



शिक्षा का अधिकार



सर्व शिक्षा अभियान  
सब पढ़ें सब बढ़ें

GOVERNMENT OF GOA

**GOA SARVA SHIKSHA ABHIYAN**

**PORVORIM GOA**

**SYLLABUS  
AND  
LEARNING INDICATORS**

**IN  
ENVIRONMENTAL STUDIES**

**FOR  
CLASSES III, IV & V**

**ADAPTED & APPROVED BY  
STATE COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING  
GOVT OF GOA**

# ENVIRONMENTAL STUDIES (EVS)

## FOR CLASSES III, IV & V

### Part I

## SYLLABUS

### INDEX

SR. NO	CONTENT	PAGE NO.
1	Introduction: Teaching of Environmental Studies	
2	NCF 2005 and Objectives of Environmental Studies	
3	Integrating 'Subjects' or Forging a New Understanding?	
4	Themes for a Child Centered and Integrated Approach	
5	'Plants' and 'Animals as Part of the Theme 'Family and Friends'	
6	Our Bodies, Ourselves: 'Family and Friends' offer Sensitivity and Sensibility	
7	Things we Make and Do	
8	Scaffolding Children's Learning: The Question Format of the Syllabus	
9	What Learning Do We Expect?	
10	What biology do students know?	
11	Class III – Key Concepts/Issues	
12	Class IV – Key Concepts/Issues	
13	Class V – Key Concepts/Issues	

**Part II**  
**LEARNING INDICATORS**  
**INDEX**

<b>SR. NO</b>	<b>CONTENT</b>	<b>PAGE NO.</b>
1	How do children learn EVS?	
2	What do we expect from EVS classroom?	
3	What are the curricular expectations/Learning outcomes of EVS Learning?	
4	What are the Learning Indicators of EVS Learning?	
5	Learning Indicators in EVS for Primary Level	
	1. Observation and Reporting	
	2. Discussion	
	3. Expression	
	4. Explanation	
	5. Classification	
	6. Questioning	
	7. Analysis	
	8. Experimentation - Hands on activities	
	9. Concern for Justice and Equality	
	10.Cooperation	
6	Guidelines for users	

# PREFACE

Ministry of Human Resource and Development (MHRD) has approved the following quality improvement programmes for the State of Goa during the current academic year 2014-15:

1. Early Literacy programme for Std: I and II (Language and Mathematics)
2. EVS, English and Mathematics for Std: III, IV and V
3. Mathematics and Science for Std: VI, VII and VIII

NCERT has developed stage-wise learning indicators based on **The National Curriculum Framework (NCF-2005)** and the syllabi along with **stage-wise curricular expectations**.

The state's focussed programme for classes III to V during the year 2014-15 aims to improve learning in EVS, English and Mathematics. About 870 teachers at this stage will be trained for 3 days with a focus on teaching of EVS. This training would include amongst others an understanding of learning indicators and assessment and evaluation practices based on learning indicators. Minimum one teacher is identified from each school for this programme during the year 2014-15. State has further committed to conduct studies to measure improvement in learning levels of the students (SLAS) .With this Quality Improvement Programme it is expected to show an increase of 10% over the baseline NAS survey conducted by NCERT.

The learning outcomes/curricular expectations are generally treated as assessment standards. However, it is necessary to understand clearly that curricular expectations/learning outcomes needs to be achieved to the best possible level irrespective of the fact that these may or may not be used as testable construct.

The learning indicators given in Part II are based on the approved syllabus given in Part I of this handbook. The Learning Indicators have a broad range across the three classes and they aim at including children's learning at different levels. Guidelines for teachers given at the end of each curricular area will further enhance quality in classroom transactions.

It is hoped that this handbook would provide meaningful insights into the progress and accomplishments of children's overall development from class to class and finally reach up to the expected learning level at each stage of EVS learning.

It is expected that EVS teachers would use this handbook as their personal copy; and also note their best practices, student's achievements, children's joyful and wholehearted participation in learning activity, their quality of learning, development of children's understanding etc in the space provided in this booklet. Sharing of this feedback among other teachers would certainly help create quality improvement. The material in this booklet is useful even to the parents in understanding 'growth' of children's understanding of EVS.

Place: Porvorim

Dated : 03-10-2014

**Minanath T. Upadhye**  
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## PREAMBLE

### Why this document?

India's 12th Five Year Plan (2012-2017) notes that the four main priorities of education policies have been **Access, Equity, Quality and Governance**. The document also continues to prioritize these four areas, but places the greatest emphasis on **improving learning outcomes at all levels**. Various educational surveys, educational data over the years indicated that learning achievements of children in various subjects particularly in **Languages, Maths, EVS, Science and Social Sciences** are not satisfactory. The Joint Review Mission's reports of SSA of last few years also mentioned that the learning levels of children are not up to the desirable level in spite of all the efforts being made by the states such as timely availability of textbooks and other learning materials, training of teachers, regular monitoring, etc. It is a fact that many a times, **teachers complete the textbooks but they do not have clear idea what kind of learning they are expecting from children in respective subjects**. Generally teachers use textbooks that would only provide a broad idea as to how to transact the textual material inside and outside the classroom.

The **NPE 1986 and POA 1992** emphasized that the essential levels of learning should be laid down and children's achievement should periodically be assessed so as to keep track of the progress towards the NPE goal of ensuring that all children achieve essential levels of learning. Steps were indeed initiated to put into practice the NPE formulation. **MLLs** were developed class-wise and subject-wise for primary stage in 1992 in the form of competencies. However, over time MLLs appear to have faded away from the educational discourse because the target of educational achievement became the MLLs and not the formation of experimental / critical minds. The development of **class-wise competencies** made this exercise more product and rubric-oriented, rather than focusing on overall development of children.

**The National Curriculum Framework (NCF-2005)** and the syllabi developed as a follow up for various curricular areas at each level (class) consciously do not provide class-wise learning outcomes/ curricular expectations but talk about **stage-wise curricular expectations**. The learning outcomes or curricular expectations are generally treated as assessment standards. It is therefore necessary to develop clarity that curricular expectations/learning outcomes are achieved to the best possible way whether these may or may not be used as testable construct.

