of fractals and the fractals found in nature.

Suggested Research Tools: Internet surfing to learn about fractals and its applications.

Mode of Presentation: Drawings of different stages of the fractal and project report of the analysis.

Time Requirement: Two periods to explain the process and one week to complete the project

Expected Learning Outcomes:

The students are expected to:

- find out the area and perimeter of a square.
- find out the area and perimeter of squares formed at different stages and the total area and perimeter of the figure thus formed.
- generalize the area and perimeter at nth stage.
- identify a fractal and define it.

Procedure: The teacher shall divide the class into groups of five. Each group shall draw Sierspinski's Carpet to a stage 0 through 4. They shall find the area and perimeter of figures formed after each stage and then generalize the formula for the nth stage. The teacher shall encourage the students to find relationship between the areas and perimeters at different stages and reach a conclusion.

Trans Disciplinary approach:

- Find the use and existence of fractals in nature and human body.
- Appreciate the use of mathematics in nature and everywhere around us; even in the human body.

Identification of Various Types of Geometrical Figures Found in Different Monuments

Introduction: The project expects the students to find out where and how mathematics is used in the architecture of various buildings of the world. They shall identify different geometrical shapes used to build different monuments in the world.

Suggested Research Tools: Internet surfing, powerpoint presentation, auto collage, photo story.

Mode of Presentation: Make an auto collage of the pictures collected and explain how and where mathematics is used. You may download it from:

http://research.microsoft.com/en-us/um/cambridge/projects/autocollage/download.aspx

The students may also make a photo story of the pictures collected, explaining how and where mathematical figures are being used.

Time Requirement:

- One or two periods for the explanation of the project
- One week to complete the project.

Expected Learning Outcomes:
After the project, the students are expected to

- identify various geometrical shapes along with their properties.
- know why a particular geometrical shape is used in a building.
- appreciate the aesthetic beauty of mathematics.

Procedure: The students shall be asked to work in groups of five. They shall collect pictures of various monuments using different geometrical shapes and identify them. They shall make a digital collection of the pictures and tabulate the geometrical figures they found in those monuments, along with the properties of that figure. They shall also identify the most frequently used and the least used geometrical shapes in the pictures.

The above shall be presented using photo story or auto collage (download links given above). The teacher shall also encourage a student from each group to present their work in front of other students.

Transd-isciplinary Approach:

- The students shall learn about various buildings/monuments in the world. They shall be encouraged to read a brief history of the monument and about the architecture involved in building it.
- Artistic and aesthetics skills to make auto collage and photo story.

Use of Pythagoras Theorem in Identifying Your Right Shoe Heel Size

Introduction: The research project not only reinforces Pythagoras theorem, but also shows how it governs other aspect of their lives. It also gives an informal introduction of slope of a line as the ratio of rise is to run. The students shall be asked to recapitulate Pythagoras theorem. They shall collect various shoe sizes and find out which of them form a right angled triangle; as such heels are best suited for the body. They may also be introduced to the fact that slope of a line is defined as the ratio of rise and run as shown below.

Rise

Run

Suggested Research Tools: Internet access, data collection by visiting the market

Mode of presentation: The students shall present a project report of the data collected and give their interpretation.

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Time Requirement: One period for explanation and one week for the preparation of the project report

Expected Learning Outcomes:

The students will be able to

- identify right triangles
- apply Pythagoras theorem in real life scenario
- define the slope of a line
- appreciate the use of mathematics in simple things

Procedure: The students shall be introduced to the project and shall be shown how to find the triangle formed in the shoe heel as shown above. They shall be asked to collect the data from a shoe shop in the nearby market, or friends and family. A set of 10 observations may be collected.

The students shall be asked to determine if the height of the heel follows the Pythagoras theorem. If it does, the height of the heel is appropriate, otherwise not. They may be asked to tabulate the data.

The second application of the same project is based on a study in London, that the ratio of rise to run of the shoe should be ≤0.27. The students shall be asked to find out this ratio and find out if the heel size is appropriate.

The students may be encouraged to use MS excel to tabulate the data for calculations.

The teacher may finally ask the students to tabulate as below (record for ten observations)

Rise	Run	Slope/hypotenuse	Pythagoras theorm (yes/no)	Ratio of rise to run (yes/no)

Trace the Map of the Route from your Home to your School (or any other place), Find the Various Possible Routes and Identify the Shortest Route

Introduction: The students are required to draw a map of their area, from home to school (or some other place) and find the various possible routes to that place and identify the shortest route. They shall list down the various possible routes that are there while going and coming back to the place. They shall be expected to be as detailed as possible in their presentation. They would also mark the important places on their way.

Suggested Research Tools: Google maps/bing maps to identify the areas and routes to be drawn.

Mode of Presentation: Project report and a sketch of the map, analysis of the data

Time Requirement: One period for introduction to the project and one week for working of the project.

Expected Learning Outcomes:

After the completion of the project, the students are expected to:

- learn the approximation of scales.
- identify the shortest route for a given map.
- find out the number of possible routes that are possible to and fro a place when the number of routes to a place and from a place are known. The teacher may encourage the students to generalize the concept of finding the number of routes to and fro for any number of routes.

Procedure:

The students shall be instructed for the project details and the expected outcomes. They shall be asked to refer to the online maps of

Trans-disciplinary Approach:

- Identification of areas
- Drawing skills
- Identifying the geographical conditions of an area to identify the feasibility of a route.

Finding Prime Numbers beyond 100

Introduction: The research shall enable the students to have a clear idea about prime numbers and their identification. They shall be able to observe that all prime numbers except 2 are odd numbers but not vice-versa. They shall find the applications of prime numbers in encryption and other places.

Suggested Research Tools: Reading material for divisibility rules, internet surfing for application of prime numbers

Mode of Presentation: Powerpoint presentation, project report

Time Requirement: One period to explain and three to four days for completing the project.

Expected Learning Outcomes:
The students will be able to
- identify and differentiate between composite and prime numbers.
- understand that all odd numbers are not prime, but all prime numbers except 2 are odd.
- develop the skill of fractorization and divisibility rule.
- identify the areas where prime numbers are used and why.
- appreciate the use of numbers and their properties in complex situations.

Procedure:
- Study the method of 'Sieve of Eratostheres' to find prime numbers.
- Use the knowledge of divisibility rules of odd numbers like 3,5,7,9,11, etc., to check whether a given number is prime or composite.
- Identify the pattern formed in the first 100 prime numbers.
- Explore more about the application of prime numbers in encryption.
- Record and prepare project report.

Trans-disciplinary Approach:
- Use of large prime numbers in encryption of data.

Writing a dialogue and enacting a play on the types of numbers the students have learnt viz. natural numbers, whole numbers, integers, fractional numbers, rational numbers and decimal numbers

Introduction: The students will write a play on the different types of numbers; they may write on the need of the different types of numbers, operations on numbers, applications of numbers and so on. They may freely choose the concept of the play

and be as creative as possible. The students, while doing so, get a clear idea about the different types of numbers, both while performing and observing. A sample dialogue may be viewed at http://nrich.maths.org/1510.

Suggested Research Tools: Internet surfing, encyclopedia of numbers, refer to the websites of history of number system

Mode of Presentation: Script in the project work shall be submitted and the play shall be enacted in the class in groups

Time Requirement: One week for the preparation of the script. One week for the preparation of the act.

Expected Learning Outcomes:

After the project presentation, the students are expected to:

- understand the importance of different types of numbers.
- understand various operations on different numbers.
- understand the properties of various arithmetic operations on different numbers.
- know the history of different types of numbers.

Procedure:

- The class may be divided into groups of 8 to 10 students each. Each group shall be given a certain sub-topic, say history and need of numbers, explaining different types of numbers, properties of numbers.
- The students will be asked to write a script, being as creative as they can. The teacher may help them in the concept building.
- The students will then present the play in front of the class in groups.

Trans-disciplinary Approach:

- While writing the dialogue, the power of language is important. The students develop the language and use their vocabulary extensively.
- While reading the history of numbers, they learn a lot about the history of other things including the socio-economic status of the country and lives of the people.

Verification of Pick's Theorem for Different Polygons

Introduction: Pick's theorem deals with finding the area of closed polygons on a geoboard. The students may use a graphpaper, or geogebra page instead. They shall verify the theorem for a square, rectangle, different types of triangles and other polygons.

Refer to Pick's Theorem at http://mathworld.wolfram.com/PicksTheorem.html

For a sample activity on geogebra, visit

http://www.geogebratube.org/material/show/id/3718
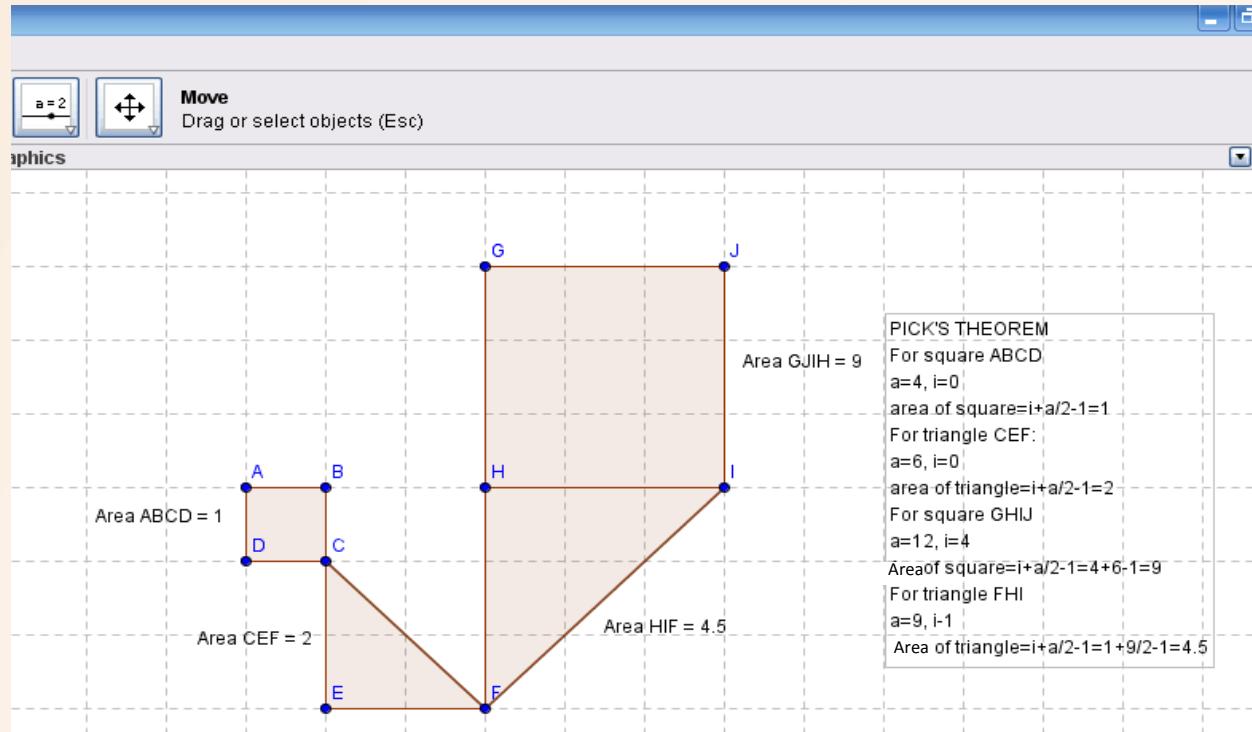
The students may be encouraged to extend this activity to find out the results when a square has a 'hole' of dimension 1 unit, 2 units and so on. A figure for reference to the above is shown below:
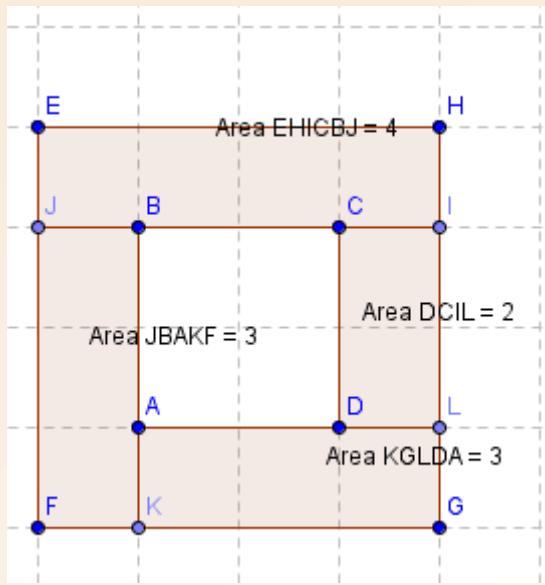
Suggested Research Tools: Internet surfing for Pick's theorem, Geogebra, Encyclopedia

Mode of Presentation: Present the project on a geoboard /soft copy of geo board/graph paper/ soft copies on geo-gebra page

Project report of the analysis

Time Requirement: Two periods for explanation and three days for project preparation.

Expected Learning Outcomes:

After the project, the students will be able to

- find out the area of various figures using mathematical formulae and geoboard.
- verify the area of the figures using Pick's Theorem.
- develop generalization of result for the figures with a hole in it.

Procedure: The students will be divided into groups of five and each student in each group will take up one type of polygon to verify the theorem. The groups will make a presentation on their findings and generalizations.

Topic 9:   a)   **Make a histogram of the height and weight of the students in the class.**

b) **Make pie chart of the portion of the annual income that your family spends at school fee, house rent/installments, food, books, clothes, entertainment, annual savings and other misc. expenses.**

Introduction: The students are required to make a histogram of the data they collect by measuring the heights and weights of the students of the class and a pie chart of the family budget of each of them. The teacher may expand/reduce the above list for the pie chart. The students shall also prepare five questions and their answers on each of the histogram and pie chart.

Suggested Research Tools: Encyclopedia/books for the definitions of pie chart and histogram.

Mode of Presentation: Project report including the questions and answers

Time Requirement: One period to explain the project and one week for completion.

Expected Learning Outcomes: The students use the concepts of histogram and pie chart to make the charts and frame questions on them. So, after the completion of the project, they will be able to

- understand the meaning of class intervals.
- understand how to make a frequency distribution table.
- make a histogram keeping in mind all its properties.
- analyze a histogram to make questions on it.
- understand that central angle of a sector is a fraction of the area of the circle while constructing a pie chart.
- make a pie chart and analyze it.

Procedure: The class may be divided into groups of five. The students discuss the problem and make a framework to go about it. Each student gives an individual report. Each group may measure the height and weight of the group members and then share it with the other groups. The pie chart activity shall be carried out individually by everybody. A sample pie chart construction may be viewed at http://www.mathsisfun.com/data/pie-charts.html

To look for the presence of acids/bases in different types of food items and the co-relation, if any, with their use in different situations

Introduction: Quite a few of the food items we use regularly have a 'sourish' or a 'bitterish' taste. We can associate these tastes with the acidic/basic nature of these food items. This study aims to identify such food items and their associated nutritional/health benefits or hazards.

Suggested Research Tools: Litmus paper/other suitable laboratory tests, data about pH- values of different food items.

Mode of Presentation: Observation and its Analysis, Overall Report, PowerPoint Presentation.

Estimated Time Requirement: One Period for discussion with teachers concerning different food items and different methods of analysing their acidic/basic nature. One week for completion of the project.

Expected Learning Outcomes:

- Collection of data
- Learning testing skills
- Analysis/Inference/interpretation of data
- Collation of inferences with 'daily life observations'.
- Developing presentation skills.

Procedure:

- Select a suitable simple method (like the litmus paper test) for checking the acidic/basic nature of a given substance.
- Take variety of items like papaya, orange, lemon, pomegranate juice, bitter gourd, paste of neem leaves, paste of tulsi leaves, sodium bicarbonate (baking soda), toothpastes of different brands, etc.

- Do the litmus paper test with each of your selected items and group them into acidic/basic category on the basis of your test.
- Look for the possible uses of your selected items and check whether your classification is in accord with the usual 'uses' to which these items are put.
- Suggest other possible uses of the different items on the basis of the classification done by you.

Extension:

- A better test of the acidic/basic nature (which also gives a kind of quantitative estimate of the degree of acidity/basicity of a substance) is through measurement of the pH values. Look for the methods used for this purpose and find out the range of pH values for acidic/basic substances.
- Compare the pH values of the food items/commonly used substances, tested by you, with the listed pH values of strong acids (like HCl, HNO_3, H_2SO_4) and strong bases (like $NaOH$, KOH) and estimate their 'relative values'.
- Look for some substances that are neutral (neither acidic nor basic) and look for their uses in day-to-day life.

Trans-disciplinary Approach-

General Health/Medicine: The project can also be used to assess the role and use of different types of acidic/basic foods and plants vis-a-vis our health. Students can also look into the role of edible/organic acids and bases in the process of digestion and other body functions.

Assessment

S. No.	Parameters	Excellent (5)	Above Average (4)	Average (3)	Below Average (2)	Poor (1)
1	Nature of data collected					
2	Extent of data collected					
3	Ability to do 'litmus Test'					
4	Interpretation of 'litmus Test' results					
5	Collation of inferences with 'daily life observations'					
6	Quality of presentation of the result					

Observe and photograph the 'patterns' of different types of sounds

Introduction: Sound is known to have a vibratory or wave nature. The vibrations or waves, associated with musical or pleasant sounds, have regular well defined patterns. The corresponding patterns, with unpleasant sounds, or noises, are quite irregular and ill-defined. This study aims to observe the 'visual display' of the 'patterns' of different types of sounds and observe the differences in these patterns for musical sounds and noises.