Broadly, curricular expectations define what each child should to know, able to do and the disposition that should be acquired over a period of time. Curricular expectations are not to be measured class-wise but need to be achieved by the **end of a particular stage** as these are long term targets of the Curriculum i.e. abilities, attitudes, values, etc. **Learning Indicators along with the pedagogical processes will help achieve these curricular expectations.**

The **learning indicators** have been developed for each class i.e. at the end of each class from class I to class VIII. The 'learning indicators' need to lay down the **'essential levels of learning'** as postulated by the NPE;

The Learning Indicators help in a number of ways by:

- Understanding learning as a process
- Focusing and understanding children's learning on a continuum of learning
- Respond positively to diversity and helping all children to participate fully and achieve well.
- Providing a reference point for parents, children and others to understand the learning of every child in a simple way
- Providing a framework for monitoring, learning and reporting progress about the child

The present exercise is aimed to clarify some misconceptions or confusions related to these areas. With the implementation of CCE, teachers are using **CCE as a pedagogic tool**. They are expected to regularly assess children's progress as per their pace of learning and provide feedback. Research is consistent across countries, content area and age groups- show that using assessment for learning improves all student achievement more than external tests or educational reforms. **CCE also provides opportunities to teachers to use it as an assessment tool so that children's knowledge, understanding, various skills, attitudes, values, etc could be developed over a period of time.**

Children construct their knowledge and have different learning styles. Thus learning process needs to be seen as a continuum. As we all know in teaching-learning paradigm whatever we plan (inputs) for expected learning of a child, must be translated and reflected in the child's behaviour. However, the path Teaching learning strategies have to be planned according to the needs of the children. **For children with disabilities**, sign language, audible books, tactile maps and the likes are required. The teacher will have to determine the needs as she/ he interacts with the child, **while drawing her plan from curricular expectation to transaction and from transaction to attainment**. Without identifying learning indicators it is even more difficult for a teacher or a system to move further or improve learning levels. So there is a need to develop well defined learning indicators to meet the curricular expectations.

Teachers cannot think in isolation to achieve these curricular expectations. **Pedagogical interventions** that are required to achieve these expectations have also been given for each curricular area. These pedagogical processes provide examples which would help the teachers and other users to understand the extent and the nature of learning on the part of the children related to each curricular area.

The present exercise would also encourage the States to lay down learning indicators and learning outcomes through a joint effort of the Centre and States. The States have the full liberty to adopt/adapt these indicators/ outcomes as per their needs. This proposal is made in view of the fact that an important objective of planning in our country has been removal of disparities in achieving the objectives of educational and pedagogic planning.

All children up to the elementary stage irrespective of their abilities/disabilities, social-economic ethnic background or gender, have right to education. **Our school education needs to support our children to develop their knowledge, understanding, range of skills and dispositions to act in the future life as productive citizen**. Children have variations in their abilities, dispositions and personal social qualities. Some children have special needs i.e. physical, communication, sensory and/or emotional needs that affect their learning. Some disadvantages may influence their learning such as gender discrimination at home, development delay, limited experiences in early years. Providing appropriate and enriched experiences and modifying the teaching learning strategies help meet the identified learning needs of our children. **Inclusive approach** not only addresses the diverse needs of children but also provides opportunities to learn from each other. School programmes/activities should coordinate with the community services so as to meet the social, emotional, physical and learning needs of all children including those with special needs.

#### **What does the document include?**

NCERT has developed class-wise learning indicators. These have been developed in all the subject areas namely English, Hindi, Urdu, Mathematics, EVS, Science, Social Sciences and Arts Education. Children learn in a spiral way and not in a linear way; therefore the learning indicators have a broad range across the classes and stages and aim to include children learning at different levels. The document follows the nature and its approach to each curricular area as envisaged in NCF-2005. It also provides **guidelines for users** given at the end of each curricular area. Some of the guidelines are common but subject specific guidelines have also been provided. This document would provide useful and meaningful insights into the progress and accomplishments of children at various stages of their overall development and finally reach up to the expected learning level at each stage. This would serve as a useful document to parents and to the system at large about the quality of learning and development of children during the elementary stage of school education.

# Part I

## SYLLABUS

### ENVIRONMENTAL STUDIES (EVS)

#### FOR CLASSES III, IV & V

#### **Introduction: Teaching of Environmental Studies**

The National Curriculum Committee had recommended in the 1975 policy document “The Curriculum for the Ten-year School: A Framework”, that a single subject ‘Environmental Studies’ be taught at the primary stage. It had proposed that in the first two years (Class I-II) Environmental Studies will look at both the natural and the social environment, while in Classes III-V there would be separate portions for social studies and general science termed as EVS Part I and Part II. The National Policy on Education 1986 and the National Curriculum Framework (NCF) 1988 also posited the same approach for the teaching of Environmental Studies at the primary stage. Contemporary research on how children learn to make sense of the world around them and how pedagogy in primary school can enable them to develop scientific abilities and understanding in consonance with social and environmental concerns has further supported this integrated structure. The NCF 2000 had recommended that Environmental Studies be taught as an integrated course for the entire primary stage, instead of in two distinct parts devoted to science and social studies in Classes III-V. The present NCF 2005 has called for the continuation and further strengthening of this integrated approach for Environmental Studies during the primary years.

#### **NCF 2005 and Objectives of Environmental Studies**

The present syllabus is designed to forge an integrated perspective for the primary stage of schooling that draws upon insights from Sciences, Social Sciences and Environmental Education. The National Curriculum Framework 2005 indicates some of the objectives of teaching science and Social Sciences at the primary stage as follows:

- to train children to locate and comprehend relationships between the natural, social and cultural environment;
- to develop an understanding based on observation and illustration, drawn from lived experiences and physical, biological, social and cultural aspects of life, rather than abstractions;
- to create cognitive capacity and resourcefulness to make the child curious about social phenomena, starting with the family and moving on to wider spaces;
- to nurture the curiosity and creativity of the child particularly in relation to the natural environment (including artifacts and people);
- to develop an awareness about environmental issues;
- to engage the child in exploratory and hands-on activities to acquire basic cognitive and psychomotor skills through observation, classification, inference, etc.;

- to emphasize design and fabrication, estimation and measurement as a prelude to the development of technological and quantitative skills at later stages;
- to be able to critically address gender concerns and issues of marginalization and oppression with values of equality and justice, and respect for human dignity and rights.

## **Integrating ‘Subjects’ or Forging a New Understanding?**

What do we understand by General Science and Social Sciences? When we think of these ‘subjects’ in school we clearly have in mind some body of knowledge and also typical ways of acquiring that knowledge that we associate with each of them. These school subjects have evolved through their own complicated histories and are today quite different from the way sciences or social sciences are practiced in the real world of specialized disciplines, such as physics, zoology, chemistry, molecular biology, history, sociology, geography, economics, political science, etc. So what happens when groups of specialists sit down to discuss what should be taught at the primary level? They naturally tend to think of ‘topics’ that have traditionally served as the bases of their own different disciplines. Thus biologists (if we can use that term to somehow bring together botanists and zoologists!) would naturally propose a study of plants, animals or the human body, whereas physicists would think of sound, light, force and work, while chemists would propose studying forms of matter, properties of substances, etc. Add to this the different disciplines under the rubric of Social Sciences and we soon end up with a confounding platter of topics, which are not necessarily ‘integratable’, and are neither close to the way the child relates to her world. Most primary school curricula working on an integrated approach therefore do not proceed with lists of ‘topics’ from different ‘subjects’ but instead propose ‘themes’ that allow for a connected and inter-related understanding to develop. This requires moving beyond traditional boundaries of disciplines and looking at priorities in a shared way. This approach has been followed for the present syllabus. Several themes were discussed to see what possibilities each of them offers, to bring together insights from different disciplines, in an interconnected manner that is basically child centered. For each theme a web of possible connections was drawn up, of concepts and skills, to explore how that may be developed over the primary years. Specialists from several different disciplines of sciences, social sciences, pedagogy, gender studies, child development, curriculum studies, etc. discussed the possibilities of the proposed themes, pointed out the gaps, and debated on the priorities for a child centered approach. It is clear that there is no single format that can offer a uniquely satisfactory elaboration of ideas for primary school and this syllabus too makes no such claim.

This is not a prescriptive but instead a suggestive format, which indicates the key themes and sub-themes along with their possible connections. It consciously begins with *key questions* rather than key concepts, which can trigger the child’s thinking in new directions and provide scaffolding to her learning process. This format is meant to help textbook writers, teachers and parents to appreciate the immense possibilities and the depth of children’s understanding. It also indicates how adults can stimulate and actively support children’s learning, rather than restrict or throttle it, as often happens when children are forced to memorise information they just cannot understand.



## Themes for a Child Centered and Integrated Approach

This syllabus web has been developed within a child centered perspective of themes that provide a common interface of issues in social studies, sciences and environmental education. The syllabus for Classes III-V is woven around six common themes given below; the predominant theme on 'Family and Friends' encompasses four sub-themes:

1. Family and Friends:
  - 1.1 Relationships;
  - 1.2 Work and Play;
  - 1.3 Animals;
  - 1.4 Plants
2. Food;
3. Shelter;
4. Water;
5. Travel;
6. Things We Make and Do

The syllabus web moves outward over the three years; it gradually extends the child's understanding of her world, beginning from the immediate 'self' to include her family, the neighbourhood, the locality and also the country. Thus by the time the child reaches Class V, she is able to see her 'self' in the larger context – as part of a community, the country and also, more tacitly, as located in this world. Indeed, in some flights of fancy the syllabus even goads the young child to ride on a spacecraft and leap beyond the earth, into outer space, that may yet not be comprehensible but is certainly fascinating for her.

Thus, for instance, the theme on '**Food**' begins in Class III with '**cooking**', '**eating in the family**', about what we eat and what others eat, what animals eat, etc. It then moves on in Class IV to how food is grown, what different plants they may have seen, how food reaches us, etc. In Class V children discuss who grows it, the hardships farmers may face, while staying grounded to the reality of our own pangs of hunger or the plight of people who do not get food. In addition, '**when food gets spoilt**' explores spoilage and preservation of food, while changes in food habits and the crops grown are analyzed through the experiences of elders/grandparents. Finally '**our mouth - tastes and even digests food**' sees how the saliva makes food taste sweet on chewing, while '**food for plants?**' also introduces the idea of some curious insect eating plants.

The theme on '**Travel**' was developed to help the child on this journey of ideas, of expanding social and physical spaces, into newer and unfamiliar terrains of often mind-boggling and no less fascinating diversity. In Class III the theme encourages children to look at their own journeys, if any, and to see how older people in their family may have traveled in earlier times, as they also hear of accounts of how people travel today in a desert, through forests, in the hills, or in big cities. Moreover, it also suggests a story as a 'resource', to bring into the classroom the experiences of a child of a migrating family and the problems she faces in the process of her schooling. Such narratives suggested as 'resources' are meant to provide creative opportunities of bringing in experiences of other children/people, who may be very different, but whom children can relate to. This can be done through stories, posters, plays, films, and other media. In Class V the theme 'Travel' takes children through the '**rough and tough**' terrain of the Himalayas with, perhaps, the story of

Bachhendri Pal, who hoists the national flag after a trying expedition, while they can also be encouraged to design a flag for their own school.

This theme also takes them on a **'ride on a spacecraft'** into space, from where for the first time they see the aerial view of the earth, and being no less than a Rakesh Sharma or a Kalpana Chawla, each child is asked to give an interview to the Prime Minister of India about what they see from there!. The exercise of looking at aerial views is developed through different views of school, where different perspectives get introduced. It is linked to the concept of mapping, which they begin in Class III through a basic two-dimensional representation of their classroom, and by the time they reach Class V they can read and draw simple aerial views of their locality or city.

## **'Plants' and 'Animals' as Part of the Theme 'Family and Friends'**

'Plants' and 'Animals' have consciously been included under the theme of **'Family and Friends'** to highlight how humans share a close relationship with them and to also provide a holistic and integrated scientific and social perspective of studying them. Traditionally 'plants' or animals' are presented as autonomous categories, seen purely from the perspective of science. Here an attempt is made to locate them in a social and cultural context, and also to see how the lives and livelihoods of some communities, such as the gujjars, musahars or 'pattal'-makers, are closely connected with specific animals or plants. Moreover, in the universe of young children narratives of animals and plants play a significant role, and they can relate well even to the animated characters perceived as 'family and friends'. It is a challenge to transcend conventional boundaries of scientific disciplines to try and relook at the notions of, say, 'plants', 'animals', 'food', or 'our body' from a child's perspective. In fact, some scientific categories are seen to be too formal and counter-intuitive, and perhaps even 'reductionist', for the child to understand. Conventionally biologists divide living things broadly

into two categories 'plants' and 'animals'. The idea of 'plants' is considered simple enough to be presented in primary school along with 'parts of a plant', 'functions of the parts of the plant', etc. But why should this way of looking at a plant be considered more 'natural' or even desirable for a child? In fact, extensive research across the world has shown that young children find it too abstract to make a distinction between living and non-living, or to divide the living world between plants and animals. Despite considerable exposure to science teaching in several countries, children as old as 13-15 years have consistently believed that a tree is different from a plant, contradicting the conventional categories of biologists'. Children also systematically differentiate between plants and vegetables ('a carrot and cabbage are not plants'), or even between plants and weeds ('grass is not a plant'). Moreover, a majority of children do not naturally think of seeds as parts of a plant. This has led some primary school curricula to postpone these conventional categories and first allow space to children to explore their own intuitive ideas, in order to achieve a better understanding later of how science tends to classify them differently.