Suggested Research Tools: Suitable Camera/Mobile Phone; Strong source of light

Mode of Presentation: Photographs; video presentation; album of diagrams; power point presentation

Estimated Time Required: Two Periods for discussion by teacher concerning vibration/sounds and difference in the characteristics of different sounds, Ten days for completion of the project.

Expected Learning Outcomes:
The students will:

- Get familiar with the correlation between 'sound' and 'vibrating objects.'
- Learn assembling of simple set-ups
- Develop photographic skills and get familiar with different types of cameras.
- Know the difference between 'music and noise'.
- Collate observed 'sound patterns' with different sounds.

Procedure:

- Take a plastic or cardboard tube of small radius.
- Take a part of a balloon and use it to cover one end of the tube using rubber band or tape.
- Cut a small circle of aluminium foil. Stick the foil on the part of the balloon mounted on the tube.
- Go to a dark room, throw a narrow beam of light, light from a strong source on the mounted aluminium foil. The reflected light will appear as a shining spot on a screen/wall.
- Produce a sound at the open end of the tube. The spot on the wall will be seen to move. Record the movement of the spot using a video camera, mobile phone.
- The movement of the spot depends on the nature of sound produced. We are thus observing the sound in terms of the movement of the spot.
- Use different sounds and the difference in the movement of the spot on screen/wall.

Extension: If possible, use a microphone and feed its output to a CRO. The CRO can give a visual display of the nature of sound produced by different sources.

Trans-disciplinary Aproach:

Music: The project can be used to correlate the musical sounds of different instruments/devices with their observed sound patterns.

Differences between musical sounds and 'noise' can be highlighted.

Forensic Sciences: Attempt can be made to look the differences in detail, of the sounds of different persons/different sources and devices.

Assessment

S. No.	Parameters	Excellent (5)	Above Average (4)	Average (3)	Below Average (2)	Poor (1)
1	Nature of 'set-up' used					
2	Quality of assembly of the 'set-up' used					
3	Nature of light source used					
4	Number of Photographs taken					
5	Quality of Photographs taken					
6	Nature of sound sources – varying from 'noisy to 'musical' used					
7	Compilation and presentation of results					

To collect data/information about the (i) source, (ii) method of manufacture, (iii) advantages and disadvantages of different types of fabrics

Introduction: We use different types of fabrics in different seasons and at different places. This study aims to know the basic details of a variety of fabrics and to correlate these details with the different uses to which different fabrics are put.

Suggested Research Tools: Data about manufacturing details/uses of different types of fabrics

Mode of Presentation: Data/Information; PowerPoint Presentation; Charts

Estimated Time Required: Two periods for discussion by teacher on the essential details of different types of fabrics. Ten days for completion of the project.

Expected Learning Outcomes: Students will be able to:

- find out the names of as many different types of fabrics as possible.
- distinguish between natural and artificial fibres.
- collect information about the animal fibres-wool and silk.
- find out where the different sheep, yak, goat, llama, etc., are found in the world- climate and weather where they live.
- the processing of fibres – wool (natural), fibres and artificial fibres.
- learn the advantages and disadvantages of natural and artificial fibres.
- learn the used of the fibres.

Procedure:

- Find about the names of as many different types of fabrics as possible.
- Collect data/information about the:
    - (i)   source or place of their origin
    - (ii) method of manufacture
    - (iii) use vis-a-vis climate/weather

(iv)   advantages and disadvantages

- Use your collected data/information to suggest the possible uses of each type of fabrics and the reasons for the same.

Extension: Look for the basic details of the material and method of manufacture of different types of artificial fabrics. Compare and contrast their advantages/disadvantages with the fabrics obtained from natural sources.

Inter-disciplinary: Social Science – Collecting information about the use of different types of fabrics by people in different regions and understanding of possible reasons for the same.

Assessment

S. No.	Parameters	Excellent (5)	Above Average (4)	Average (3)	Below Average (2)	Poor (1)
1	Collection of data					
2	Analysis of data					
3	Conclusion					
4	Report					

To collect information/data about the (i) composition, (ii) properties (iii) and uses of different alloys

Introduction: Mankind's entry into the 'Iron-Age' heralded the use of **metals** in our day-to-day life. This study aims to know how alloys are formed through a suitable combination of different metals, have relatively more 'desirable' and 'useful' properties and how the use of a variety of alloys has helped mankind in more than one way.

Suggested Research Tools: Data about composition and uses of different types of alloys.

Mode of Presentation: Data/Information; PowerPoint Presentation; Charts

Estimated Time Requirement: Two periods for discussion by teacher on the differences between alloys and pure metals. Ten days for completion of the project.

Expected Learning Outcomes:
The students will be able to:
- know the difference between 'Pure-Metals' and 'Alloys'.
- collect data about the composition and names of different alloys.
- collect data about the main properties and uses of different alloys.
- highlight the similarity/differences between the characteristics and properties of 'alloys' and the 'metals' they are made up of.
- develop presentation skills.
- learn analysis/inferential Interpretation of data.

Procedure-

- Find out the names of as many alloys as you can. A suggested list of some of the well known alloys are: Steel, Stainless steel, Brass, Bronze, German Silver, duraluminium, Alnico, Gun Metal, Bell Metal, Solder, Magnalium, Type Metal.
- Collect data/information about the:
  (i) Composition
  (ii) Properties
  (iii) Uses of different types of alloys
- Make a comparative chart, wherever possible, comparing and contrasting the properties of each alloy with the metals it is composed of.
- Look for the reasons for the preference of the alloys over their composite metals.

- Suggest any changes in the percentage composition of different alloys that may lead to an improvement in their properties.

Trans-disciplinary Approach:

Social Sciences and Metallurgy: Students can look for the reasons of the use of different alloys – rather than pure metals – in historically significant structures / situations. They can also look for their uses in different practical situations.

Assessment

S. No.	Parameters	Excellent (5)	Above Average (4)	Average (3)	Below Average (2)	Poor (1)
1	Listing of differences between metals and alloys					
2	Number of alloys selected					
3	Listing of the composition of different alloys					
4	Listing of the practical uses of different alloys					
5	Listing of the differences between alloys and the metals they are 'made up of'					
6	Quality of Presentation of the compiled reports					

To collect data/information about the common sources/causes of water pollution. Find different methods/techniques used for the purification of water and design an improvised 'water filtration technique' that may be used for 'purification of water'.

Introduction: Pollution in general, and water pollution, in particular, is one of the major problems/scares of our present life. This study aims to make us familiar with the basic details and main causes of water pollution and the 'ways and means' of making water potable. It also aims to sensitize people about the need to do their best to minimize all types of 'pollutions' and to conserve our natural resources.

Suggested Research Tools: Earthen Pitchers, gravel, charcoal, coarse sand, data about different types of water filters, effects of chlorination

Mode of Presentation: Data/Information; Power Point Presentation; Seminar

Estimated Time Requirement: Two periods for discussion by teacher on the sources/causes of water pollution and sensitization about the need for water conservation and avoiding water wastage.

Expected Learning Outcomes:

- Familiarity with the common sources/causes of water pollution.
- Knowing about the methods/techniques used to minimize the effects of water pollution.
- Familiarity with the basic ideas of water purification used by villagers/city water treatment plants.
- Familiarity with the role of filters/ultraviolet rays, reverse osmosis and other recent techniques in checking/removing water pollution.
- Understanding the need and importance of providing 'potable water' to one and all.

Procedure:

- Collect data/information about the common sources/causes of water pollution.
- Look for, and suggest, methods/techniques that may be used to minimize the effects of these sources/causes of water pollution.
- Collect data/information about the different methods/techniques used for purification of water. In particular, look for the role of filter, ultraviolet rays and phenomenon of 'reverse osmosis' in the water purifiers used in households, offices and commercial establishments.
- Get information about the tests/measurements/checks through which the suitability, or otherwise, of water, for use as 'potable water', is decided.
- Make a simple improvised 'water filter' of your own. A simple method of doing the same is to use a set of four earthen pitchers, with the first three having a (plugable) hole at their bottom. Fill the top pitcher with impure water, the next below it with gravel and charcoal and the third one with coarse sand. The last pitcher is for collecting the 'filtered out' water.

  Let the impure water go through the other two pitchers before reaching the 'collecting pitcher'. You will be able to see a marked difference in the water collected, with respect to the initial impure water.

  Chlorination (in specified amounts) can help to improve the suitability of this filtered water for use as 'potable water'.

Extension:

- Suggest 'ways and means' for bringing an increase in the 'level of awareness' for conservation of water.
- Look for the methods/techniques used for harvesting of rain water. Make suitable suggestions of your own for this purpose.

Trans-disciplinary Approach:

EVS and Social Science: The project can also help to sensitize students about the need and importance of potable water and the need for conservation of water and avoiding its wastage.

Assessment

S. No.	Parameters	Excellent (5)	Above Average (4)	Average (3)	Below Average (2)	Poor (1)
1	Information/Data about the common sources/causes of water pollution relevant to the 'place of project'					
2	Information/Data about the general common sources/causes of water pollution					
3	Familiarity with the basic ideas of water purification used by villagers					
4	Knowing the basic features of the 'City Power Plant'					
5	Data about the methods used in different household water purifiers					
6	Information about the need and importance of providing Potable water to one and all					
7	Quality of presentation of the results					

Develop a 'clock' based on the co-relation between the relative length (length/height) of a shadow (of a rod, say) and 'day time'

Introduction: 'Time measurement' and use of a suitable 'time-table' has played a key role in the development of mankind. This study aims to make us familiar with a simple method of 'estimating time' through suitable simple observations and mathematical calculations. We also observe the role of different factors (like place of observation, season of observation, etc.) on our measurements and thus learn to appreciate how/why one needs to take into account the variety of factors that can affect a given measurement. We are also sensitized about the role/importance of accuracy and precision in our measurements.

Suggested Research Tools: Suitable Roads, Measuring Tape; data about use of sundials

Mode of Presentation: Observation data and its analysis; Graphical representation; information/details about sundials

Estimated Time Requirement:

Two periods for discussion by teachers concerning the relevant mathematical calculations; familiarisation with sundial and other early methods of time measurement. One week for completion of project.

Expected Learning Outcomes:

- Knowing about different methods of 'measuring time' used earlier.
- Knowing about the use of 'sundial' as a method of measuring time.
- Observing variations in the length of the shadow with variation in place/time of observation.
- Correlating 'relative length of the shadow' with the place/time of observation.
- Drawing 'calibration graphs' and reading them.
- Understanding and extending calculation skills.

- Appreciating the extent of accuracy/precision associated with a given method of measurement.

Produce:

- Keep a record of the 'day, date' and place of observation.
- Start taking your observations when the sun is clearly above the horizon.
- Use at least three rods of different (known or measured) height.
- Fix the rods about 3-4 metre away from each other.
- Use a 'measuring tape' for measurement of the length of the shadow.
- Calculate the relative length (length of shadow/height of the rod) of each shadow, take the mean of the three relative lengths, which would be observed to be nearly equal to each other.
- Take 5 to 6 observations before noon (at intervals of 30 to 40 minutes) and an equal number after 'noon'.
- Use a graph, to show the relation between the mean 'relative length' and the 'time of the day'.
- Repeat the observations over about a week and record any variation in the mean 'relative length' on the same 'time of the day'.
- Plot a graph between the 'mean (of the seven values of mean relative length) values' and 'time of the day'.
- This graph can now be used as a 'clock' at the given place of observation.
- Check the 'time', estimated from your graphs (through a measure of 'relative length') with that given by your watch.
- Record the order of error in your 'shadow based clock'.

Extension:

- Observe the changes in the 'relative length' of the shadow of a given rod over different months and seasons. Hence try to workout the 'correction' needed in 'your graph clock' with change of month/season.

- Use simple geometry/trigonometry for estimating the 'angular elevation' of the sun and observe the changes in the same with changes of month/season.
- If possible, compare the 'relative lengths, values', at the 'same time of the day' and in the 'same season' taken by observers in different cities. Try to reason out the 'causes' for the observed changes.
- Try observe to the change in the direction of the shadow at different times. How could this be correlated to time measurement? Think of designing a 'sundial' clock on this basis.

Trans-disciplinary Approach:

Mathematics: The project can be used for mathematical calculations and for using the observed data for problems related to height estimation.

Social Science/Geography: Students can record the correlation between 'relative lengths' values, at a given time, at different cities/places and use this record and relevant observations, to estimate the (unknown) distance between two places.

Assessment

S. No.	Parameters	Excellent (5)	Above Average (4)	Average (3)	Below Average (2)	Poor (1)
1	Recording of the 'place' and time of observation					
2	Choice of the rods used and the method of measuring time					
3	Planning of the place and time of observation					
4	Calculation of the relative lengths of the					

	shadow of different rods					
5	Extent of variation in the 'relative lengths' of the shadows of different rods					
6	Drawing of the 'calibration graph'					
7	Order of error in the 'shadow based clock'					

Observe the variations in the buoyant force (i) through change in the nature of material (same submerged volume and same liquid), (ii) through change in the volume of the submerged part (same material, same liquid) and (iii) through changes in the density of liquid (same material, same submerged part)

Introduction: This study aims to make us appreciate how/why one needs to take a careful look at a variety of factors that may be associated even with a chance/simple observation. We are sensitized about taking a 'whole and complete' view of a given problem and the 'ways and means' we can adopt to analyze it. The importance of the 'loss in weight', when an object is submerged in a fluid, also gets 'appreciated and associated, with different day-to-day life situations.

Suggested Research Tools: Suitable container/s, spring balance/s, different liquids

Mode of Presentation: Observations; Inferential/Analysis, PowerPoint Presentation; Report

Estimated Time Requirement: Two Periods for discussion by teacher in the basic concepts of buoyant force, the 'set-ups' for measuring 'loss-in weight' and the role of the buoyant force in day-to-day life. Ten days for completion of the project.

Expected Learning Outcomes:

The students will be:

- familiarised with the concept of 'buoyant force'.
- assembling simple 'set-ups'.
- using the 'spring balance'.
- understanding the factors that could affect the 'buoyant force'.
- knowing the 'Archimedes' Story and the 'Archimedes' Principle'

Procedure:

- Set up a suitable apparatus using an 'appropriate container', suitable 'stands', and a 'spring balance'.
- Measure the 'buoyant force' through the 'loss in weight' when the given object is submerged in the liquid.
- Study the variations in the 'buoyant force' in the 'suggested sequence'. Think of any other 'variations' that can be relevant to these investigations.
- Analyse your observations and try to come to 'conclusions' about the factors on which the 'buoyant force' may depend.
- Look for 'practical situations' where the conclusions about the 'buoyant force' become relevant.

Extension:

- Look for the possibilities of representing your 'observation data' through 'appropriate graphs'.
- See whether the 'buoyant force' shows any further change with the depth, (to which the object is submerged), after the object has just been fully submerged under the liquid.

- Take objects of the same volume but different shapes and materials and observe whether these changes bring any change in buoyant force when these objects are fully submerged.

- Try measuring the density of different liquids used through a simple method of your own.

- Look for the co-relation, if any, between the buoyant force and the weight of the liquid displaced by the submerged part of the object.

- Make a list of different practical situations where 'buoyant force' helps objects to stay afloat.

- Try making a list of different liquids that may be used for different categories of materials so as not to cause any damage to the material or any dangerous chemical reaction.

Trans-disciplinary Approach:

Social Science (Daily Life): Understanding and using the concept of buoyant force/loss in weight for practical daily life applications like:

(i)   estimating the purity of milk/a given edible oil.

(ii) the need or otherwise, of 'charging up' a given car/invertor battery.

(iii) checking the purity of a given Piece of gold jewellery and other similar applications.

Assessment

S. No.	Parameters	Excellent (5)	Above Average (4)	Average (3)	Below Average (2)	Poor (1)
1	Nature of the 'set-up' used					
2	Estimation of the factors affecting the 'buoyant force'					
3	Nature/extent of the observations taken					
4	Inferences drawn on the basis of the observation taken					
5	Presentation of the results obtained					

Observe the effect of change in the (i) length of the string, (ii) material of the bob, (iii) size of the bob, (iv) amplitude of swing, (v) nature of the string material, on the time period of a simple pendulum

Introduction: This study aims to make us appreciate how a variety of factors, that may appear relevant to a given measurement, need not be so when this measurement is actually carried out. We are thus sensitized about the importance of 'observations and measurements', over mere 'guess work in arriving at scientifically valid conclusions. We also get to know how to look, and search for, the 'pair of variables' that may be proportional to each other.

Suggested Research Tools: Bobs (of different materials and sizes), different types of strings, stop clock/ stop watch/ Digital watch

Mode of Presentation: Observations; Inferential Analysis; graphical representation; Report

Estimated Time Requirement: Two Periods for discussion by teacher concerning the history of the concept of the simple pendulum and introduction to the 'scientific approach' of identifying and checking the effects of different parameters on a given physical; quantity. One week for completion of the project.

Expected Learning Outcomes:

- Knowing about the Galileo's observation on the swinging chandelier.
- Identifying the factors on which the time period of a simple pendulum may depend.
- Setting up of the simple pendulum 'set-up'.
- Counting of complete oscillations and measurement of time period.
- Knowing about the least count of the stop clock/stop watch used and its association with the precision of time measurement.
- Collection of data and analysis and inferencing on the basis of the same.
- Graphical representation of the inferred results.
- Listing the factors on which the time period of a simple pendulum depends.

Procedure:

- Set up a conventional 'simple pendulum apparatus' using a cotton string and an 'iron bob' of size (diameter) about 2cm.
- Adjust the 'bob' to lie about 5cm from the floor, mark its mean position on the floor; draw a line through its mean position and mark points on it at distances of 10 cm, 20 cm, 30 cm, 40 cm and 50 cm (from the mean position) on either side.