Taking cognizance of the way children think 'plants' are first introduced through the theme on **'Food'** – through what plants children eat, and also through the idea that we may eat the leaves, or the stem, or seeds of different plants. In fact, this comes after a discussion on questions related to 'Which of the following is food? – red ants, birds' nest, goats' milk, etc. This is to sensitize them to the idea that what some of us take to be 'food' may not be so for others; that food is a deeply

cultural notion. As discussed above, to allow for a more connected approach 'plants' is a sub-theme under the umbrella of 'Family and Friends'. Thus in Class III children look at the different '**plants around us**', at possible changes over time from when their parents were young, and also what things around them are made of plants. They are expected to talk to their parents and other elders around them, so that these discussions can act as scaffolding to their learning. This is also indicated in the activity column of the syllabus. Children in Class III also observe the shapes, colours, aroma, etc to see the diversity of '**leaves in our lives**', to talk of how plant leaves may be used to eat on, the times of the year when lots of leaves fall to the ground, which may be used to make compost, and also paint different leaf motifs they see on their pots, animals, clothes, walls, etc. In Class IV they look at '**flowers**' and flower sellers, and discuss '**whom trees belong to?**' while in Class V they move on to '**forests and forest people**', the notion of parks or sanctuaries, and also '**plants that have come from far**'. In this way they are enabled to construct a more holistically connected understanding, from a scientific, social, cultural and environmental perspective, that is enriched with an aesthetic and caring appreciation of plants around them.

**Our Bodies, Ourselves: 'Family and Friends' offer Sensitivity and Sensibility** Similar to the case of 'plants' discussed above, traditionally 'our body' is also treated in a purely scientific and socially distanced manner, with units such as 'our senses', 'parts/organs of the body' and 'respiration', 'digestion', etc. However, the theme '**Family and Friends**', specially through its two sub-themes

**1.1 Relationships** and **1.2 Work and Play**, allows children to look at their own body as part of their 'self' in a more contextual and connected manner. In Class III in the sub-theme on **Relationships**, they discuss their relatives, who live with them and those who have moved away, to get a basic idea of relationships and changing households. They reflect on whom they admire among their relatives and for what qualities or skills, and describe on which occasions or festivals they meet most of them. The unit '**our bodies – old and young**' helps them place their own body in relation to those of their family members, and asks them to notice differences that may occur with age. More significantly, the rubric of the family provides a sense of intimacy and empathy, to help develop sensitivity towards people having different abilities/disabilities. For instance, they look at how some of their older family members may have difficulty in hearing or seeing, and then go on to discuss how they themselves or their friends may cope with such challenges.

In Class IV, the same sub-theme 'Relationships' has a unit on '**your mother as a child**' to make children find out about who were her relatives with whom she lived then. They also think about their body in relation to their mother's; how a baby rat or kitten is related to its mother, and through a possible narrative, about children who may have been adopted/looked after by foster parents, say, after a cyclone. By '**Feeling around with eyes shut**' they explore their senses of touch, smell, etc. - not in isolation of the people or animals they care for - but by trying to identify all those living with them only by touching, hearing or smelling them. They continue the exploration of feeling what is smooth/rough, hot/cold, wet/dry, sticky/slippery, etc. and are asked to think if there are some things (or people) they are not allowed to touch. This unit also attempts to make them sensitive to the fact that while touch can mean both a caress and a painful slap, the caress too can be a 'good' touch or a 'bad' touch.

In Class V, the unit **'Whom do I look like?'** helps them identify family resemblances, to look for any similarities in the face, voice, height, etc., and also to note particular traits such as **'who laughs the loudest?'**. It goes on to how by **'feeling to read'** on a Braille sheet, someone like Helen Keller could manage to overcome tremendous challenges, as described through accounts of her autobiography.

'Family and Friends' has another **sub-theme 1.2 'Work and Play'** through which they explore different patterns of activity when people are working and 'not-working' in their family and neighbourhood. This helps them to sensitively look at stereotyped gender roles, and to compare their own daily routine with that of a working child. It also allows them to analyze the games they play, to see how traditional games or toys have changed since the time their grandparents were young. In Class V this sub-theme looks at **'team games - your heroes'** and also martial arts or wrestlers and how they are trained. An exploration of our bodies and the process of respiration naturally falls into this context, and in **'blow hot blow cold'** they compare how much faster they breathe after a run. They also see how much they can expand their chest, how they blow on a glass to make it cloudy, and blow to warm their cold hands and also to cool something hot. As suggested this unit could make use of the beautiful story by Dr. Zakir Hussain, **"Usee Se Thanda Usee Se Garam"** as a resource. The unit **'clean work, dirty work'** sensitizes them to the dignity of labour and how different people's work provides essential services to society, possibly through a narrative/story based on Gandhi's work.

## Things we Make and Do

The area of **Things we Make and Do** is visualised as an important component as well as a common thread inherent in the process of understanding all the other themes. We humans make things not only to meet our needs but also to express ourselves in a variety of ways and to transcend our limitations. We also comprehend better when we do things ourselves. Often when a young child gets a toy for a gift, she has fun dismantling and later re-assembling it in a completely novel way as much as enjoying it as it is. When she is given a new book she is eager to add 'her pictures' into it as much as appreciating the book. Formal education as well as all that goes into 'being a good child' however discourages these acts. The theme of Things we Make and Do therefore is an opportunity to recharge the variety of energies/components that make learning more fulfilling, and where cognition is not an end but a process enriched by experience, failure, observation, success, etc. There is also a need to give our rich living traditions of art and craft, of 'making and doing things', their rightful place in our curricula.

Another aspect related with this theme is to understand the significance of design and technology in relation to science and society. Technology is not merely applied science; it has an independent existence and in many cases predates developments in science. Moreover, most of the things we make and do also depend on raw materials and interventions that impact the earth and life on earth.

This theme will also help address the issue of dignity of physical labour. A young child loves sweeping, wanting to help the mother in the household chores, loves fiddling with any electrical appliance within her reach. However, she soon begins to ascribe value to these things that she once

enjoyed doing. Sweeping becomes dirty, and to be done by servants or women in the house, fiddling with implements becomes an area reserved for men and boys. In short work becomes a way to segregate people, to judge them, to ascribe it to a particular gender, class or caste. Mahatma Gandhi's vision and plan of 'Basic Education' had the potential to overcome these fractures. The present syllabus takes a small step in that direction, while encompassing contemporary concerns relating to environmental education, social relations with a vision for sustainable development and appropriate technologies

It needs to be emphasised that the syllabus has consciously included key questions that openly address issues of inequality or difference and encourage children to think critically. Whether it is about social discrimination in school or in getting water, about physically challenged people, or working children, all these issues are part of the reality of children, especially those who are disadvantaged and therefore more vulnerable to be pushed out of school. The objectives clearly stress the need to enable children to articulate and critically reflect on these lived experiences, however unpleasant, and not promote a culture of evasion or silence in school. This calls for a specially sensitive approach in textbooks as well as in the teaching learning process in classrooms, and teachers will need to review how they can do justice to these questions.

## **Scaffolding Children's Learning: The Question Format of the Syllabus**

Since the 1970s the philosophy of primary education in different countries, including ours, has been influenced by the Chinese saying "I do, I understand". This lays emphasis on the principle of 'learning by doing', which suggests that learners actively construct their understanding while directly interacting with their environment. However, this model of learning looks at each learner as a solitary individual – it is the "I" who is trying to understand, struggling to develop each concept. This approach is associated with the 'cognitive constructivist psychology' of Piaget, and implies that teachers can only provide a stimulating environment for children to develop. This also suggests that children need to be nurtured individually like delicate plants, as they develop naturally through successive stages of intellectual development. However, in the last few decades it has been increasingly seen that children do not learn alone, through interaction with the environment, but learn more through talking and discussing with other people, both adults and other children. This psychological approach known as 'social constructivism' has been influenced by the work of Vygotsky and Bruner, who showed that adult support is crucial to children's thinking. With an appropriate question or suggestion the child's understanding can be extended far beyond the point which she could have reached alone. In fact, it has been shown that through the 'scaffolding' provided by such questions, discussions, and adult support, the child can be helped to cross what is called 'the zone of proximal development' to leap to the next level of understanding.

The present syllabus is framed within this social constructivist perspective of learning. It is hoped that children will be supported to construct knowledge far beyond their individual abilities through appropriate questions and interventions, including discussions with adults, in school and also at home, as also among themselves. *Instead of listing key concepts the syllabus begins by suggesting some key questions, framed in a language appropriate to stimulate the thinking of a child*

*that age*. These are not meant to be questions of the textbook but are suggestive of the nature of scaffolding to be provided to help children think in certain directions. This is especially important to help children articulate their own ideas, for instance, in the case of what they understand by the term ‘plants’ or ‘animals’. Textbooks written in different contexts and regions will be different and indeed must reflect their own specific concerns. However, such questions are important for textbook writers to know how to guide children to observe, compare, predict or analyse certain phenomena or processes. For instance, in the theme on Food, there is a question “Who provides us the Mid-day Meal?” This is a leading question to encourage children to begin thinking about the agencies and institutions who provide certain services, beyond the concrete observation of the particular person. Thus as they begin to think about the post office or the school or hospital as institutions, it will help them in developing the abstract concept about the notion of governance or ‘government’, which they normally encounter later usually in the form of statements or information that they are totally unable to comprehend. Thus when appropriate connections and linkages are made in the child’s mind about her own immediate experiences she is enabled to understand more abstract or sophisticated concepts and arguments later.

The matrix of each theme contains leading questions and key concepts and also suggested resources and activities. As the name indicates, these are purely suggestive for teachers and textbook writers, to give an idea of how the particular theme can be dealt with. It is clear that different textbooks based on this syllabus structure can turn out to be very diverse in terms of the elaboration of the themes. Just as every structure must have its own foundations and its own stability, similarly each child ultimately needs to construct her *own* understanding, articulation, knowledge and skills. We do know that children are not blank slates or empty vessels to be filled by ‘information’ about carefully listed key concepts, and that they cannot learn by passively listening to adults, however expressive they may be. This is the basic problem of our traditional system which relies on giving ‘information’, justified on whatever grounds, but without caring to know about the possible zone of the child’s development. Indeed there is no getting away from this: If children have to understand an idea they have to construct knowledge for themselves, which can happen when they get the right cues to connect new understanding with what they already possess. This syllabus identifies those cues that will help children connect with their varied knowledge systems. Our children do indeed know and can learn a lot; it is our responsibility to help them do it better.

## **What Learning Do We Expect?**

How can Environmental Studies help *all* our children, all those who struggle to go to school, and even all those who still cannot do so; those for whom the main purpose in life is going to school, as well as those who aspire for a school that can support life, with meaning and dignity? This document gives a suggestive matrix of themes and sub-themes through the three years of Classes III-V. It is up to the teachers and textbook writers to translate this into books, materials and classroom activities, to shape an enabling *learning environment* for each child, wherever she may be located. Even in the earlier years children do learn about their environment, though there is no separate subject in school. It is expected that in Classes I-II the two subjects of Language and Mathematics will incorporate some themes for the development of concepts and skills in areas broadly related to EVS.

This syllabus format consciously does not spell out any outcomes for each theme. For each thematic area related key concepts, skills and activities have been clearly indicated at appropriate places. However, schools must ensure that these activities or discussions will be conducted because only then can it be ensured that learning will happen. For instance, at several places the activities indicate that children need to conduct specific observations. We know that even young children's senses are sharp and they are able to detect small differences between fairly similar objects, though not always the similarities. However, the purpose of conducting 'observation' activities in EVS is usually not to collect random similarities or differences, but to *seek information from the object to extend children's ideas and understanding*. For instance, to look specifically at the shapes of leaves, the edges, the patterns of lines in it, etc. to know more about them. Thus *specific purposes will need to be spelt out when activities are designed*. Similarly, young children ask many questions which help in their development, but which are not all deep, and which do not allow them to understand things at that stage. However, *EVS classrooms will need to provide opportunities to children to be able to progressively ask higher order questions* that require different levels of reasoning and investigation, by planned activities and exercises to get them to phrase their questions, to answer, discuss and investigate them. These are basic to the learning process in EVS and yet, unfortunately, most classrooms are not designed to ensure this. How then can we expect all children to learn? What then does it mean to specify any outcomes at this point?

We reiterate the purpose in drafting this syllabus through the following example:

## **What biology do students know?**

Janabai lives in a small hamlet in the Sahyadri hills. She helps her parents in their seasonal work of rice and 'tuar' farming. She sometimes accompanies her brother in taking the goats to graze. She has helped bring up her younger sister. Nowadays she walks 8 km everyday to attend the nearest secondary school.

She maintains intimate links with her natural environment. She has used different plants as sources of food, medicines, fuel wood, dyes, and building materials; she has observed parts of different plants used for household purposes, religious rituals and in celebrating festivals. She recognises minute differences between trees, and notices seasonal changes based on shape, size, distribution of leaves and flowers, smells and textures. She can identify about a hundred different types of plants around her, many times more than her biology teacher can – the same teacher who believes Janabai is a poor student; that "These students don't understand science ... they come from a deprived background!"