- Keeping the amplitude of swing constant (10 cm from the mean position), vary the length of the simple pendulum and, for each length, measure the time of 20 oscillations in each case. Hence, calculate the time period value for each case. (2 to 3 length values below 100 cm and an equal number above 100 cm)

- Repeat observations (for the same values of length) by adjusting the amplitude of swing to be 20cm (30cm, 40 cm, 50cm).

- Repeat again all the above steps by using a bob of different size and then of a different material (say brass).

- Repeat all the 'above steps' using a string of a different material (say 'jute', a thin wire, etc.).

- Observe the factors on which the time period of a simple pendulum depends.

- Do we observe any change in time period (for the same length) with a change in the:

  (i) Size of the bob?

  (ii) Amplitude of the bob?

  (iii) Nature of string material?

- Draw a graph showing the co-relation between the length of a simple pendulum and its time period. Do we get a straight line graph?

Extension:

- Find out the length of the simple pendulum for which the time period is 2s. A simple pendulum of this length is known as a 'second's pendulum'.

- Draw graphs between $(\ell$ and $T)$, $(\ell$ and $T^2)$, $(\sqrt{\ell}$ and $T)$, $(\ell$ and $\sqrt{T})$ and see which of these is (nearly) a straight line graph. Hence try 'deducing' the possible co-relation between the 'length of a simple pendulum' and its 'time-period'.

Trans-disciplinary Approach:

History: The project may be associated with the life and works of Galileo and his role in shaping the scientific approach and developing the 'scientific method'.

Social Science (Daily Life): 'Measurement of Time' can be associated with Time once lost can never be regained. Sensitization about making full use of available time can be explained and explored.

A comparative study of properties of different types of soil and their suitability for different crops

Introduction: This study aims to make us aware about the importance and role of different types of soils in growing different types of crops at different places and at different times. We are sensitized about the skills and innovations of the farmers growing their crops in line with the 'time' and 'place' of their work.

Suggested Research Tools: Survey

Mode of Presentation- Data/Information collection; Discussion with farmer; Power Point Presentation; Charts/Report

Estimated Time Required: Two Periods for discussion by teacher on differences in different types of soils and their role/importance for proper growth of different types of crops. Ten days for completion of the project.

Expected Learning Outcomes:

- To familiarise with the different kinds of particles in soil.
- To feel the soil and identify its texture.
- To familiarise with the different colours of soil.
- To conclude regarding the presence/absence or organic matter.
- To find the pH of soil.

- To conclude regarding the acidity/basicity of soil.

- To find the moisture content of soil.

- To relate moisture content with the type of soil particle.

- Calculation of water holding capacity of different soils.

- To analyse the type of crops growing based on water holding capacity.

Procedure:

- Collect soil sample from your neighbourhood where you find plants growing.

- List the types of crops/plants growing in the soil.

- Collect data/Information about the texture, colour, pH, density and water holding capacity of different types of soils.

- Collect about four more samples from other regions. You may ask your friends/relatives to send samples.

- Obtain the same set of data/information about all these soil samples.

- Tabulate your record/data/information in a format of the type suggested below:

Soil Sample	Collected from (Region's name)	Texture and colour	pH value	Density	Water holding capacity	Crops growing
A						
B						
C						
D						
E						

Extension:

- What type of crops/plants are found growing in your region?
- Which type of crops grow in other regions you collected samples from?
- Do you find any preferences shown by plants in terms of the soil type?
- Which plants grow in all soils irrespective of the soil type? Comment upon the advantages such plants have over the others.
- Make a list of plants/crops that grow only in specific regions you collected samples from.
- What effect fertilizers have on the nature of soil? Take the help of local farmers for collecting the relevant information.

Trans-disciplinary approach: Geography Study of types of soil and the crops growing in different regions of India.

Chemistry: Chemical properties of soil.

Microbiology: To study soil microflora.

Assessment

S. No.	Parameters	Excellent (5)	Above Average (4)	Average (3)	Below Average (2)	Poor (1)
1	Whether soil from different locations have been categorised into different soil classes based on the given characteristics.					
2	If soil samples have been indentified after matching with the given soil colour chart.					

3	Whether concluded correctly regarding acidic/basicity of given soil samples.					
4	Calculation of soil moisture and arranging the given soil samples from less to more soil moisture.					
5	Calculation of water holding capacity and arranging the given soil samples from less to more in terms of water holding capacity.					

A study of the inheritance of characters by observing similarities and dissimilarities between (i) siblings, (ii) parents and their children, (iii) twins (optional), (iv) grandparents and children and to draw conclusions about the inheritance of the traits studied

Introduction: This study aims to make us appreciate one of the most elegant and comprehensive scientific theory of all times-Darwin's theory of evolution. We are also sensitized about the role of the 'Family' in the overall set-up of the 'society'.

Suggested Research Tool: Observation

Mode of Presentation: Data/Information collection; Discussion with relatives/friends; Inferential Analysis; PowerPoint Presentation

Estimated Time Requirement: Two Periods for discussion by teacher on the basic details of the theory of evolution. Ten days for completion of the project.

Expected Learning Outcomes- Students will be able to:

- know a number of easily observable genetic traits.
- compare the traits with their family members such as parents, grandparents, siblings, etc.
- understand that traits are passed from the parents to their offspring with the help of supporting evidence of the observation table.
- identify the traits that are inherited from the parents.
- sort and sequence data according to the given criteria.

Extension:

- Once all the data have been collected and finalised in the observation sheet, they can make bar graph.
- Choose few traits listed in the observation table to calculate the frequency of traits in the family.

Procedure:

- Collect data from your relatives or friends and ask them to look up or recall features/physical appearances of your relatives.
- Decide the characteristics you want to study.
- Some are listed here: colour of hair, eye colour, mole on the cheek present or absent, ear lobes attached or free, type of thumb-straight or bent.
- Make a list of five characters that are seen in your family.
- Note down which of your relatives look alike. Are the selected traits shown by them or not?
- Prepare your observations on a large sheet in the form of a family tree or pedigree chart.
- List the trait/traits that is/are present only in you or your sibling and not in any of your parents or grandparents. Comment upon the nature of the trait. Is it inherited from your elders?

- List the traits you inherited from maternal grandfather/mother and paternal grandfather/mother.
- List the features in which you resemble your parents (father or mother).
- How many traits you share with your siblings?
- Which traits are very common in the family?
- What is a (i) dominant and (ii) recessive trait? Give example from your collected data.
- Is there any trait that is present only in the male members of the family? What are such traits called?

Trans-disciplinary Approach:

- **Mathematics:** Students will learn to do mathematical calculation and find the frequency of trait in percentage and draw its bar graph.
- **English:** Students will improve their power of expression while writing all the steps of the project.

Assessment

S. No.	Parameters	Excellent (5)	Above Average (4)	Average (3)	Below Average (2)	Poor (1)
1	Collection of data					
2	Analysis of data					
3	Conclusion					
4	Report Presentation					

A study of the inheritance of characters by observing similarities and dissimilarities between (i) siblings, (ii) Parents and their children (iii) twins (optional) (iv) Grandparents and children and draw conclusions about the inheritance of the traits studied.

Introduction: Have you heard people saying that he/she looks like her/his father or have you noticed that sisters look alike? We also see twins around us. Do you know why do they look similar or dissimilar? They look similar due to their inherited trait. An inherited trait is a particular genetically determined characteristic. The traits of children are determined by the traits passed on from their parents. Would you like to find out inherited traits present in your family members?

Some of the inherited traits are:

(a)   Attached or unattached earlobes
(b)   Colour of skin
(c)   Colour of eyes

Mode of Presentation /Suggested Research Tool: Observation, observation sheet

Estimated Time Requirement: Seven days

Learning Objectives: Students will be able to:

➢   know a number of easily observable genetic traits.
➢   compare the traits with their family members such as parents, grandparents, siblings, etc.
➢   understand that traits are passed from the parents to their offspring with the help of supporting evidences of the observation table.
➢   identify the traits that are inherited from the parents.
➢   sort and sequence data according to the criteria given.

Extension:

➢   Once all the data have been collected and finalised in the observation sheet, they can make bar graph.
➢   Choose few traits listed in the observation table to calculate the frequency of traits in the family.

Process-

Milestone – I   **Time- 4 days**   **Date of submission_____**

(A) **Attached and unattached earlobes.**
   (i)   Students will observe earlobes in their parents.
   (ii) Students will also observe the attached and unattached earlobes in their grandparents and siblings.
   (iii) If their grandparents are not staying with them then they can observe the earlobes in their photographs or they can ask their parents about this detail.
   (iv) Students will enter all the observations in the observation table given by the teacher.
   (v)   Students will have to complete the observation and its entry in the observation table within four days.
   (vi) After entering all the observation, students will have to submit it to their teacher on the 5th day.

Milestone – II   **Time- 3 days**   **Date of submission_____**

   (i)   Students will study the data carefully and will be able to identify whether attached or unattached earlobes are inherited traits or not.
   (ii) Students will calculate the frequency of each trait in the following way:
$$\frac{\text{Number of family members with traits}}{\text{Total number of family members}} \times 100 = \text{…..…} \%$$
   (iii) Students will prepare bar graph to show the frequency of trait in the family. (A tree of inherited traits as shown in the sample trees). Students will put a tick mark of the traits present and optional.
   (iv) Students can also do Pedigree Analysis as shown in the sample.

B and C. Similarly students will observe other traits mentioned earlier (page 1) and enter their observation in the sheets given to them.

   (i)   Students will write all the steps along with observation sheet for submitting to their teachers.
        (a) Graph   (b) Family Tree

Trans-disciplinary Approach:

   (i)   **Mathematics:** Students will learn to do mathematical calculation while finding the frequency of trait in percentage and drawing its bar graph.

(ii) **English:** Students will improve their power of expression while writing all the steps of the project.

References:

Website: www.agclassroom.org/nt.
http://gslc.genetics.utah.edu
www.carolina.com

(A) Observation Table

Type of Earlobe	Name of the student/child		Siblings		Parents		Grand Parents	
	Boy	Girl	Sister	Brother	Mother	Father	Grand Mother	Grand Father
Attached								
Unattached								

(B) Observation Table

Eye Colour	Name of the student/child		Siblings		Parents		Grand Parents	
	Boy	Girl	Sister	Brother	Mother	Father	Grand Mother	Grand Father
Brown Eye								
Green Eye								
Grey Eye								

(C) Observation Table

Skin Colour	Name of the student/child		Siblings		Parents		Grand Parents	
	Boy	Girl	Sister	Brother	Mother	Father	Grand Mother	Grand Father
Very Fair								
Wheatish								
Dark								

A comparative study of properties of different types of soil and their suitability for different crops

Introduction - Soil is both organic and inorganic in nature. Inorganic because it is the resenuois of most minerals and organic because it is having both living and dead organic matter. It is teaming with millions of microbes namely bacteria, fungi, nematodes and bigger animals like earthworms and the burrowing animals. The knowledge of both the physical and chemical properties help to determine the type of soil and the crops that can be grown in it.

Estimated Time- 10-15 days

Learning objectives-Students will be able to

- familiarise with the different kinds of particles in soil.
- feel the soil and identify its texture.
- familiarise with the different colours of soil.
- conclude regarding the presence/absence of organic matter.
- find the pH of soil.
- conclude regarding the acidity/basicity of soil.
- find the moisture content of soil.
- relate moisture content with the type of soil particle.
- calculate water holding capacity of different soils.
- analyse the type of crops growing based on water holding capacity.

Procedure:

- Collect soil sample from your neighbourhood where you find plants growing.
- Note down the texture, colour, pH, its density and water holding capacity.
- List the types of crops/plants growing in the soil.
- Similarly collect four more samples from other regions. You may ask your friends / relatives to send samples.
- Perform the same set of tests on all the soil samples
- Tabulate your observation.(or make your own)

Soil sample	Collected from (Region's Name)	Texture and colour	pH value	Density	Water holding capacity	Crops growing
A B C D E						

Extension:

- What type of crops/plants is found growing in your region?
- Which type of crops grow in regions you collected samples from?
- Do you find any preferences shown by plants in terms of the soil type?
- Which plants grow in all soils irrespective of the soil type? Comment upon the advantages such plants have over the others.
- Make list of plants/crops that grow only in specific regions you collected samples from.
- What effect fertilizers have on the nature of soil? Study with the help of local farmers.

Trans-disciplinary Approach:

Geography- Study of types of soil and the crops growing in different regions of India.

Chemistry- Chemical properties of soil.

Microbiology- Study soil microflora.

Assessment-

a) Whether soil from different locations have been categorised into different soil classes based on the given characteristics.
b) If soil samples have been identified after matching with the given soil colour chart.
c) Whether concluded correctly regarding acidity/basicity of given soil samples.
d) Calculation of soil moisture and arranging given soil samples from less to more soil moisture.
e) Calculation of water holding capacity and arranging given soil samples from less to more in terms of water holding capacity.

Reporting of kind of crops:

(i)   already growing in the said location.
(ii) that can be grown in the given location based on above properties.

Conclusion:
Comparative analysis of different soil samples with respect to physical properties. the students should conclude:

(i)   about the quality of soil and which crops can be grown in it.
(ii) its acidity/basic nature thereby helping the farmer in deciding the kind of fertilizers to be used to make it natural for growing a variety of crops.
(iii) whether it has high/how water holding capacity and moisture content on the basis of which it may be decided which crops will grow suitably and more importantly that excessive irrigation is not done which may lead to (a) wastage of water and electricity and (b) increased of salinity of the soil.

References:

1. Practical Manual in Biology – Class XII
2. Text Book in Biology – Class XII
3. Internet : Google Search

Rubric of Assessment

		Excellent	Very Good	Good	Average	Below Average
1	Division of work in the group					
2	Completion of tasks					
3	Procedure followed stepwise					
4	Completed observation table					
5	Presentation to documentation					
6	Analysis					
7	Guidance of farmers/gardeners					

To collect data/information about the:

(i) Source
(ii) Method of manufactures
(iii) Advantages and disadvantages of different types of fabrics

Learning Outcomes: Students will be able to:

- find out the names of as many different types of fabrics as possible.
- distinguish between natural and artificial fabrics.
- collect information about the animal fibres – wool and silk.
- find out where the different sheep, yak, goat, llama, etc., are found in the world – climate and weather where they live.
- understand the processing of fibres – wool (natural) fibres and artificial fibres.
- learn the advantages and disadvantages of natural and artificial fibres.
- learn the use of the fibres.

Process

- The students will collect information about the natural and man-made fibres from the NCERT books of class VII and VIII, Reference Books, magazines and the internet. They will record their data on a worksheet.
- They will collect samples of different types of fibres from tailor shops, cloth shops, factories, hosiery, home, etc.
- Visit to a factory manufacturing silk cloth/jute/hosiery, etc.
- On a map of India they will mark the jute, cotton, wool factories. On map of world they will mark the wool rearing animals.

Worksheet

S. No.	Name of the fibre	Natural / Artificial	Source	Use
1				
2				
3				
4				
5				
6				

- Now identify the cost, maintenance and durability of the above fibres with the help of parents, shopkeepers, and your teacher.

S. No.	Name of the fibre	Cost	Maintenance	Durability
1				
2				
3				
4				
5				
6				

- The students will identify the fibres which are cost effective, easy to maintain and are durable. Then find the tensile strength of the fibre and write observations as follows:

Observation Table

S. No.	Type of Threads/Fibres	Total Weight required to break the thread
1	Cotton	
2	Wool	
3	Silk	
4	Nylon	

(Marbles or pebbles of same size may be used instead of weights)

Arrange the above fibres in the increasing order of their tensile strengths. Students will find out whether synthetic fabrics soak less/more water than the natural fibres and make the following observation table:

Observation

Material (Fabric)	Volume of water left in the mug (ml)	Time taken to dry in the sun (min/hr)
1		
2		
3		
4		

Then they will find out the fabrics which are biodegradable/non-biodegradable and make observations as follows:

S. No.	Type of Fabric	Approximate time to degenerate	Nature of material biodegradable/ non-bio degradable

From the above table identify the fabrics which are ecofriendly.

Analysis Table

From the above four activities students will compare the properties of natural and artificial fibres.

Material ➙ Property	Natural	Artificial
⬇ 1. Tensile strength 2. Moisture absorption 3. Biodegradable 4. Action of heat/flame		

Trans-disciplinary approach:

Social Science: On the map of the world students can mark the places and countries where the animals are reared for wool.

On the map of India they can mark the places where the cotton, jute and wool industries are located.

Environmental Studies: The students can identify the fabrics which are non biodegradable.

English-Recall the nursery rhymes 'Baa baa black sheep, Mary had a little lamb'.

References-

Websites
www.indiansilk.kar.nic.in/
www.psic.ws/macrog/index.htm
www.edugreen.teri.res.in
www.nationalgeographic.com/resourcees.

Books -
Science Text Books Classes VII, VIII - NCERT

Science Power Class VII – Srijan Pubilshers

Basic Science for Class VIII – Bharti Bhawan

S. No.	Student's Name	Date of Submission	Collection of data-worksheet	Observation (Activities) Act 1	2	3	4	Analysis (Table)	Conclusion	Documentat-ion	Total
Marks	2	2	3	2	2	2	2	4	1	2	20

Life Skills Education Program

History of Life-Skills

Life-Skills Based Education (LSBE) has a long history of supporting child development and health promotion. In 1986, the **Ottawa Charter** for Health Promotion recognized Life-Skills in terms of making better health choices. The 1989 **Convention on the Rights of the Child** (CRC) linked Life Skills to education by stating that education should be directed towards the development of the child's fullest potential. The 1990 *Jomtien Declaration* on *'Education for All'* took this vision further and included Life-Skills among essential learning tools for survival, capacity development and quality of life. The 2000 **Dakar World Education Conference** took a position that all young people and adults have the human right to benefit from *"an education that includes learning to know, to do, to live together and to be"*, and included Life-Skills in two out of the six EFA Goals.