Can we help Janabai translate her rich understanding into formal concepts of biology? Can we convince her that school science is not about some abstract world coded in long texts and difficult language: it is about the farm she works on, the animals she knows and takes care of, the woods that she walks through everyday? (*National Curriculum Framework 2005, p. 45*)

**CLASS III**  
**ENVIRONMENTAL STUDIES**

Questions	Key Concepts / Issues	Suggested Resources	Suggested Activities
<p><b>1. Family and Friends</b> <b>1.1 RELATIONSHIPS</b> <b><i>My family</i></b> Who all live with you at home? How are they related to each other? Do you have relatives who do not live with you? Have they always been there? How many children did your grand parents have? Who do you think will be your new relatives in future?</p> <p><b><i>My family and me</i></b> Do you look like anybody in your family? Have you learnt anything from anybody in your family? Whom do you admire most among all your relatives? Who is the most caring and patient person? When do you meet members of your family who do not live with you?</p> <p><b><i>Whom do I look like?</i></b> Do some of your relatives look similar? Which features are similar – eyes, ears, the voice or height? Are there any two people in</p>	<p>Concept of a family; diversity in family types; Family as a support system, Ideas about relationships; Simple family tree (three generations).</p> <p>Family influences – physical characteristics, values and habits, appreciating qualities and skills of family members; family as a support system.</p> <p>Concept of similarity between relations, hereditary features.</p>	<p>Child’s daily life experience; Family members.</p> <p>Family members, local knowledge, story/poems on different festivals.</p> <p>Family photographs; Narrations by elders about family members when they were young.</p>	<p>Observation, enquiry about family relations from adults, discussion.</p> <p>Observation, exploring from elders about extended family, narrating stories / singing poems related to festivals, writing about any festival, drawing.</p> <p>Discussion About stories / films / jokes involving twins</p>



<p>your family who look exactly alike?</p> <p><b>Old and the physically challenged</b></p> <p>Do you know of people who are hard of hearing? Are many of them old? Do you have any friends who cannot hear/see well? Is there any way in which you may have helped them? Are there any sounds you like but others/elders do not?</p>	<p>Sensitivity to the old and physically challenged; Introduction to the sense of hearing and sight; sensitization to the fact that the body ages, also that some children may not hear /see at all or may be partially affected. Basic idea about Braille.</p>	<p><i>“Meri bahen sun nahin sakti”</i> a book by Bharat Vigyan Samiti or any other material on differently abled children.</p>	<p>Reading and discussion; Making different kinds of sounds and expressing likes and dislikes about them.; blindfold act, visiting any local institution that deals with the blind or any other institution.</p>
<p><b>1.2 PLANTS</b></p> <p><b>Plants around us</b></p> <p>How many different kinds of plants do you see around you? What are the differences you notice? What things around you are made of plants? Is there a plant in your area that was not there when your grandparents were young? Do you know of some plants which do not grow around you, say things that we eat and not grown around you?</p>	<p>Exploring children’s ideas about a ‘plant’. Plant diversity; size, where they grow, shape, colour, aroma, etc.; dependence on plants for everyday life. Introduction of new plants/crops and changes observed by elders over time. Plants and the climate / environment.</p>	<p>Child’s daily life experience, observation, information from grandparents/ elders, a sample/picture of a plant which is unusual in the local surroundings.</p>	<p>Observation of different plants around, compare and classification based on simple characters; Discussion about things made of plants, pencil prints of barks, leaf prints.</p>
<p><b>Leaves in our lives</b></p> <p>What different kinds of leaves do you see? Do you use plant leaves to eat on? In what other ways are leaves used?</p>	<p>Leaf diversity – colour, shape, texture, aroma, etc. Seasonal shedding of leaves; compost from</p>	<p>Child’s daily life experience, observation, a story on a compost pit.</p>	<p>Observation, collection of different leaves, smelling different plant leaves, discussion, visit to a nearby compost pit,</p>

<p>Is there some time of the year when lots of leaves fall to the ground? Are they burnt? Have you seen a compost pit? What leaf motifs do you find on clothes, pots, walls, animals, etc.? Do you decorate your house with leaves on some occasions?</p>	<p>leaves. Leaf designs/motifs on different objects.</p>		<p>decorating the classroom with leaf motifs. Applying <i>mehndi</i> on palms in different designs.</p>
<p><b>1.3 ANIMALS</b> <b><i>Animals: small and big</i></b> Which are the smallest and the biggest animals you have seen? Which have you only heard about? Which animals have tails? How many legs?</p>	<p>Exploring children's ideas of an 'animal'.</p>	<p>Child's daily life experience, observation, stories/poems on animals (NBT).</p>	<p>Observation of diversity of animals around you, listing, Discussion about what they eat, where they live relative size of animals they have seen, pictures in books, animals heard about. Drawing pictures of favourite animals.</p>
<p><b><i>Some creepy crawlies – and flyers too</i></b> What different kinds of small crawling animals do you know? Where and from what does each of them hide? Which insects can crawl and also fly? Which ones bite us? Can flies make us ill? Why does a spider make a web?</p>	<p>Exploring children's ideas of crawling animals, flyers and insects.</p>	<p>Child's daily life experience, observation, stories/poems on insects, flyers and crawling animals (NBT).</p>	<p>Observation, of ants, flies, spiders, crickets, cockroaches, earthworms, lizards and other animals. Discussion about them, where they live, what they eat, insect bites (wasp) etc. Drawing some of them.</p>
<p><b><i>Birds</i></b> Which are the birds you see around your area? Do they like some trees more than others? What</p>	<p>Exploring children's ideas of birds-their living places, eating habits, common</p>	<p>Child's daily life experience, observation, stories/poems on birds (NBT)</p>	<p>Drawings of birds; mimicking different neck movements and sounds of birds,</p>