Life-Skills Based Education is now recognized as a methodology to address a variety of issues of child and youth development and thematic responses including as expressed in UNGASS on HIV/AIDS (2001), UNGASS on Children (2002), World Youth Report (2003), World Program of Human Rights Education (2004), UN Decade on Education for Sustainable Development (2005), UN Secretary General's Study on Violence Against Children (2006), 51st Commission on the Status of Women (2007), and the World Development Report (2007).

Every nation, society and community has to work towards promoting adolescent health. When young people acquire Knowledge, Attitudes, Value Enhanced Life-Skills (KAVELS), they benefit in a variety of ways. These Life-Skills help young people to make informed decisions, solve problems, think critically and creatively, communicate effectively, build healthy relationships, empathize with others, cope with stress, and manage their lives in a healthy and productive manner. Such knowledge and skills can lead to behaviours that prevent diseases and injuries, foster healthy relationships and enable young people to play leadership roles.

Moreover, the knowledge and Life-Skills education imparted to students are likely to be passed on to their own children, thus influencing future generations.

Global and Indian experiences have shown that educational interventions that focus on Life-Skills development have proven very effective in empowering adolescents to manage their concerns, including avoidance of risky behaviour.

The approach that is being followed by the Central Board of Secondary Education

International is to provide accurate, objective and scientific knowledge keeping in mind that the content should be age –appropriate and directed towards the sensitivity of young minds. The process of transfer is made simpler through the KAVELS approach.

(Knowledge, Attitude, Value Enhanced Life Skills)

A positive attitude is essential to cope with the rapid changes which happen in the life of a young learner in the areas of body, mind and soul. Different values need to be experienced at different levels and internalized through development of appropriate expression. Social-skills are needed to use values throughout the day.

Young people need to think about Life Skills, reflect on them and carry them into their personal and social lives. They need to be able to see the effect of their behaviour and choices and develop socially conscious Decision-Making Skills. One can develop reflection points for value enhanced Life-Skills such as 'Everyone in the world has the right to live with dignity and respect' including myself. *(Values : Respect, Life-Skills : Critical-Thinking, Decision-Making). 'Tolerance is being open and receptive to the beauty of differences'. (Value : Tolerance, Life-Skills : Interpersonal-Skills, Communicative-Skills).* One can also add sayings from the local culture, bring in local role models and learning gleaned from historical figures.

In addition to enhancing knowledge, the focus of the modules is on development of value enhanced Life-Skills in students which would help them in resisting peer-pressure, taking informed decisions and making healthy choices.

Objectives of the Life-Skills Programme:

- To develop concept of Life-Skills with respect to everyday life.
- To create awareness about the ten core Life-Skills and their inter-relatedness.
- To develop Life-Skills of Creative-Thinking, Critical-Thinking, Empathy, Coping with Stress, Coping with Emotions, Inter-personal Relationships, Communication-Skills, Decision-Making Skills, Self-Awareness and Problem-Solving.
- To apply these Life-Skills in all spheres of life.

These can be utilized in many content areas like:

- Relationship-Management
- Professional-Communication
- Consumer Education
- Livelihood and Employability
- Environmental- Awareness
- Gender Concerns
- Process of Growing up
- Education for Development
- Social-Communication

In short, Life-Skills empower young people to take positive action to protect them and promote their health and positive social-relationships.

Vision

Nurturing...

Aware, Responsible and Empowered Adolescents

Life-Skills are essentially individual **abilities that help to promote mental well-being and competence in young people when they face the realities of life.** Most development professionals agree that Life-Skills are generally applied in the context of health and social issues of concern.

What are the main Components of Life-Skills?

Thinking-Skills

Social-Skills

Emotional Skills

These Life-Skills can be further segregated into three core groups as depicted above:

Life-Skills		
Thinking-Skills	**Social-Skills**	**Emotional-Skills**
• Self-Awarness	• Interpersonal-Relationships	• Managing Feeling/Emotions
• Problem-Solving	• Effective-Communication	• Coping with Stress
• Decision-Making	• Empathy	• Self Esteem
• Critical-Thinking		• Self Awareness
• Creative-Thinking		
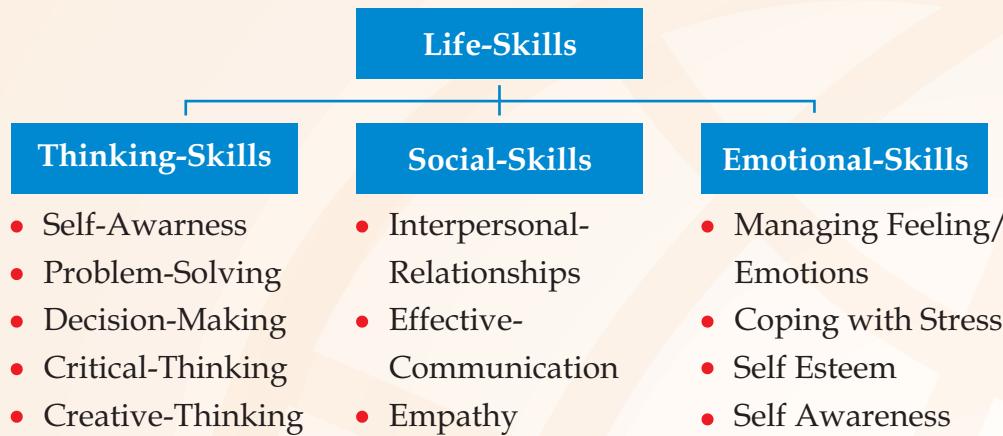
Note: Most of these skills are interdependent and overlap with each other.

Thinking-Skills

These include decision-making/problem-solving skills and information gathering skills. The individual must also be skilled at evaluating the future consequences of their present actions and the actions of others. They need to be able to determine alternative solutions and to analyze the influence of their own values and the values of those around them.

Social-Skills

These include verbal and non-verbal communications, active listening and the ability to express feelings and give feedback. Also in this category, are negotiation/refusal-skills and assertiveness skills that directly affect one's ability to manage conflict. Empathy, which is the ability to listen and understand others' needs, is also a key interpersonal-skill. Teamwork and the ability to cooperate include expressing respect for those around us. Development of this skill set enables the adolescent to be accepted in society. These skills result in the acceptance of social norms that provide the foundation for adult social behaviour.

Emotional-Skills

These refer to skills to increase the internal locus of control, so that the individual believes that s/he can make a difference in the world and affect change. Self-esteem, self-awareness, self-evaluation skills and the ability to set goals are also part of the more general category of self-management skills. Anger, grief and anxiety must all be dealt with, and the individual learns to cope with loss or trauma. Stress and time management are key areas of focus, as are positive thinking and relaxation techniques.

How do Life-Skills help?

Thinking-Skills	Social-Skills	Emotional-Skills
With the enhancement of thinking skills, an individual demonstrates the ability to be original, flexible and imaginative. Instead of taking all that comes her/his way, she/he raises questions and thinks critically, identifies and analyses problems. While deciding on a thing she/he implements a well thought out decision and takes responsibility. It makes one comfortable with one's own self at the same time accepting or trying overcome weaknesses while building on the strengths for positive self-concept.	Social-skills help a person to demonstrate the ability to identify, verbalize and respond effectively to others' emotions in an empathetic manner. Along with this s/he gets along well with others without prejudices. S/he also takes criticism constructively and reflects, listens actively and communicates using appropriate words, intonation and body language.	With enhanced emotional skills an individual is able to identify causes and effects of stress on oneself and develop and use multi-faceted strategies to deal with it. As and when required, the person is also able to express and respond to emotions with an awareness of the consequences.

Enhanced Life-Skills in an individual thus help in developing:

- **Improved Self-Esteem**
- **Self- confidence**
- **Assertiveness**
- **Ability to establish relationships**
- **Ability to plan and set goals**
- **Acquisition of knowledge related to specific content areas**

Detailing of Core Life-Skills:

1. **Self-Awareness** includes our recognition of *'self '*, of our character, of our strengths and weaknesses, desires and dislikes. Developing self-awareness can help us to recognize when we are stressed or feel under pressure. It is also often a pre-requisite to effective communication and interpersonal-relations, as well as developing empathy for others. We all have different attributes/qualities.

2. **Critical-Thinking** is an ability to analyze information and experiences in an objective manner. Critical-thinking can contribute by helping us to recognize and assess the factors that influence attitudes and behaviour, such as values, peer-pressure and the media.

3. **Problem-Solving** enables us to deal constructively with problems in our lives. Significant problems that are left unresolved can cause mental-stress and give rise to accompanying physical strain.

4. **Creative-Thinking** contributes to both decision-making and problem-solving by enabling us to explore the available alternatives and various consequences of our actions or non-action. It helps us to look beyond our direct experience and even if no problem is identified, or no decision is to be made, creative-thinking can help us to respond adaptively and with flexibility to the situations of our daily lives.

5. **Decision-Making** helps us to deal constructively with decisions about our lives. This can have positive consequences for the health of young people when they actively make decisions about their own health practices by assessing different options and the effects of different decisions.

6. **Interpersonal-Relationships** Skills help us to relate in positive ways with the people we interact with. This may mean being able to make and keep friendly relationships, which can be of great importance to our mental and social well being. It may mean keeping good

relations with family members, which are an important source of social support. It may also mean being able to end relationships constructively.

7. **Effective-Communication** means that we are able to express ourselves, both verbally and non-verbally, in ways that are appropriate to our cultures and situations. This means being able to express opinions and desires, but also needs and fears. And it may mean being able to ask for advice and help in a time of need.

8. **Empathy** is the ability to imagine what life is like for another person, even in a situation that we may not be familiar with. Empathy can help us to understand and accept others, who may be very different from ourselves. So this skill can improve social interactions, for example, in situations of ethnic or cultural diversity.

9. **Managing-Feelings and Emotions** includes skills for increasing internal locus of control for managing emotions, anger and stress.

10. **Coping with Stress** means that we take action to reduce the sources of stress, for example, by making changes to our physical environment or lifestyle. It also means learning how to relax, so that tensions created by unavoidable stress do not give rise to health problems.

The various Life-Skills work best in conjunction. Many Life-Skills are required to manage a particular situation and cope with it effectively. One particular skill may be effectively utilized in diverse situations. The appropriate combination of Life-Skills at a given moment is an art. Adolescents learn their Life-Skills from parents/teachers / significant others who act as role models.

There are two ways of incorporating the concept of Life – Skills in various disciplines.

a) By emphasizing the importance of a particular Life-Skill in the text, one can at least, create the necessary awareness among young boys and girls about certain Life-Skills, which would ensure a healthy life for them. For instance, while discussing the needs and concerns of young adolescents the importance of developing among them the skill of firmly saying 'NO' to eating Junk food or going out for late night parties.

b) The second way to incorporate Life-Skills in text-books is to include a few meaningful questions or activities in the text. The purpose is to motivate children to critically think and decide for themselves what safe and responsible behaviour is.

Assessment

Introduction

Assessment is an integral part of the teaching learning process. It is continuous like both teaching and learning and addresses two basic questions – How are we doing? How can we do better? An assessment is a diagnostic process that measures an individual's behaviour, life skills, attitudes, or other selected qualities and aspects of student's growth and development in addition to the cognitive domain reflected in scholastic aspects. An assessment should be accurate and objective so that students know what is expected of them. In addition, it must meet scientific criteria, as well as provide meaningful insight. More than providing just data and information it should open doors to strategic change and measure progress. Assessment can lead to increased self-awareness and inspire people to learn and grow. As a sequel to the development of curriculum of CBSE-*i*, there is an exigency of developing an assessment framework for the CBSE-*i*. CBSE-*i* has to have clearly spelt out guidelines for schools on assessment framework to oversee the quality of transaction in CBSE-*i* schools. It needs to be in harmony with pedagogy prescribed for the transaction of the international curriculum by CBSE-*i*.

1. Assessment in CBSE-*i*

The educational assessment in the CBSE International (CBSE-*i*) shall have the following guiding principles:

- The ultimate purpose of assessment is to support and enhance student learning.

- It must be capable of eliciting optimal performance from students.

- Assessment shall focus on all key areas of student learning and development: Scholastic, Life Skills, Performing Arts and Visuals Arts, Physical Education, Critical thinking, etc.

- It will be continuous and comprehensive in nature.

- It will move from purely summative assessment to a number of assessments using a variety of assessment tools catering to varying learner needs.

- Assessment shall consider a wide range of relevant performance information, formal and informal, standardised and non-standardised.

- It shall be a combination of formative and summative assessment covering extensively generic skills such as analysing, deducing and evaluating.

- It will include projects (encouraging self paced learning) and non-examinable element viz. Perspectives, Life Skills, SEWA (Social Empowerment through Work and Action) and Research.

- Information on how to understand and use assessment data shall be provided regularly to the schools.

- The teachers will be empowered through regular online counseling and supported by training programmes.

2.   How are the results of assessment used?

Results are used to:

- promote students learning.

- improve students learning.

- develop strategies in the instructional programmes for improvement.

- generate opportunities for self reflection, collaboration, etc., and demonstrate improvement through formative assessment before the final summative.

- Take decisions regarding placement of students.

3.   Framework for assessment

A Framework for Assessment aims to:

- create an effective assessment system which supports the learning objectives at various levels of depth and the teaching learning activities.

- ensure smooth transitions in learning by providing links between primary, middle and secondary levels.

- provide effective network through which there is sharing of performance standards, expectations and assessment tools and techniques among teachers and students.

- develop effective reporting procedures.

Continuous and Comprehensive Evaluation

Continuous and Comprehensive Evaluation (CCE) refers to a system of school-based evaluation of students that covers all aspects of a students' development. It is a developmental process of a child which emphasises on two fold objectives.

The term 'continuous' is meant to emphasize the evaluation of identified aspects of students 'Growth and development' is a continuous process rather than an event, built into the total teaching-learning process and spread over the entire span of academic session. It means regularity of assessment, diagnosis of learning gaps, use of corrective measures and feedback of evidence to teachers and students for their self evaluation.

The second term 'comprehensive' means that the scheme attempts to cover both the scholastic and the co-scholastic aspects of students' growth and development. Since abilities, attitudes and aptitudes can manifest themselves in forms other than the written word, the term refers to application of a variety of tools and techniques (both testing and non-testing) and aims at assessing a learner's development in area of learning like:

- Knowledge
- Understanding/ Comprehension
- Application
- Analysis
- Evaluation
- Creativity

School-based Continuous and Comprehensive Evaluation

There has been a consistent move towards reducing the load on the student by making public or board examination stress free. Over the decade there has been a high pitched race towards more marks and thus more competitiveness among students and schools.

The paradigm shift is to empower schools by creating a workable school based continuous and comprehensive scheme.

School Based Continuous and Comprehensive Evaluation system should be established to:

- reduce stress on children
- make evaluation comprehensive and regular
- provide space for the teacher for creative teaching
- provide a tool of diagnosis and remediation
- produce learners with greater skills

Positions Paper on Aims of Education - NCF 2005, NCERT

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4. There are four Assessment Paradigms

Assessment of Learning

Most commonly, assessment is defined as a process whereby someone attempts to describe and quantify the knowledge, attitudes or skills possessed by another. Teacher directedness is paramount and the student has little involvement in the design or freedom in implementing of the assessment process in these circumstances.

Features:

- Summative
- Teacher decides learning
- Teacher collects evidence
- Teacher judges what has been learnt (and what has not)

Assessment for Learning

The assessment for learning involves increased levels of student autonomy, but not without teachers guidance and collaboration. The assessment for learning is sometimes seen as being akin to 'formative assessment' and can be seen as inform teaching. There is more emphasis towards giving useful advice to the student and less emphasis on giving marks and the grading.

Feature:

- Teacher design learning
- Teacher design assessment with feedback to student
- Teacher assesses what has been learnt

Assessment as Learning

Assessment as learning is perhaps more connected with diagnostic assessment and can be constructed with more emphasis on inform learning. Assessment as learning generates opportunities for self assessment and peer assessment. Students take on increased responsibility to generate quality information about their learning and that of other.

Features:

- Teacher and student co-construct learning
- Teacher and student co-construct assessment
- Teacher and student co-construct learning progress map

Assessment for learning and assessment as learning activities should be deeply embedded in teaching and learning, and be the source of iterative feedback, allowing students to adjust, re-think and re-learn.

Assessment in Learning

The assessment in learning places the question at the centre of teaching and learning. It deflects the teaching from its focus on a 'correct answer' to 'a fertile question'. Through enquiry, students engage in processes that generate feedback about their learning, which come from multiple sources and activities. It contributes to the construction of other learning activities, lines of enquiry and the generation of other questions.

Features:

- Student at the centre of learning
- Student monitors, assesses and reflects on learning
- Student initiates demonstration of learning (to self and others)
- Teacher as coach and mentor

5. **Scholastic Assessment**

The desirable behaviour relate to the learner's knowledge, understanding, and application. Evaluation, analysis and creativity in subjects and the ability to apply it in an unfamiliar situation are some of the objectives in scholastic domain.

In order to improve the teaching learning process, assessment should be both formative and summative.

Formative and Summative Assessment

Formative Assessment is a tool used by the teacher to continuously monitor student progress in a non threatening, supportive environment. It involves regular descriptive feedback, a chance for the students to reflect on their performance, take advice and improve upon it. It involves students, being an essential part of assessment from designing criteria to assessing self or peers. If used effectively it can improve student performance tremendously while raising the self esteem of the child and reducing the work load of the teacher.

Features of Formative Assessment

- Is diagnostic and remedial

- Makes the provision for effective feedback.
- Provides the platform for active involvement of students in their own learning.
- Enables teachers to adjust teaching and take into account the results of assessment.
- Recognizes the profound influence assessment has on the motivation and self-esteem of student, both of which are crucial influences on learning.
- Recognizes the need for students to be able to assess themselves and understand how to improve.
- Builds on student's prior knowledge and experience in designing what is taught.
- Incorporates varied learning styles into deciding how and what to teach.
- Encourages students to understand the criteria that will be used to judge their work.
- Offers an opportunity to students to improve their work after feedback.
- Helps students to support their peers and expect to be supported by them.

Formative Assessment is thus carried out during a course of instruction for providing continuous feedback to both the teachers and the learners for taking decisions regarding appropriate modifications in the transactional procedures and learning activities.

- often means no more than that the assessment is carried out frequently and is planned at the same time as teaching. (Black and William, 1999)
- provides feedback which leads to students recognizing the (learning) gap and closing it……….. it is forward looking……….' (Harlen, 1998)
- ….. includes both feedback and self-monitoring.' (Sadler, 1989)
- …..is used essentially to feedback into the teaching and learning process.' (Tunstall and Gipps, 1996)

Summative Assessment is carried out at the end of a course of learning. It measures or 'sums-up' how much a student has learned from the course. It is usually a graded test, i.e., it is marked according to a scale or set of grades. Assessment that is predominantly of summative nature will not by itself be able to yield a valid measure of the growth and development of the child. It, at best, certifies the level of achievement only at a given point of time. The paper pencil tests are basically a one-time mode of assessment and to exclusively rely on them, to

decide about the development of a child is not only unfair but also unscientific. Over emphasis on examination marks focusing on only scholastic aspects makes children assume that assessment is different from learning, resulting in the 'learn and forget' syndrome. Besides encouraging unhealthy competition, the overemphasis on Summative Assessment system also produces enormous stress and anxiety among the learners.

Features of Summative Assessment

- Assessment of learning

- Generally taken by students at the end of a unit or semester to demonstrate the "sum" of what they have or have not learned.

- Summative assessment methods are the most traditional way of evaluating student work.

Summative Assessment

- Good summative assessments test and other graded evaluations must be demonstrably reliable, valid, and free of bias' (Angelo and Cross, 1993).

- Assessment (that) has increasingly been used to sum up learning…' (Black and William, 1999).

- looks at past achievements… adds procedures or tests to existing work… involves only marking and feedback grades to students… is separated from teaching…. is carried out at intervals when achievement has to be summarized and reported.' (Harlen, 1998)

Scholastic Assessment		
Formative Assessment (Periodic variety of tools) (Flexible Timing)		**Summative Assessment Written-End of term (Practical)**
Tool	**Techniques**	
• Objective type • Short Answer type • Long Answer type • Interview schedule • Checklist • Rating scale • Anecdotal records • Document Analysis • Tests and inventories • Portfolio	• Tests • Assignments • Quizzes • Competitions • Projects • Debates/ Panel Discussion • Elocution • Group discussions • Club activities • Mind maps • Role plays	• Objective type • Short Answer type • Long Answer type • Practical Skills

For assessment in scholastic areas the CBSE-*i* schools will undertake both Formative and Summative Assessment in classes VI to VIII.

A broad distribution of weightage to various types of questions is given below for Summative Assessment which may be adhered. This weightage has been decided keeping in view the essence and spirit of the CBSE-*i* curriculum. The Performance Profile for classes VI-VIII is attached at Annexure I.

Types of questions:

Types of Questions	Weightage to be given
Based on Conceptual Understanding	40%
Inferential type	20%
Higher Mental Ability type	20%
Multidisciplinary	10%
Construct Question based on the Answer provided	10%

Types of Questions	Weightage to be given
Multiple Choice Questions	10-20%
Short Answer Type I	30-40%
Short Answer Type II	20-30%
Long Answer Type	10-40%

Types of questions:

MCQs (Multiple Choice Questions)

Multiple choice items are typically composed of questions that require students to select one correct or best option from those provided. They consist of a stem that "ask the question or sets of the situation for response", followed by a series of one correct and several (generally around three) incorrect options (distractors).

SAQs (Short Answer Questions)

Short answer questions are "constructed- response" or open ended questions that require students to create an answer. Short answer items typically require responses of one word to a few sentences.

SAQs assess unassisted recall of information rather than recognition. A short question has to be worded carefully so as to elicit the desired response.

LAQs (Long Answer Questions)

Questions requiring long answers which include explanation, description expression of opinion, arguments, etc., are LAQs. The length of answer varies from class to class. Similarly weightage of marks will also determine the length of the answer. Students are expected to write with fluency and accuracy. The text type under LAQs could be writing of an article, short essay, report, speech or any other sustained piece of writing.

Implications for the Teaching Community

The on going process of transformation of school education in general and evaluation practices in particular has re-defined the teacher's role. Some of the major implications are as follows:

• Teaching practices can no longer be a mechanical routine. Since formative assessment is an integral part of the classroom teaching, the teacher has to devise ways and means to use the feedback for improving curriculum transaction.

• Teaching the text book will not be the main mode of classroom practices. Value addition in terms of interactive tasks, co-operative assignments and projects and integration of new content will be required to involve all the learners in the teaching-learning process.

• Since formative assessment requires the teacher to devise appropriate tools and procedures that are specific to a unit or lesson taught, it will become imperative for the teacher to constantly add new materials and strategies to his/ her repertoire. It will also mean that the lesson plan becomes dynamic and constantly changing according to the needs of the lesson and the learners.

• The teacher has to become a true knowledge worker, referring to sources, reading new materials, discussing curriculum-related issues with colleagues and experts, writing materials and taking up research.Teaching can no longer be a six or seven hours job. It is a profession and the practitioner has to prepare himself / herself every day not only in the school but also outside the school.

• Recording and reporting will necessarily become more detailed because a number of parameters sometimes ignored or only weakly attempted have to be included effectively. Teachers will be required to devote adequate time on a regular basis for formative assessment and its recording. It also means that teachers should develop tolerance for complexity and ambiguity.

  Please find enclosed a case study for Class VIII Social Science. These are detailed guidelines for teachers to look at and frame appropriate documents accordingly.

Case - Study
Class-VIII : Social Science

Subject : Social Science

Topic : Women, Caste and Reform

Task : Dramatization

Procedure:

1. Students will be divided into groups. They will, in their groups, discuss and prepare a short skit on any of the social ills prevalent in the Indian Society at different periods of time.

2. The social ills may include Sati, Child - Marriage, Female - Infanticide, Denial of Education to Women and Gender Disparity.

3. Each group will prepare a small skit and perform it. Each student will be asked to speak some dialogue.

4. After the presentation, students will have a discussion.

Learning Objectives:

- To enable the learners to gain an insight into the social evils prevalent in India at different periods of time.

- To provide an opportunity to the learners to reflect on social evils and verbalize their feelings.

Skills:

To develop in the students the ability to:

- Write scripts
- Deliver dialogue
- Act
- Work in teams
- Improve writing skills

Assessment

The performance of the groups will be assessed on the basis of content, dialogue-delivery and clarity of concept.

Time:

- Discussion and script writing: Two periods
- Presentation: One period

Follow up:

The presentations could be discussed in the class. Wherever the concept is not clear, teacher could encourage students to give their comments. The teacher could also revisit any part of the lesson that has not been clearly understood by the students.

Key features :

- The main objective is to enable the learners to gain an understanding of the concept of social evils perpetrated against the girl child and the woman in India at different periods of time.

- The task is part of the teaching-learning on the topic of women, caste and reform.

- The task involves students in group interaction and presentation.

- After the task is completed, the teacher gives feedback for improvement. Also, if needed, the lesson may be reviewed.

- Assessment is done on the basis of well-defined criteria.

- The task is done in the classroom as part of the lesson.

- The main purpose is not to measure the knowledge of the learners. The task aims to provide conceptual clarity to the learners through experiential learning.

- It also encourages further learning.

These attributes are at the heart of Formative Assessment. Let us now look at the following questions given in a test:

What are the different social evils prevalent in Indian society at different times? How have they affected girl children and women? Write your answer in about 200 words.

This is a typical question that figures in a summative test or examination. Here the main aim is to measure the extent of knowledge of the learners in the lesson tested. The answers of the learners will be marked or graded on the basis of value points and a marking scheme. The information collected by the teacher may not be used to diagnose the problems faced by learners or for remediation since the test is usually conducted after completing the unit or lesson.

However, if a short quiz or test is conducted on the topic when the lesson is in progress to ascertain the learning gaps for the purpose of providing further help to learners, it will be formative in nature. So, by and large the way in which a tool is used, i.e. for enhancing learning or for ascertaining and measuring the extent of learning, decides whether it is to be used for a formative or a summative purpose.

Overall Framework of Formative and Summative Assessment Scholastic Areas.

Scholastic Part 1

Evaluation of Academic Subjects in Classes VI –VIII.

Type of assessment	Percentage of weightage in academic session	Month (Suggestive only)	Term wise weightage
FIRST TERM			
Formative Assessment -1	10%	April-May	FA 1+2= 20%
Formative Assessment-2	10%	July-August	
Summative Assessment-1	30%	September	SA1= 30%
SECOND TERM			
Formative Assessment-3	10%	October-November	FA 3+4= 20%
Formative Assessment-4	10%	January-February	
Summative Assessment-2	30%	March	SA1= 30%

Total Formative Assessments   = FA 1 + FA 2 + FA 3 + FA 4 = 40%

Summative Assessments   = SA 1 + SA 2 = 60%

The following points have to be noted by teachers and students:

● There are two formative assessments each in the first and second term.

● Each Formative Assessment is again divided into smaller assessments (class assignments, quiz, projects, written tests) which can carry different marks.

● Each formative assessment has a weightage of 10% which can be arrived at by taking an average of all tasks or the best three or four.

● The total weightage of all the four formative assessments is 40%.

Formative Assessment and Classroom Teaching

The formative assessment tasks need to be designed keeping the following principles in mind:

● Formative assessment is an integral part of classroom practices. So they must be related to the syllabus to be transacted.

● The tasks may specify the following:

❖ Unit/Lesson

❖ When to conduct the task

❖ Approximate time required for each task

❖ Objectives of the task

❖ Task specifications

❖ Procedure for conducting the task including preparation, if any

❖ Criteria for assessment

❖ Feedback and follow-up

Teachers, however, have the freedom to make minor modifications in the overall design of the task to suit their requirements.

> The most important aspect to be kept in mind is that these tasks are meant to be integrated with the teaching-learning process, i.e., while teaching a unit on a lesson (and NOT after). Also the follow-up in terms of providing further help to clear doubts, remove problems faced by learners and make modifications in teaching methods and strategies, has to be given utmost importance. Hence FA tasks will figure in the teaching plans developed by teachers.

Procedure for Formative Assessments

❖ The performance of students in each task will be assessed on the basis of assessment criteria to be clearly defined by the teacher.

❖ The total of marks obtained by each student in the formative tasks will be calculated and reduced to 10 marks. For instance, if three tasks of 5 marks each have been given for FA-1 and a student obtains 3, 3 and 2 in these tasks, the total marks obtained by the student will be 8 out of 15. The weightage of 10% will be $(8/15) \times 10 = 5.33 = 5 = $ Grade C (The total will be rounded off to the next whole number if the decimal is 0.5 or more. If less, it will be ignored). Similarly the marks for FA-2, FA-3 and FA-4 will be calculated and a total of 40% weightage for the whole academic session can be calculated.

Task Types Appropriate for Formative Assessment

The Teacher's Manual on CCE has details of the types of assessment tools available to a teacher. It also mentions that all the tools are not appropriate for formative assessment. Here an attempt has been made to clarify what is NOT formative assessment. Since the purposes of formative and summative assessments differ, the tools have to be chosen carefully. However, in general, the following tips will help teachers in making a decision in this regard:

- Formal Paper Pencil tests are not always suitable for formative assessment because schools tend to make use of them more for summative rather than for formative purposes.

- Projects and Assignments that need much work outside the school and class hours may not be ideal for formative assessment. The reasons are obvious.

  - ❖ Without proper monitoring, these tasks may lose their validity and credibility. (Students may just copy or download from the internet. Parents and others may actually do the projects and assignments!)

  - ❖ To be formative, the tasks should involve collaboration, discussion, reflection and improvement.

On account of these reasons, projects and assignments should be very carefully used as tools of formative assessment. However, in the hands of imaginative and resourceful teachers, they may become effective formative assessment tools.

- What can be effectively assessed through formative assessment cannot be assessed through summative assessment. Speaking and listening skills, presentation skills and practical skills and all the co-scholastic areas have to be assessed formatively.

- By combining formative and summative assessments all the aspects of a learner's personality development can be comprehensively assessed.

Precautions that may be taken regarding Projects:

a) Give realistic projects and assignments. It may not be a good idea to give a topic like

Survey of Moghul Architecture, which is too broad.

It may invariably lead to a 'cut and paste' practice.

On the other hand, it may be better to expect students to attempt the following on their own:

- Choose any one example of Moghul Architecture
- Collect information and pictures on the monument
- Write a brief report in about two pages giving the following details:
  - Name of the Monument
  - Period, when was it built
  - Who built it
- The purpose (History of the Monument)
- Salient architectural features

- Its present state

- Your suggestions to preserve the heritage

Record Keeping

It is absolutely essential that teachers maintain a clear record of the formative assessments conducted because they will be verified by officials and peer assessors appointed by CBSE-*i* from time to time. The following points have to be kept in mind while recording FA:

- Individual report book as suggested by CBSE-*i* has to be maintained.

  - A separate consolidated marks register must be maintained by the teacher for his/her own record.

  - As of now, the marks will be converted into grades and only grades will be reflected on the Report Card and Continuous and Comprehensive Evaluation Certificate of School Based Evaluation.

- Schools may devise a suitable format for the marks register. Many schools are computerising the entire process of recording the assessments. While evolving such a programme, care may be taken to ensure that all the relevant particulars are included in the programme.

- Maximum marks, marks obtained and weightage for 10 marks for each of the four formative assessments must be maintained.

- Cumulative total in FA must be calculated and recorded.

- Recorded evidence of student performance and teacher/self/peer assessment has to be collated and maintained so that the queries of parents may be answered based on such evidence. In this context, the importance of Student Portfolio gains significance. It is suggested that every student maintain a portfolio consisting of the best of their written work in each subject. These should include the work submitted as draft as well as the edited and improved versions to demonstrate the progression of learning over a period of time. Teacher will find it convenient to open individual student portfolio folders at the beginning of an academic session, discussing with students the importance of and the procedure for maintaining the Portfolios.

- It is to be noted that the assessment has to be reflected in the Report Book only as grades.

The grades will be on the 9 point grading scale as given below:

91-100	A1
81-90	A2
71-80	B1
61-70	B2
51-60	C1
41-50	C2
33-40	D
below 33	E

- The marks in the consolidated marks register will be calculated to arrive at the weightages for different FAs and SAs, and the equivalent grades will be entered in the Report Book. What it means is that the assessment of each task in FA and each SA test will be carried out in terms of marks which will be entered in the consolidated Marks Register. Grades to be entered in the Report Book once in each term will be calculated accordingly from the consolidated Marks Register.

- Apart from the above records, schools will also maintain a Results Register for each section which could be consolidated for classes at the end of the academic session.

b) It is not enough if we make the project or assignment simple and realistic. In order to ensure that further learning has taken place and that the students are able to link new knowledge with what they have learnt in the class, the teacher could interview each student on the project. The interview, if conducted imaginatively, could be very brief but at the same time give evidence of the student's own research and presentation.

c) Making projects a group activity so that it can be done in the classroom itself is an excellent idea. Groups will decide, with the teacher's help, what projects they will work on, division of the project into smaller units, allotment of smaller units among members, etc. It means that project work should be discussed in the class to make it work.

d) Fixing a time frame and interact with groups to see where they are at different stages, what they are doing and whether they need any help to monitor the progress of work as well as learn to allocate time objectively. This will instill seriousness of purpose, besides motivating the students to take up their work with keen interest.

5. As pointed out earlier, the formative and summative tools are determined by the purpose for which they are used.

a. If the purpose is to formally ascertain at a given point in time what students know and do not know, then it is summative.

b. If the purpose is to informally get information regarding how the course is going, how learning can be improved during the course itself, what are the challenges faced by individual learners and how the teacher should address them, then it is formative.

So it is the purpose of the tools that usually determines whether it is for formative or summative assessment. Having said this, we can still make an attempt to identify assessment tools that are more suitable for formative assessment than for summative assessment. Since summative assessment is formal and is usually a paper-pen test, what cannot be assessed by such means can be assessed only through formative assessment tools.

Suggested Tools for Formative Assessment

Language

- Listening Comprehension
- Reading Comprehension
- Debate/ speech/ Group Discussion/ Role Play /Presentation
- Dramatization/ Dialogue/ Conversation/ Commentary
- MCQs/ Quiz
- Grammar Exercises
- Writing/ Completing a poem, story, script, play, diary entry, etc.
- Web Charts, Concept Mapping
- Visual Representation
- Letter, E-mail, data interpretation, article, bio sketch and dialogue completion

> It is suggested that at least one out of four tasks should be used for assessing conversation skills in the form of listening comprehension or conversation.