<p>do they eat? Can you recognize birds by their feathers? What are the different sounds they make? Are they saying something to each other? Are there some birds that come from other places? Do you feed any birds or place water for them?</p> <p><b>1.4 WORK AND PLAY</b> <b>Work around me</b></p> <p>What are the different kinds of work done around me? What work does my mother/ father/ brother/ sister etc. do? What work do I do? What work do others do? When I am not working what do I do? When my father/ mother is not working what do they do?</p> <p><b>Working children</b></p> <p>What kind of work was done by children when your grandparents were young? Has that changed today? Who are the children you know who work and go to school/ who work and cannot go to school?</p>	<p>features like feathers and sounds produced by them. Feeding birds.</p> <p>Different occupations, idea of working time and leisure time; work inside and outside homes – gender, age, caste, economic, etc. aspects.</p> <p>Sensitize children to other children who work at home and outside - not as a result of family neglect but more as a systemic cause. Important that all children go to school. A sense of how child labour existed in other countries before all children began to go to good common schools.</p>	<p>Poem 'Home work' by Shyam Bahadur Namra <i>Case study:</i> time chart of the daily routine of a child who does a lot of housework.</p> <p>Excerpt from story by Charles Dickens. Narrative describing a poor child's/child laborers experience in a common school in another country.</p>	<p>collecting feathers.</p> <p>Draw a daily time-chart for your father, mother and yourself, discussion.</p> <p>Reading and listening to the story/excerpts. Discussion and narratives about children making firecrackers at Shivkashi., child workers at Dhabas and auto workshops.</p>
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<p><b>Games we play</b> What games do I play? Did my grandparents play the same games? Are these indoor / outdoor?</p>	<p>Leisure; games in school and outside, past and present; for some play is work</p>	<p>Traditional and local games; folk toys</p>	<p>Listing, classifying indoor and outdoor games.</p>
<p><b>2. Food</b> <b>Foods from plants and animals</b> Which of these is food – red ants, bird’s nests, snakes, bananas, goat’s milk, etc.? What plants do you eat - what parts of the plant? What food do we take from animals?</p>	<p>Appreciation of cultural diversity in food; basic ideas about various plant used as food; food from animals.</p>	<p>Regional narratives and stories about ‘unusual’ foods mentioned.</p>	<p>Listing and discussing about food we do or do not eat; tabulating food we take from different plants and animals. Observing and drawing different parts of plants eaten.</p>
<p><b>Cooking</b> What do you eat that is not cooked? What is eaten only when cooked? How do you cook food? What do you cook it on? What are the different kinds of vessels used for cooking? What are they made of? Is water used in all forms of cooking? Which food is cooked without using water? How?</p>	<p>Food may be eaten raw or cooked, steamed, boiled, baked, fried etc.; Different fuels, types of stoves; Types of vessels used in cooking, different shapes (regional/traditional), different materials, etc.</p>	<p>Songs/poems on food or lack of food; local knowledge about what is edible; photographs.</p>	<p>Listing raw and cooked food; discussion on cooking methods/materials, etc; survey to find out the types of fuels/vessels used; drawing various utensils; historical time line tracing what in the kitchen has changed and roughly when.</p>
<p><b>Eating in the family</b> Do all members of the family eat the same food in your family? Who eats more? Who eats last in your family? Who buys the food and what is bought from the</p>	<p>Different eating practices in the family. Amount of food varying with gender, age, physical activity, etc. Cooking and gender/caste</p>	<p>Everyday experience, local knowledge. Poems / illustrations on gender stereotyping.</p>	<p>Observation and asking adults, discussion. Listing of food items bought from the market/grown at home.</p>

<p>market? Who cooks the food in your family? What do babies have for food? When do babies start eating and what do they eat other than milk?</p>	<p>roles in the family; Food for the baby, significance of milk.</p>		
<p><b>What animals eat</b> Do animals eat the same things? What do different animals eat? Do you feed the animals around you - what? What do they take from your house even when not fed?</p>	<p>Food of domestic and wild animals; care of domestic animals.</p>	<p>Stories, cartoons and films.</p>	<p>Observing and listing different animals and their feeding habits;; Discussing food given to animals.; observing animals being fed, keeping food out and observing animals come and feed.</p>
<p><b>3. Shelter</b> <b>Houses and houses</b> Have you seen - a house on stilts, a tent, a flat on the tenth floor, a house on wheels or a house on a boat? Do you know anyone living in such houses? Why do people use such houses?</p>	<p>Some unusual houses, a narrative and a discussion about why such houses are built. Different types of houses. Need for shelter, need for living together</p>	<p>Pictures of different types of houses; easily available materials for model making.</p>	<p>Discussion; observation; Drawing, model making and art work. Creative writing about imagined experiences.</p>
<p><b>Decorating and cleaning our shelter</b> How do you decorate your shelter? Do you draw designs on your walls/floor or decorate with leaves / flowers / other objects? How do you keep your house clean? Do you also help in cleaning? Who mops and sweeps it? Where do you throw the</p>	<p>My house, Houses/ shelters are decorated in different ways in different cultures; Need for shelter to provide protection from heat, cold, rain and problems faced. Need to share housework. Garbage</p>	<p>Illustrations of designs/ motifs used for decoration of the house.</p>	<p>Draw a picture of your house. Draw the various kinds of designs/motifs used to decorate walls/ floors of houses.</p>

<p>garbage? Do you have any problems living in your house during rains, summer or winter? Have you seen houses with sloping roofs? Why are they made sloping?</p>	<p>disposal.</p>		
<p><b><i>My family and other animals</i></b> Who all live with you? Which animals live with you - which are the biggest and the smallest animals living in your house? From where do they get their food? Where in your house do these animals live? Which of them are seen only at night?</p>	<p>Family members; pets and other animals, insects, rodents, etc. Food for the pets and other animals. Some are seen only at night.</p>	<p>Daily life experiences. Cartoons.</p>	<p>Discussion and sharing of experiences and knowledge. Drawings of insects, rodents; pets and other domestic animals.</p>
<p><b><i>Mapping my neighbourhood</i></b> How big is your school? What kind of a building is it? Can you draw a picture of your school and your classroom? Do you know your way around your neighborhood? Can we explain to someone how to reach the post office or the bus stand from our house?</p>	<p>Neighbourhood, mapping and representation in two dimensions. Directions.</p>	<p>Survey of different parts of the school, survey of the neighbourhood</p>	<p>Estimating distances, marking location of places and drawing / mapping from different perspectives, like from the top, from the front etc, Draw a map of the route from our house to the nearest shop.</p>
<p><b>4. Water</b> <b><i>Water for my family</i></b> What are the main sources of water in your locality? Who fetches the water and from how far? Do all the people in your locality use the</p>	<p>Local sources of water; uses of water; gender roles; distance estimates; social discrimination; clean water for drinking</p>	<p>Child's daily life experience, local knowledge</p>	<p>Listing the sources of water, Exploring by asking questions from elders or people around, Discussion.</p>