Mathematics

- Data handing and analysis
- Group projects
- Problem solving
- Maths Lab Activities
- Quiz / oral questions
- Experiments

- Presentations
- Chart, model making
- Visual Representation
- Simple and interesting assignments
- Mathematical puzzles based on various theorems

Science

- Experiments
- Information gathering and deducing
- Presentations on science concepts/ experiments
- Investigations for stated problems
- MCQs and Science Quiz
- Simple and interesting assignments
- Group assignments and projects
- Model Making
- Science symposium/ seminar
- Preparation of various compounds/salts
- Explanation of different natural phenomenon using scientific principles

Social Science

- Written assignments involving inference, interpretation and evaluation
- Commentaries
- Simple projects (group and individual)
- Presentations (group and individual)
- Quiz and MCQs
- Models and chart
- Debates
- Symposium/ Seminar
- Conducting interviews of historical figures
- Role plays
- Dramatization of historical events

In addition to the tools listed above teachers can devise other informal ways in which formative assessment can be done. For instance observation of student's performance in the class (participation, answering questions, etc.) can also be used effectively for formative assessment. Written tests have not been included in the above list because they tend to become formal and hence are more suitable for summative assessment. Moreover, if written tests are also used for formative purposes, there will be a tendency to use them more often as they are relatively easy to construct and administer. This will lead to an increase in the stress level of students. They are better used for summative assessment. This, however, does not prevent teachers from holding one minute tests, open book tests and concept-based questions expecting written answers during the course of teaching a unit or lesson. The answers have to be analysed and discussed to provide conceptual clarity and address gaps in learning. However, they are all to be attempted in the class with scope for feedback.

Steps in undertaking Formative Assessment

a. Planning

At the beginning of the academic session teachers of the same subject can consult each other and draw out a plan of formative assessment for the entire session.

How many formative tasks will be used for FA-1, FA-2, FA-3 and FA- 4 ?

While deciding the tasks, care should be taken to select a variety so that knowledge and skills are covered comprehensively and there is no scope for monotony to set in. For example, in languages, the different skills like reading, writing, speaking and listening and language areas like literature and grammar have to be covered under formative assessment. The plan could be to distribute tasks over the four formative assignments in such a way that all these aspects are assessed at least twice or thrice in a session. Similarly the task may be chosen in other subjects in such a way that they assess different skills and competencies using a variety of modes of assessment.

b. Classroom Strategies

Since the tasks are to be integrated with classroom instruction, teachers have to embed them in their lesson plans.

Objectives: These specify the learning outcomes for each task and hence help teachers and learners in developing a focus. They are also meant to be kept in mind at the time of assessment.

Procedure: A task may need some preparations on the part of the teacher. These are included under 'Procedure'. The different steps to be followed,

precautions to be taken and suggestions for collecting information are also provided under this heading.

Criteria for Assessment

In order to make the assessment objective and systematic, specific criteria need to be provided for each task along with suggested marks. It is essential that the teachers put up these criteria or read them out to the class before commencing a task. Learners should know on what basis they will be assessed. It will also give them task clarity. The scores obtained by students in each of the tasks conducted must be recorded. The record of assessment should also be maintained. Wherever a written product emerges, it may be made part of the Student Portfolio.

Feedback and Follow Up

This is a crucial stage in formative assessment. The performance of students gives valuable information about their understanding, conceptual clarity, problems faced and gaps in learning. Based on this information, teachers could give feedback and undertake follow up activities for remediation and enrichment. The information will also enable teachers to modify their practices for enhanced effectiveness of learning.

Some Challenges

Teachers may face certain challenges in integrating formative assessment with teaching. This may be due to:

- Large class size
- Scarcity of time
- Constraints imposed by logistics
- Strategy to assess group/ pair tasks

With the help of proper planning these challenges could be overcome. Some suggestions are given below:

Large Class Size

- Choose tasks that involve group work and pair work.
- Tasks that require written answers from the learners could be peer assessed.
- Answers to MCQs and other objective type questions could be marked by students themselves by exchanging their work sheets as the teacher calls out the answers.
- All the students in a class need not be assessed in one period. It means that the tasks may be

distributed among groups of students so that the teacher is able to assess them in different periods. The implication is that in large classrooms all the students need not be assessed in all the tasks. By planning the tasks carefully, all the skills can however be covered by rotating the tasks among groups of students.

- It follows from this that all the students need not be involved in the same task at a time. In order to cater to multiple intelligences, teachers could adopt a flexible approach with regard to giving tasks to students. For instance, students good in written work may be given tasks different from students good at practical work.

- While framing the time table some double periods could be provided in each subject. Tasks involving debates, presentations, group discussions, dramatization, role plays, etc., could be conducted during the double periods.

c. Time Management

Since the number of teaching periods for each subject is pre-determined, teachers may feel that conducting formative assessment tasks within the allotted periods may prove to be difficult. However, it is to be borne in mind that formative assessment is to be built into the teaching-learning process and it only represents a change in the methods to be adopted for curriculum transaction. By reducing explanations and frontal teaching, adequate time could be found for tasks and activities. Some other suggestions are:

- Proper planning will result in efficient time management.

- Complete the preparations for each task well before the class begins so that there is no wastage of time.

- Use self and peer assessment strategically.

- Train learners in the initial part of the term to collaborate with each other and the teacher. Over a period of time they will be able to maintain efficiency and brisk pace.

- It is essential that the scoring sheet with names of students is prepared at the beginning of the academic session as per the annual plan. Columns for FA-1, FA-2, FA-3 and FA- 4 may be provided along with details of the tasks selected for each assessment and the maximum marks so that recording of scores does not take much time.

- Train the students in maintaining their portfolios. A folder may be maintained for every subject in which the best written products could be filled by each student. When students are helped to take responsibility for record keeping, it will ease some burden on the teachers besides leading to better time management.

Assessment Objectives

Assessment framework contains a range of objectives that may be measured at any given point of time for Primary, Middle and Secondary levels. The assessment objectives are clear, concise statements which can be measured at a given point of time. It is very essential to align these assessment objectives with the learning objectives to know how well the students have learnt, what it was intended for them to learn.

- Demonstrate fundamental movement skill;
- Participate and use equipment in a variety of games;
- Develop skills of balancing, stretching and rolling, hopping, running, throwing, swimming, sprinting, dodging and bouncing;
- Develop skills of cooperation and encouragement in team games;
- Develop skills of team work, fair play and strategy;
- Develop ability to run, skip and hop with equipments such as rope, etc.

Music

The students develop the ability to:

- participate in simple singing and rhyming activities
- explore aspects of musical concepts in their singing, playing and moving activities
- create their own rhymes, games, songs and simple composition
- listen to and respond to music

Drama

The students develop the ability to:

- use imagination and the elements of drama in play and dramatic contexts
- dramatize personal experience and learn the skill of using movements, space and object
- respond to dramatic experiences in personal ways

Dance

The students develop the ability to:

- participate in dance activities and demonstrates an awareness of body parts
- acquire a good sense of rhythm and keeps pace with the beat

Broad Assessment Objectives

Specific Objectives

Languages

The students develop the ability to:

- identify and analyse texts in terms of elements and techniques of written language as used in various literary genres

- identify and analyse purposes, structures and elements in case of language texts

- gather information in language from a variety of sources, analyse and evaluate the quality of the information obtained and use it to answer questions

- plan for writing in language by building on prior knowledge, generating words and organising ideas for a particular audience and purpose

Social Science

The students develop the ability to:

- promote comprehension of key concepts in History, Geography and Social and Political Structures

- encourage acquisition of knowledge of the past for an understanding of the present

- acquire a lasting interest in the study of Social Science by bringing in an environment familiar to the students

- appreciate the value of sources, its nature, origin, value and limitations

- acquire skills of analysis, interpretation and evaluation

- correlate events of the past to happenings in the present day and to their own lives

- recognise the interaction of human beings on environment, the natural assets in the form of flora and fauna and develop a disciplined behavior in protecting the natural assets and sustain it for future

Mathematics

The students develop the ability to:

- revisit and consolidate basic concepts and skills learnt at the primary stage

- use algebraic notation and its use in solving problems and generalization

- acquire ability of measurement and data handling, relevance of number systems to various facets of human functions and understand the pattern and relationship between number systems

- acquire Computational Skills of approximation, estimation and measurement and ability to identify patterns which facilitate logical and spatial intelligences

Information and Communications Technology

The students develop the ability to:

- assess the impact of new technologies on society
- use technology productively
- use common software applications
- acquire the ability to access, evaluate and research information
- integrate ICT across disciplines
- carry on projects, assignments and research using tools of ICT

Science

The students develop the ability to:

- learn the principles of science through familiar experiences
- work with hands to design simple technological units and modules
- learn more about the environment and health through activities and surveys
- appreciate the implications of scientific study and its limitations
- use the scientific method and scientific skills to evaluate ideas and make choices/ decisions
- acquire an understanding about the evolving nature of science

Physical Education

The Students develop the ability to:

- demonstrate fundamental movement skill
- perform movement skills, participate and use equipment in a variety of games
- acquire skills of balancing, printing, stretching and rolling
- acquire skills of hopping, running, throwing, swimming, sprinting, dodging and bouncing
- acquire skills of cooperation and encouragement in team games
- acquire skills of teamwork, fair play and strategy
- acquire ability to run, skip and hop with equipments such as rope

Performing Arts

The Students develop the ability to:

- appreciate various forms of drama, its making and performance

- verbalize the appreciation of different kinds of drama

- write about characters, plot and situations taken from various kinds of performance such as live theatre, screen, drama and films

- acquire a good sense of rhythm and keep pace with the beat

- acquire control over movement and explore movement using the elements of dance in response to stimulus to express ideas, feelings or emotions

- respond to and communicate about a dance performance

- experience and describe a dance performance using terminology such as movement costumes, set, physical or sound setting, etc.

Visual Arts

The Student develop the ability to:

- make simple pictures and other kinds of art work

- explore an experiment with the range of media and tools such as water colours, oil paints, crayons, acrylic and computer applications

- appreciate the quality of different styles of painting sculpture or photographs

- communicate in verbal and written form and appreciate about different kinds of art work

Glossary

Logistics for Assessment

Photocopying of worksheets may not be feasible in all the schools. Teachers have to adopt a few strategies to overcome this problem.

Suggestions

- Only elaborate worksheets and those with diagrams and pictures need to be photocopied.

- Wherever possible, the worksheet can be put up on the chalk board.

- If technology is accessible, worksheets could be projected with the help of an LCD projector.

- MCQs and objective type questions could be read out and students instructed to write only the answers on a sheet of paper.
- Instructions for pair work, group work and whole class work could be read out once or twice.
- Share with the Principal and school administration the requirement of photocopies in advance so that the school makes adequate arrangements.
- Always use both the sides of the sheet of paper for photocopying. It may mean that more than one task is photocopied on a single sheet. After the students complete one task the sheets may be collected and redistributed for the next task.
- Whenever possible, worksheets could be shared by two or more students.
- Train the students to observe economy in the use of paper / worksheets.

Strategy to assess group/pair tasks

Initially teachers may find it a little difficult to assess group/ pair tasks because the product is usually from more than one student. Some suggestions are given below to help the teachers in this regard:

- Wherever possible group and pair tasks could be broken down into smaller areas and each member of the group could be assigned an area.
- Where the above is not feasible, the contribution of each student to group work has to be observed and monitored.
- Usually after group discussion a presentation is to be made by each group. Care may be taken to rotate the presentation among all the students so that over a period of time all are given an opportunity to present the group's views.
- Group tasks may be assessed for the entire group/ pair. It means that members of each group may get the same mark/ grade. However, in pair tasks it is easier to assess the performance individually.
- Since formative assessment is informal, group tasks may be assessed on broad parameters such as participation, contribution and effectiveness of each member of the group.
- It is necessary that the teacher monitors group tasks properly to ensure that every student is participating and no student dominates.

This framework lays emphasis on teacher-preparedness, planning and co-ordination. It is suggested that at the time of drawing out an annual plan, the Principal interacts with each subject committee and helps the teachers prepare a plan of action ensuring that assessment is integrated with the teaching-learning process.

It may be necessary to prepare detailed lesson plans for each unit besides the overall plan for the first and second term. While the lesson plan should essentially be an innovative tool evolved by each teacher depending on the concepts to be taught, the needs of the learners and other socio-cultural factors, it is perhaps advisable to include certain broad areas in the lesson plan to make it reflect the integration of continuous and comprehensive evaluation. While these broad areas, along with the format of the lesson plan could be decided by each school, the following components could be included to ensure holistic planning:

- Content/ topic/ lesson
- Concepts/ skills
- Instructional Objective
- Levels - entry, process, integration, exit
- Tools of assessment with specific questions
- Remediation

It is also suggested that the formative tasks may be assessed for ten marks or multiples of ten to facilitate easy calculation of weightage. Similarly, self evaluation by students could be encouraged by integrating ICT and developing student self-assessment tools. While it will provide ample scope for learner autonomy, it will also reduce the burden on the teachers. Finally a word about projects. This document specifies that projects should, as far as possible, be done in the school itself. But certain projects that call for extensive research, work involving hands and using different materials may be difficult to be carried out within school hours. Since the main concern is about the genuineness and credibility of the work submitted for assessment by the students, if adequate care is taken by the teacher in monitoring the project work, students may be allowed to do some part of it outside the schools. By making the projects realistic and simple, teachers can ensure authenticity of the work of students.

ASSESSMENT RUBRICS FOR VARIOUS STYLES OF PROJECT PRESENTATION

1. Rubrics For Poster Making

Criteria for Assessment	A (Excellent)	B (Very Good)	C (Good)	D (Satisfactory)	E (Needs Improvement)
Required Elements	The poster includes all required elements as well as additional information	All required elements are included on the poster without additional information	Some of the required elements are included on the poster	Few required elements were included	Several required elements missing
Graphics - Relevance	All graphics are related to the topic and make it easier to understand	All graphics are related to the topic and most make it easier to understand	Most of the graphics are related to the topic	Some of the graphics are related to the topic	The graphics show no relation to the topic
Content - Accuracy Language	All the facts are accurately displayed on the poster, excellent use of language	Most of the facts are accurately displayed, appropriate use of language	Some accurate facts are displayed, language is largely appropriate	Few accurate facts are displayed, inappropriate and inaccurate use of language	Very few facts are displayed, inaccurate language

Attract-iveness	The poster is exceptionally attractive in terms of design, layout, and neatness	The poster is attractive in terms of design, layout and neatness	The poster is acceptably attractive	The poster is normal in terms of design, layout and neatness	The poster is not well designed

2.   Rubrics for Slide PowerPoint Presentation

Criteria for Assess-ment	A (Excellent)	B (Very Good)	C (Good)	D (Satisfact-ory)	E (Needs Improve-ment)
Title and Body text	Use of consistent formatting for titles and body copy on all slides. Title and body text size clearly readable. Font styles not distracting	Use of consistent formatting for titles and body copy on most slides. Title and body text size clearly readable.	Use of consistent formatting for titles and body copy on some slides. Title and body text size readable.	Use of consistent formatting for titles and body copy on few slides. Title readable but body text size is not clearly readable.	Consistent formatting for titles and body copy not used in most of the slides. Title and body text size not clearly readable. Font styles distracting

Use of colours	Colours are used properly that is dark background /light text or light background /dark text and graphic elements work coordinated into the colour scheme above expectation	Colours are used properly that is dark background /light text or light background /dark text and graphic elements work coordinated into the colour scheme in usual way	Colours are used properly that is dark backgro- und/light text or light backgro- und/dark text and graphic elements work coordin- ated into the black and white scheme	Colours are not used properly that is dark background /dark text or light background /light text and graphic elements work coordinated into the black and white scheme	Colours are not used properly that is dark background /dark text or light background /light text and graphic elements were not coordinated
Sound and Transition	Transition and sounds are used appropria- tely and are not distracting to the content of the presentation	Appropriate transitions are used but the sound used is not appropriate	The speed of transition does not match the slide	Transition and sounds used are distracting to the content of the present- ation	Transition used is inappropria te. Sound not used
Use of language	Presentation free of spelling and grammatical errors, with creative and appropriate	Presentation free of spelling and grammatical errors. Appropriate use of	Present- ation free of spelling and gramma- tical errors.	Some spelling and grammat- ical errors. Language is used approp-	A number of spelling and grammat- ical errors. Inapprop- riate use of

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	use of language and narrative style	language but lack of creativity	Language used not approp-riate	riately.	language, lacks creativity

3. Rubrics for Group Discussion

Criteria for Assess-ment	A (Excellent)	B (Very Good)	C (Good)	D (Satisfact-ory)	E (Needs Improve-ment)
Organization and clarity	Viewpoints and responses are outlined clearly and in order	Completely clear and orderly presentation	Clear and orderly in most parts	Clear in some parts but not overall	Not clear in most of the parts
Working with others	Always listens to, shares with and supports the efforts of others. Keeps the team members working well together	Mostly listens to, shares with and supports the efforts of others	Usually listens to, shares with and supports the efforts of others	Seldom listens to, shares with and supports the efforts of others but is not always a good team member	Rarely listens to, shares with and supports the efforts of others. Rarely a good team member
Contribution	Provides useful ideas while participating in group discussion	Most of the ideas provided are useful	Some of the ideas provided are useful	Few of the ideas provided are useful	Rarely provides useful ideas

Present-ation style	Tone of voice, use of gestures, level of enthusiasm are consistently convincing	Tone of voice, use of gestures, level of enthusiasm are usually convincing	Tone of voice, use of gestures, level of enthu-siasm are sometimes convin-cing	Few of these features are used convin-cingly	These features are rarely used convin-cingly

4. Rubrics for Debate

Criteria for Assess-ment	A (Excellent)	B (Very Good)	C (Good)	D (Satisfact-ory)	E (Needs Improve-ment)
Organiz-ation and clarity	Viewpoints and response outlined are clear, orderly and original	Completely clear and orderly presentation	Clear and orderly in most parts	Clear in some parts but does not have full clarity	Not clear in most of the parts
Use of agrgu-ments	All the Reasons given are relevant	Most of the times argue with good/ relevant points	Gives many reasons in support of the topic	Few relevant reasons are given	Does not argue at all
Use of examples and facts	Gives most relevant supporting examples and facts	Gives examples and facts to support reasons	Tries to find out facts and examples	Some relevant examples/ facts are given	Few or no relevant supporting examples/ facts are given

Use of rebuttal	Arguments made by other teams are responded to and dealt with effectively	Many effective counter arguments are made	Some effective counter arguments are made to rebutt arguments	Few effective counter arguments are made	No effective counter arguments are made
Presentation style	Tone of voice, use of gestures, level of enthusiasm are consistently convincing	Tone of voice, use of gestures, level of enthusiasm are usually convincing	Tone of voice, use of gestures, level of enthu-siasm are sometimes convin-cing	Few of these features are used convince-ingly	Features are not used convince-ingly

5. Rubrics for Role Play

Criteria for Assess-ment	A (Excellent)	B (Very Good)	C (Good)	D (Satisfact-ory)	E (Needs Improve-ment)
Delivery of content	Understands concept. Is able to understand what to deliver and how.	Understands concept. Is able to understand what to deliver. Seems to be confused about how.	Understands concepts but doesn't know how to deliver	Concept is partially understood. Willing to clarify.	Has not understood the concept. Seems disinter-ested.
Present-ation of character	Is in the skin of the character. Can communi-cate	Effectively communicat es feelings, situation and motive.	Can unders-tand the character and commu-	Communica tes feeling, situation and motive satisfact-	Unable to emote.

	character's feelings, situation and motive effectively. Is convincing.		nciate feelings, situations and motive satisfact-orily	orily.	
Imagin-ation and creativity	Use imagination and creativity effectively to make a powerful impact.	Has imagination and creativity and use them for role play to same extend	Has imaginatio n but does not employ it for effective role play	Does not have imagination but lines to deliver	Shows little effort to improve-ement

6.   Rubrics for Research

Criteria for Assess-ment	A (Excellent)	B (Very Good)	C (Good)	D (Satisfact-ory)	E (Needs Improve-ment)
Thesis/ Problem/ Question	Poses a thoughtful, creative question that engages them in challenging or provocative research.	Poses a focused question involving them in challenging research.	Addresses a problem and searches for solutions.	Constructs a question that lends itself to readily available answers.	Relies on teacher-generated questions.
Informa-tion Seeking/ Selecting and Evaluating	Gathers information from a variety of quality-electronic and print	Gathers information from a variety of relevant sources-print and	Gathers informatio n from easily available resources.	Gathers information from a limited range of sources and displays	Gathers information that lacked relevance, quality, depth and

	sources.	electronic.		minimal effort in selecting quality resources.	balance.
Analysis	Carefully analyzes the collected information and draws appropriate and inventive conclusions	Shows a good effort in analyzing the evidence collected	Conclu-sions show inadeq-uate analysis	Conclusions are not adequately analysed or supported.	Conclusions simply involve restating the information
Synthesis	Develops appropriate structures for commun-icating products, incorpora-ting a variety of quality sources	Logically organizes the product and makes good connections among ideas	Organizes the product with few connected ideas	Organizatio n is not upto the mark	Work is not logically or effectively structured
Documen-tation	Documents all sources, including visuals, sounds, and animations.	Documents sources with some care.	Manages to document some sources, few errors noted.	Needs to use greater care in document-ting sources.	Uses plagiarized material.
Product/ Process	Effectively and creatively use appropriate communi-cation tools.	Effectively commun-icates the results of research.	Method of commu-nication shows lapses.	Needs to work on commu-nication more effectively.	Shows little evidence of thoughtful research.

7. Rubrics for Perspective

Criteria for Assess-ment	A (Excellent)	B (Very Good)	C (Good)	D (Satisfact-ory)	E (Needs Improve-ment)
Perception	Has objectivity and focus	Has focus but less objectivity	Has focus but no objectivity	Has less focus and requires more objectivity	Needs to have focus and a lot objectivity
Insight	Has deep insight	Has understand-ding	Has less understanding	Needs to develop understand-ding	Needs to work hard to develop understand-ding
Construc-tive approach	Has constructive approach	Has constructive approach but does not bring it into practice	Has mixed approach	Is vulnerable and is easily influenced	Needs to develop constructive approach

8. Rubrics for SEWA

Criteria for Assess-ment	A (Excellent)	B (Very Good)	C (Good)	D (Satisfact-ory)	E (Needs Improve-ment)
Sensitivity commitment to social issues	Is highly sensitive and committed to social issues	Is sensitive but less committed	Is sensitive but requires commit-ment	Needs to be more sensitive and requires commit-ment	Needs to develop sensitivity towards social issues and is least committed

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Initiative and leadership	Is highly motivated and takes initiative	Is motivated and sometimes takes initiative	Is motivated but requires to take initiative	Requires motivation	Requires a lot of motivation and a lot of initiative
Righteous ness and sense of responsib-ility	Is able to differentiate between right and wrong and act with responsib-ility	Can differentiate between right and wrong but is not sure of his responsib-ility	Requires training in develop-ping righteous attitude and a sense of responsib-ility	Needs to develop an insight into right and wrong and needs pursuation to shoulder responsib-ility	Requires a lot of pursuation to develop righteo-usesss

CBSE-*i*

ANNEXURE - I

SCHOOL LOGO

Performance - Profile

CBSE-i

Classes VI - VIII

Session: 2012-13

Photograph

Class Group Photograph

Mission & Vision

CBSE-i

The CBSE-i has formulated an internationally benchmarked global curriculum. This curriculum caters to individual learning styles in terms of pedagogy and assessment. It will address global needs as well as relate to local issues and local culture. It will carry forward the basic strength of the Indian system of education. It aims to promote critical and creative thinking skills, interpersonal and collaborative skills, information and media skills and effective communicative skills. There is an inbuilt flexibility as it provides a foundation and an extension curriculum in subject areas to cater to the different pace of learners. Through the CBSE-i curriculum, the Board hopes to provide quality which is equitable and accessible.

CBSE-i is …….

a response to the need to create schools which are futuristic

CBSE-i is …….

a way to move to an enquiry based skills approach in which teachers and students engage in collaborative learning

CBSE-i is …….

involved in creating students who raise questions, think, reflect, analyse, interpret, experiment, research and create knowledge

CBSE-i is …….

a set of print and electronic materials which help teachers to innovate and create

SCHOOL LOGO

Performance – Profile

CBSE- i

Classes VI - VIII
Session 2012-13

Photograph not to be attested
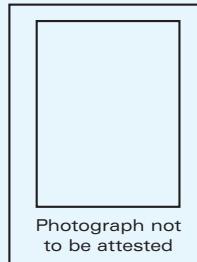
Affiliation No.   _____

Name of School   _____

Complete Address   _____

E-Mail id   _____

Telephone No.   _____

Student Profile:

Name of Student		Class :	
Date of Birth		Admission No.	
Mother's Name			
Father's Name			
Address			

Attendance:	Total working days	Total attendance of the student

Health Status

Height   : _____   Weight   : _____

Blood Group   : _____   Vision   : (L) _____, (R) _____

Teeth   : _____

_____
Signature of Parent

Part I

Scholastic Areas

(To be graded on a 9 point scale)

S. No.	Subjects	Term-I				Term-II				Overall Grade
		FA-1	FA-2	SA-1	(Term-I) FA-1&2 + SA-1	FA-3	FA-4	SA-2	(Term-II) FA-3&4 +SA-2	(Term I+II)
01	Language I									
02	Language II									
03	Mathematics (Core/Elective)									
04	Science									
05	Social Science									
06	Language III									
07*	Information and Communication Technology									
08*	Home Science									
09*	Painting									
10*	Music									
11*	Commerce/ Accountancy									
12*	Addl. Optional Subject									

*Subjects listed from Sr. No. 07 to 12 are prescribed by the CBSE-i for Differently Abled Students

Part II
A : Co-Scholastic Areas
(To be graded on a 5 point scale)

S. No.		Overall Grade	Term I & II
			Descriptive Indicators
1.	Performing Arts*		
2.	Visual Arts**		
3.	Physical Education		

Performing Arts :Music/Drama/Dance
**Visual Arts : Fine Arts/ Pottery/ Sculpture*

B : Attitudes and Values*
(To be graded on a 5 point scale)

S. No.	Attitudes towards	Grade	Term I & II
			Descriptive Indicators
1.1	Teachers		
1.2	School Mates		
1.3	School Programmes		
1.4	Environment		
2	Value System		

* Based on Teachers' Manual on CCE for classes VI-VIII.

Part III
Core Areas
A : Life Skills

S. No.	Life Skills*	Term I & II
		Descriptive Indicators**
1.	Self Awareness	
2.	Empathy	
3.	Critical Thinking	
4.	Creative Thinking	
5.	Decision-Making	
6.	Problem Solving	
7.	Effective Communication	
8.	Interpersonal Relationships	
9.	Dealing with Stress	
10.	Managing Emotions	

* Based on Revised Teachers' Manual on Life Skills

** Based on Descriptors given in Teachers' Manual on CCE (VI-VIII)

B : Perspectives*

S.No.	Comments

C : SEWA (Social Empowerment through Work and Action)*

S.No.	Comments

Time Logged in SEWA _____ hours.

D : Research*

S.No.	Comments

(Not to be graded, only to be commented upon)

* To be commented upon (Comment based on Descriptors given at the end of the Performance Profile).

E : Learner's Sketch

My Goals	
Strengths	
My Interests and Hobbies	
Sports/Games	
Responsibilities Discharged/ Exceptional Achievements	

_____   _____   _____

Signature of Student   Signature of Class Teacher   Signature of Principal

DESCRIPTORS

Debate

Category	5	4	3	2	1
Organization and clarity	Viewpoints and response outlined are clear, orderly and original	Completely clear and orderly presentation	Clear and orderly in most parts	Clear in some parts but does not have full clarity	Not clear in most of the parts
Use of arguments	All the reasons given are relevant	Most of the times argue with good/relevant points	Gives many reasons in support of the topic	Few relevant reasons are given	Does not argue at all
Use of examples and facts	Gives most relevant supporting examples and facts	Gives examples and facts to support reasons	Tries to find out facts and examples	Some relevant examples/ facts are given	Few or no relevant supporting examples/ facts are given
Use of rebuttal	Arguments made by other teams are responded to and dealt with effectively	Many effective counter arguments are made	Some effective counter arguments are made to rebutt arguments	Few effective counter arguments are made	No effective counter arguments are made
Presentation style	Tone of voice, use of gestures, level of enthusiasm are consistently convincing	Tone of voice, use of gestures, level of enthusiasm are usually convincing	Tone of voice, use of gestures, level of enthusiasm are sometimes convincing	Few of these features are used convincingly	Features are not used convincingly

Group Discussion

Category	5	4	3	2	1
Organization and clarity	Viewpoints and responses are outlined clearly and in order	Completely clear and orderly presentation	Clear and orderly in most parts	Clear in some parts but not overall	Not clear in most of the parts
Working with others	Always listens to, shares with and supports the efforts of others. Keeps the team members working well together	Mostly listens to, shares with and supports the efforts of others.	Usually listens to, shares with and supports the efforts of others	Seldom listens to, shares with and supports the efforts of others but is not always a good team member	Rarely listens to, shares with and supports the efforts of others. Rarely a good team member.
Contribution	Provides useful ideas while participating in group discussion	Most of the ideas provided are useful	Some of the ideas provided are useful	Few of the ideas provided are useful	Rarely provides useful ideas
Presentation style	Tone of voice, use of gestures, level of enthusiasm are consistently convincing	Tone of voice, use of gestures, level of enthusiasm are usually convincing	Tone of voice, use of gestures, level of enthusiasm are sometimes convincing	Few of these features are used convincingly	These features are rarely used convincingly

PowerPoint Presentations

Category	5	4	3	2	1
Title and Body text	Use of consistent formatting for titles and body copy on all slides. Title and body text size clearly readable. Font styles not distracting	Use of consistent formatting for titles and body copy on most slides. Title and body text size clearly readable.	Use of consistent formatting for titles and body copy on some slides. Title and body text size readable.	Use of consistent formatting for titles and body copy on few slides. Title readable but body text size is not clearly readable.	Consistent formatting for titles and body copy not used in most of the slides. Title and body text size not clearly readable. Font styles distracting
Use of colours	Colours are used properly that is dark background/light text or light background/dark text and graphic elements work coordinated into the colour scheme above expectation	Colours are used properly that is dark background/light text or light background/dark text and graphic elements work coordinated into the colour scheme in usual way	Colours are used properly that is dark background/light text or light background/dark text and graphic elements work coordinated into the black and white scheme	Colours are not used properly that is dark background/dark text or light background/light text and graphic elements work coordinated into the black and white scheme	Colours are not used properly that is dark background/dark text or light background/light text and graphic elements were not coordinated
Sound and Transition	Transition and sounds are used appropriately and are not distracting to the content of the presentation	Appropriate transitions are used but the sound used is not appropriate	The speed of transition does not match the slide	Transition and sounds used are distracting to the content of the presentation	Transition used is inappropriate. Sound not used
Use of language	Presentation free of spelling and grammatical errors, with creative and appropriate use of language and narrative style	Presentation free of spelling and grammatical errors. Appropriate use of language but lack of creativity	Presentation free of spelling and grammatical errors. Language used not appropriate	Some spelling and grammatical errors. Language is used appropriately.	A number of spelling and grammatical errors. Inappropriate use of language, lacks creativity

Poster Making

Category	5	4	3	2	1
Required Elements	The poster includes all required elements as well as additional information.	All required elements are included on the poster without additional information.	Some of the required elements are included on the poster	Few required elements were included	Several required elements missing
Graphics - Relevance	All graphics are related to the topic and make it easier to understand	All graphics are related to the topic and most make it easier to understand	Most of the graphics are related to the topic	Some of the graphics are related to the topic	The graphics show no relation to the topic
Content - Accuracy Language	All the facts are accurately displayed on the poster, excellent use of language	Most of the facts are accurately displayed, appropriate use of language	Some accurate facts are displayed, language is largely appropriate	Few accurate facts are displayed, inappropriate and inaccurate use of language	Very few facts are displayed, inaccurate language
Attractiveness	The poster is exceptionally attractive in terms of design, layout, and neatness	The poster is attractive in terms of design, layout and neatness	The poster is acceptably attractive	The poster is normal in terms of design, layout and neatness	The poster is not well designed.

Perspectives

Category	5	4	3	2	1
Perception	Has objectivity and focus	Has focus but less objectivity	Has focus but no objectivity	Has less focus and requires more objectivity	Needs to have focus and objectivity
Insight	Has deep insight	Has understanding	Has less understanding	Needs to develop understanding	Needs to work hard to develop understanding
Constructive approach	Has constructive approach	Has constructive approach but does not bring it into practice	Has mixed approach	Is vulnerable and is easily influenced	Needs to develop constructive approach

SEWA (Social Empowerment through Work and Action)

Category	5	4	3	2	1
Sensitivity commitment to social issues	Is highly sensitive and committed to social issues	Is sensitive but less committed	Is sensitive but requires commitment	Needs to be more sensitive and requires commitment	Needs to develop sensitivity towards social issues and is least committed.
Initiative and leadership	Is highly motivated and takes initiative	Is motivated and sometimes takes initiative	Is motivated but requires to take initiative	Requires motivation	Requires a lot of motivation and a lot of initiative
Righteousness and sense of responsibility	Is able to differentiate between right and wrong and act with responsibility	Can differentiate between right and wrong but is not sure of his responsibility	Requires training in developing righteous attitude and a sense of responsibility	Needs to develop an insight into right and wrong and needs pursuation to shoulder responsibility	Requires a lot of pursuation to develop righteousesss.

Research

Category	5	4	3	2	1
Thesis/Problem/Question	Poses a thoughtful, creative question that engages them in challenging or provocative research.	Poses a focused question involving them in challenging research.	Addresses a problem and searches for solutions.	Constructs a question that lends itself to readily available answers.	Relies on teacher-generated questions.
Information Seeking/Selecting and Evaluating	Gathers information from a variety of quality electronic and print sources.	Gathers information from a variety of relevant sources--print and electronic.	Gathers information from easily available resources.	Gathers information from a limited range of sources and displays minimal effort in selecting quality resources.	Gathers information that lacked relevance, quality, depth and balance.
Analysis	Carefully analyzes the collected information and draws appropriate and inventive conclusions.	Shows a good effort in analyzing the evidence collected	Conclusions shows inadequate analysis.	Conclusions are not adequately analysed or supported.	Conclusions simply involves restating the information.
Synthesis	Develops appropriate structures for communicating products, incorporating a variety of quality sources.	Logically organizes the product and makes good connections among ideas	Organizes the product with few connected ideas.	Organization is not up to the mark.	Work is not logically or effectively structured.
Documentation	Documents all sources, including visuals, sounds, and animations.	Documents sources with some care.	Manages to document some sources, few errors noted.	Needs to use greater care in documenting sources.	Uses plagiarized material.
Product/Process	Effectively and creatively uses appropriate communication tools.	Effectively communicates the results of research.	Method of communication shows lapses.	Needs to work on communication more effectively.	Shows little evidence of thoughtful research.

Grading System

SCHOLASTIC-AREAS

MARKS RANGE	GRADE	GRADE POINT
91 – 100	A1	10.0
81 – 90	A2	9.0
71 – 80	B1	8.0
61 – 70	B2	7.0
51 – 60	C1	6.0
41 – 50	C2	5.0
33 – 40	D	4.0
21– 32	E1	
00 – 20	E2	

CO-SCHOLASTIC AREAS

GRADE	GRADE POINT
A	5
B	4
C	3
D	2
E	1

Part-I : Scholastic Areas:-

I.(A) Academic Performance:

i)   Scheme of Studies – A Candidate is required to study:

Language – I : (English); Language II (Indian language / Mother tongue / Local Language/Foreign Language); Language III – (Any Language other than Language I and Language II); Mathematics; Science and Social Science, Information and Communication Technology (ICT).

ii)   Each academic year has been divided into two terms:

First Term (April–September)   :   FA1 (10%) + FA2 (10%) + SA1 (30%) = 50%

Second Term (October–March)   :   FA3 (10%) + FA4 (10%) + SA2 (30%) = 50%

FA   – Formative Assessment (40%)   :

SA   – Summative Assessment (60%)   :

iii)   (a) To qualify in a subject in Part-I(A), candidate must obtain minimum Grade D.

(b) Those candidates who have obtained Grade E1 or E2 in the subjects shall have to improve their performance through maximum of five subsequent attempts to qualify in the subject(s).

Part II(A) : Co-Scholastic Areas:-

1. Performing Arts : Music/Drama/Dance

2. Visual Arts : Fine Arts/Pottery/Sculpture

3. Physical Education.

Part II(B) : Attitudes and values towards : Teachers, School Mates, School Programmes, Environment, Value system.

Part III : Core Areas

(a) Life Skills : Self Awareness, Empathy, Critical Thinking, Creative Thinking, Decision Making, Problem Solving, Effective Communication, Interpersonal Relationships, Dealing with stress, Managing Emotions

(b) Perspectives

(c) SEWA (Social Empowerment through Work and Actions)

(d) Research

(e) Learner's Sketch : My Goal, Strengths, My Interests and Hobbies, Sports/Games, Responsibilities Discharged/Exceptional Achievements

Promotion Policy

1. Overall performance is to be decided on the basis of achievement in the Scholastic as well as in the Co-scholastic areas.

2. Minimum qualifying grade is D in all the five main subjects in Scholastic area. A student who fails to obtain minimum Grade D in one or more of the 5 main subjects will get 5 attempts for improvement.

3. For weightage to Co-scholastic areas, grades are to be converted into grade points according to the given scale.

4. If the grade point range is 33-40, the student gets the benefit of upscaling of grade to next higher grade in two subjects.

5. If the grade point range is 25-32, the student gets the benefit of upscaling of grade to next higher grade in one subject.

6. An asterisk or star beside the grade reflects an upscaled grade.

CBSE-*i*

ANNEXURE - II

Strategies for Inclusive Classrooms

Strategies for Inclusive Classrooms

The CBSE-*i* believes that all students must have access to learning with equal opportunity irrespective of their class, gender, race, ability, disability, language and culture, social or economic conditions. The decisions taken in the classroom should value and include the perspectives, knowledge and culture and language experiences which student brings to the classroom. The school curriculum should advocate and celebrate diversity in terms of culture and other differences. It should include all learners to realize every potential.

Research says that the teachers in an inclusive classroom should have the ability to:

- informally assess the skills a student needs, rather than relying solely on standardized curriculum;

- take advantage of individual interests of students for developing required skills;

- develop alternative assessment;

- make appropriate expectations for each student, regardless of the student's capabilities.

- learn how to value all kinds of skills that students bring to a class, not just the academic skills. In doing this, teachers will convey a message that in their classrooms they value all skills.

If teachers can do this, it allows all students to be included in a class and school.

Also the teachers must be able to:

- recognise and respond to the diversity of students in their classrooms;

- accommodate to students' different learning styles and rates of learning by employing a range of teaching methods, including cooperative group learning, peer tutoring, team teaching and individualized instruction;

- be aware of the rights of students with education support needs;

- locate appropriate material, equipment or specialists; and facilitate to identify and overcome barriers to learn.

- consult with and develop partnerships with parents and other caretakers.

- use appropriate forms and multiple modes of assessment;

- adapt their instruction to the prior knowledge and beliefs of students;

- create an inclusive community that extends beyond the boundaries of the school;

- seek to enhance the self-esteem of all students.

Teaching Strategies

The teacher in an inclusive classroom has to accommodate the different learning styles and rates of learning. She/he has to ensure that educational opportunities are provided to all students. The first step is to ensure that effective inclusive teaching practices are in place. The following are the two major strategies that are commonly used in inclusive classrooms:

(a) Cooperative Learning

(b) Peer Tutoring

(a) Cooperative Learning

While using cooperative learning methods, the class has to be divided into mixed ability groups to achieve a goal. The following factors may have to be taken into consideration while using this strategy:

- Group members may have similar or different goals assigned to them.
- Members accept ideas from others.
- Members help each other to learn.
- Members interact with each other to solve problems.

Techniques of Cooperative Learning

Grouping may follow any pattern. Some are given below:

- Students may be assigned groups. The aim of each group is to study what the teacher has taught and help each group member to achieve the highest level possible.

- Students may start with a partner in a pair and end in a group. Partners or pairs reach an agreement and share this information with other group members or with the whole class.

- Students may form groups. The teacher may provide each group member a piece of information related to a topic. The group members then come together and collate the information for the entire class.

- Students may form groups to research on various topics. This helps to present the topic in detail and all students participate in the teaching-learning process.

Examples of Teaching Strategies

- Observe carefully and plan interventions for differently abled students.
- Audio visual presentations are helpful for all students.
- Adapt curriculum materials when required to suit the needs of different students.
- Use hands-on approach that maximizes the use of all senses and addresses the need to include visual, auditory and kinesthetic learners as well as differently abled children.
- Expose students to real objects and meaningful experiences in natural environments at naturally occurring times of the day.
- Collaborate with experts to teach learning strategies and study skills to students.
- Provide extra time if required to complete assignments.
- Provide small group tutoring or individual tutoring in or outside the class.
- Provide leadership opportunities.
- Expose and provide opportunities to promote appropriate social skills.
- Use a pleasant tone of voice.
- Never make fun of any child.
- Provide opportunities to use language.
- Promote positive interdependence in the class.
- Life Skills Education through interactive opportunities.
- Keep directions brief and clear.
- Give examples and illustrations.
- Have interclass and within class groupings.
- Provide reinforcements and remediation.
- Sign language helps in communicating with children who cannot understand the language of instruction well.
- Let the light fall on your face and not behind you. This would be helpful in lip reading.

Classroom Design Modifications

- Students who are able to lip read or not able to see should be placed in front rows.
- Classroom should be well lit without shadows and glares.
- Make children with disabilities sit with a competent peer.
- Remove sources for excessive noise from the classroom.
- Speak and write on the blackboard simultaneously.

- Put posters and displays in the classroom at eye level of students.
- Provide adequate furniture for meeting the special needs of children.
- Eliminate sharp objects from the wall.
- Assist the visually impaired with good colour schemes.
- Provide flexible group learning areas.
- Have flexible time schedules.
- Personally meet the needs of all students.

(b) Peer Tutoring

A peer is an individual who belongs to a similar social group. In an inclusive classroom peer means a fellow student. Peer tutoring, means students teaching each other on one-to-one basis. So when a student of the same age or class provides instruction to another student of the same age or class the technique is called peer-tutoring.

It is also possible in some situations that an older student may tutor younger students. This is called cross-age tutoring. Sometimes, peer-tutoring may prove to be quite effective and both students gain from the process.

In peer tutoring the tutor should perform four acts, such as:

➢ **Monitoring** means supervision and regulation of the performance of a differently abled learner.

➢ **Reinforcing** means providing appropriate contingencies for approved behaviour. She/he may praise the learner if she/he has completed the work to a required standard.

➢ **Modeling** means the demonstration of a particular activity or behaviour by the peer tutor; and

➢ **Explaining** means exposing the relationships on a topic and providing appropriate examples to clarify doubts.

Curricular Modifications – A few instances

Following are some examples of curricular modifications that will help in addressing the special needs of different children:

1. Multi Level Curriculum Instructions refer to teach a diverse group of learners within a shared activity in which students have individually appropriate learning outcomes within the same curricular area. For example, in a science class while majority of students may be

working on what makes objects float or sink students with special needs may be understanding the concept of sinking and floating and the difference between them.

Curriculum overlapping happens when students have individually appropriate learning outcomes from different curricular areas but work on these in a shared activity. For example, when students are working in groups some may be achieving the learning outcomes for social studies while students with special needs may be working on development of communication skills.

Theatre is the most inclusive subject as it challenges both disabled and non-disabled. The stereotype of success and ability enforced through schools and colleges lead to a scuttling of learning through expression of human face, body and sound, says veteran theatre personality Steve Clorfeine. Source: Disability New and Information Service National Centre for promotion for Employment for Disabled People http://www.dnis.org/

2. **Students with Physical Disabilities** may require adaptations to the physical environment of the school like ramps, proper toilets, etc.

3. **Students with severe visual impairments -** may require adaptations in the equipment and the materials like reading material in Braille.

4. **Students with intellectual challenges** may require modification in the curricular content to provide less complex information and learning of functional and vocational skills.

5. **Students with hearing impairments** may require the teacher to use short sentences, look at the student often while talking and ask peers to help as much as possible.

6. **Teachers/special educators** may explore the following alternatives in relation to content, teaching materials, responses expected from the child and methods of assessment:

- **Modification;** for example, computer responses instead of oral responses;

- **Substitution;** for example, Braille for written materials;

- **Omission;** for example, omitting very complex work for children with intellectual disabilities; and

- **Compensation;** for example, self care skills, vocational skills.

> What a teacher can do for children with disabilities to increase their access to school and learning potential;
>
> 1. Children with disabilities sometimes find it difficult to get to school. Try to organise transportation to school and make school accessible by ramps, and other resources that respond to specific needs.

2. When a child with a disability first comes to your school, talk with the family member who is with the child. Find out what the child's disabilities are and what she or he can do despite the disability. Ask about any problems and difficulties that the child may have.

3. When the child starts school, visit the parents from time to time to discuss with them what they are doing to facilitate the child's learning. Ask about plans for the child's future. Find out how you can best work with the family.

4. Ask if the child needs to take any medicines while in school.

5. If you do not have enough time to give the child all the attention she or he needs, ask the school or community to find a helper for you. The helper could give the children the extra help needed during school hours.

6. Make sure that the children can see and hear you when you teach. Write clearly so that they can read what you are saying. Also, let a child with a disability sit in front of the classroom so, they can see and hear better.

7. Find out if the child and the parents have problems about schooling. Ask if the family thinks that other school children are helpful to the child and whether the child gets on well at school

UNICEF http://www.unicef.org/teachers/protection/access.htm

Relaxation for Disabled Children-CBSE-*i* Guidelines

The facilities extended by the Board to the disabled candidates (Dyslexic, Blind, Spastic and candidate with Visual Impairment) are as under:

- The persons with disabilities (Dyslexic, Blind, Spastic and candidate with Visual Impairment) have the option of studying one compulsory language as against two. Besides one language they can opt for any four of the following subjects - Mathematics, Science and Technology, Social Science, Another Language, Music, Painting, Home Science and Introductory Information Technology.

- Alternate questions in lieu of questions requiring special skills based on visual inputs must be provided in Mathematics and Science for Secondary School Examination (Class X).

- Visually Challenged, Physically Handicapped and Dyslexic students are permitted to use an amanuensis. The amanuensis must be a student of a class lower than the one for which the candidate is taking the examination.

- The visually impaired students may be provided with questions papers with enlarged print.

- Disabled candidates may be allowed an additional one hour (60 minutes) for each paper or flexible timing as the school deems fit may be adopted.

- The Board considers the Physiotherapic exercises as equivalent to Physical and Health Education component of the Board.

- School should whenever possible provide classrooms on the ground floor if there is a student who suffers from pronounced physical disability.

- Exemption from studying third language up to **middle school level** (i.e., Class VIII).

- The Centre Superintendent of the Examination Centre chooses a suitable amanuensis and forwards his/her particulars to the Regional Officer concerned for consideration and approval.

- The services of amanuensis shall be provided free of cost.

- The amanuensis is paid remuneration as prescribed from time to time by the Board.

- The candidate may be permitted to use the services of an amanuensis in all or any of the papers. Services of same amanuensis is taken for all the papers.

- The candidates are permitted to draw the diagrams, etc., themselves, if desired by them. Services of same amanuensis is taken for all the papers.

- Additional time as under is given in each paper;

  For paper of 3 hours duration   60 minutes

  For paper of 2 ½ hours duration   50 minutes

  For paper of 2 hours duration   40 minutes

  For paper of 1 ½ hours duration   30 minutes

- The Centre Superintendent makes the sitting arrangements for the dyslexic, visually impaired, physically challenged and spastic candidates on the ground floor, as far as possible.

- Alternative type questions are provided in lieu of questions having visual inputs for the blind candidates in English Communicative and Social Science for Class X and History, Geography and Economics for Class XII.

- Separate question papers in enlarged print for Mathematics and Science and Technology in Class X are provided.

- The Centre Superintendent(s) are directed to send the answer books of special category students in separate covers.

- To facilitate easy access, a few selected schools are made examination centres for special students.

- Visually impaired candidates have the facility to use computer or a typewriter for writing answers.

- Teachers from schools for visually impaired are appointed as Assistant Superintendent(s) (Invigilators) at the special examination centres. However, precaution is taken to appoint different subject teachers on different days.

- A separate column is provided on the title page of the answer book for indicating the category of differently abled candidates so that these answer books could be segregated for sending them separately to the Regional Office of the Board.

- A differently abled candidate appearing for Class X Summative Assessment Examination has the option to opt for one language instead of two along with any four of the following subjects : Mathematics, Science, Social Science, Another Language, Music, Painting, Home Science and Introductory Information Technology, Commerce (Elements of Business) and Commerce (Elements of Book Keeping and Accountancy)

The Board has also issued advisory to schools for Inclusive Education of children with disabilities. These guidelines are as follows :

- ensure that no child with special needs is denied admission in Mainstream Education

- monitor the enrollment in schools of disabled children

- provide support through assistive devices and the availability of trained teachers

- modify the existing physical infrastructure and teaching methodologies to meet the needs of all children including Children with Special Needs

- ensure that all schools are made disabled friendly by 2020 and all educational institutions including hostels, libraries, laboratories and buildings will have barrier free access for the disabled

- ensure availability of Study material for the disabled and Talking Text Books, Reading Machines and computers with speech software

- ensure an adequate number of sign language interpreters, transcription services and a loop induction system will be introduced for the hearing handicapped students

- revisit classroom organization required for the education of Children with Special Needs

- ensure regular in-service training of teachers in inclusive education at the elementary and secondary level.

The Board has also directed all its schools to provide proper physical facilities like ramps, toilets for wheel chair users and auditory signals in elevators and lifts in accordance with the provisions laid down in PWD Act, 1995 for differently abled students. (Ref. Affiliation Bye Laws)

CBSE

CONTINUOUS AND COMPREHENSIVE EVALUATION

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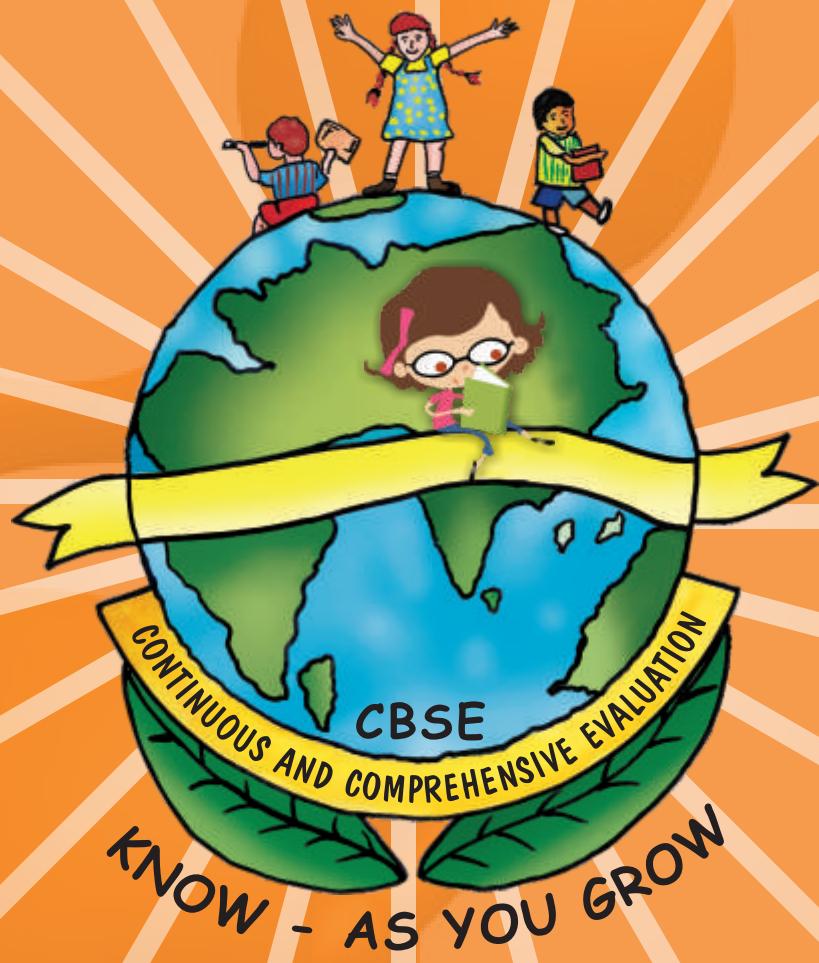
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