<p>same source of water? Are some people not allowed to take water from where you take it? From where do you get water? Does it look clean enough for drinking?</p>			
<p><b>Do animals and plants need water?</b> What happens if plants and animals do not get water – how do you see that a plant or animal is thirsty? Do all animals/plants need the same amount of water? Which plants/animals need the least?</p>	<p>Water for plants and animals.</p>	<p>Library resource-brief information about the camel, cactus along with their pictures.</p>	<p>Reading, Discussion; Comparison of a well watered and a wilting plant.</p>
<p><b>Water shortage</b> When is it difficult to get water? Are there some people in your area who always face water shortage? What would happen if we had no water? Have you seen water being wasted – how? How can we avoid it? Do you reuse water?</p>	<p>Water scarcity, wastage and recycling, water harvesting.</p>	<p>Newspaper clippings about water shortage/ water being wasted.</p>	<p>Poster making/ writing activity in groups with a message of saving water</p>
<p><b>Water in our lives</b> Which of your daily activities use water? Do you and others you know wash your hands and feet before you enter the house? Why do you think this is done? Can you describe the scene of a rainy day –</p>	<p>Use of water in different activities; cultural expressions about water / rain/ rivers; observations related to rain and the response of plants and animals.</p>	<p>Library resources, observations related to daily life. Songs about water / river / rain?</p>	<p>Enacting different activities that utilise water / a rainy day, listing the activities in which water is used, singing rain / river / water songs / poems together in the class.</p>

<p>with details about birds, animals, plants and yourself?</p> <p><b>Storing water</b></p> <p>How do you store water in your home? Do you collect rainwater - how? How much water do you store every day? About how much do you use for drinking or bathing? In what kinds of containers do you store water for drinking/washing/or for animals? What are the containers made of? If the water is at the same level in a narrow and a broad container does it mean they contain the same amount of water?</p>	<p>Measurement of volume in terms of non-standard units such as buckets, pots, etc. Estimates of quantities used for different domestic activities; safe handling of water. Containers made of different shapes and materials to store water for different purposes; Conceptual development of conservation of volume.</p>	<p>Child's daily life experience, bottles of different shapes/sizes/materials; <i>Panchtantra</i> story.</p>	<p>Drawings of different containers. Measurement activities; demonstration to help the understanding of conservation of volume. Touching different containers and discussing about their material.</p>
<p><b>5. Travel</b></p> <p><b>Going places</b></p> <p>Has your family traveled together to another place? Where and what for? How did you go? How long did it take? How far did your grandparents (or other elderly persons) travel when they were young? How did people travel in those times? How do people travel today in the desert, hilly areas, on sea, etc.</p>	<p>Need for travel, travel within the locality and beyond; travel to different social spaces – forest, village, city, etc.; travel for migration, sight-seeing, family occasions.</p>	<p>Story of a journey along the river, mountain, etc.</p>	<p>Reading and Discussion, Drawing a village / sea/ forest /mountain scene.</p>



<p><b>Ways to travel</b></p> <p>How do we go to school? How do we travel to other places? How many different ways have we travelled? How many different ways of travel do we know of? Have you been to a railway station? What all do you see there? Who are the people who work at the station and on the train? How did people travel in the past?</p>	<p>Different modes of transport; short distance, long distance, newer ways of traveling. Different kinds of workers associated with railways/station.</p>	<p>Pictures of modes of transport;</p>	<p>Collect pictures of different modes of transport; classify them into different types of transport; enact a train journey/railway station, Observations of activities at the station like loading, weighing, washing trains, signaling, selling tea, level crossing, etc</p>
<p><b>Talking without Speaking</b></p> <p>If I cannot speak, how do I tell people what I want to say?</p>	<p>Communication without speaking, Use of sign language, dance mudra's.</p>	<p>Sign language, dance mudra's.</p>	<p>Playing dumb charades, enacting situations without speaking, learning sign language, practicing mudra's.</p>
<p><b>Mailing a letter</b></p> <p>What happens when I post a letter? How does it reach my friend? Who are the people who help to do this? Are there any other ways of sending a message? How was a letter sent in the past?</p>	<p>Letter as a means of communication, work and people associated with the post office; different means of communication, changes with time.</p>	<p>Local post office, different samples of letters- inland, post card, greeting card, etc. Discussion with workers at the post office.</p>	<p>Trip to local post office, Observing sorting, stamping, weighing etc.</p>
<p><b>6. Things we Make and Do.</b></p> <p><b>Pottery</b></p> <p>What kinds of pots do we see around us? What containers are used to store grain? What kinds of containers did people make long, long back with rings of clay- when</p>	<p>To meet basic needs human beings make things; need natural resources, creativity; have changed the way we live. An idea of the earliest pots</p>	<p>Narratives and illustrations of pots and containers made in early times – with rings of clay (e.g., Social Studies book by Eklavya).</p>	<p>Making pots of clay; also with rings; with different types of clay; drying in the sun; talking to potters or brick makers to find out how these are burnt/ baked</p>

<p>they did not have a potter's wheel? Can you make such pots and dry them in the sun – how long do you think these will last? How does the potter bake them?</p> <p><b>Textiles</b></p> <p>In how many different ways can you wear a long cloth that is not stitched? How many kinds of <i>sarees</i> or <i>lungis</i> have you seen worn by people from different parts of the country? How many different colours do we know of – how many new ones can we create? What are fast colours and what problems do we face when colours run? How do we make our own vegetable block prints and tie and dye?</p>	<p>made for storage of grain – when there was no potter's wheel. The experience of making such pots with clay; drying and the need to bake them for greater strength.</p> <p>Diversity in types of clothing we wear; even with unstitched clothing. Colours and design are used in textiles; scope for creativity; vegetable dyes.</p>	<p>The idea of different styles of dress; traditional unstitched clothing and different styles of draping it.</p> <p>Some idea of mixing colours to make new ones; fast colours and colours that run; tie and dye; block printing and making our own blocks with vegetables. Samples of blocks, dyes.</p>	<p>in furnaces.</p> <p>Making different ornaments etc. with clay.</p> <p>Activity to wear/drape a dupatta or long cloth in different styles to emulate what different people do and also to create their own designs.</p> <p>Play with colours and colour mixing; Using dyes to dye cloth; making blocks with potato or ladies fingers for printing on paper.</p>
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## CLASS IV ENVIRONMENTAL STUDIES

Questions	Key Concepts / Issues	Suggested Resources	Suggested Activities
<p><b>1. Family and Friends</b> <b>1.1 RELATIONSHIPS</b> <b><i>Your mother as a child</i></b> When your mother was your age who were the relatives she lived with?</p> <p><b><i>Where do babies come from?</i></b> Have you seen a newborn baby - where did she come from? Where does the puppy/ kitten/ calf/chick come from? Do you know of people who are looking after/have adopted a child?</p> <p><b><i>My extended family</i></b> Are there things you learn from your family members? What? Do you do anything different from other members of your family? Do all your family members live with you all the time? When do you meet members of your family who do not live with you? What festivals do you celebrate together?</p>	<p>Change with time in people residing together. Family tree today.</p> <p>From the mother's body; mother-child relationship; Foster parents and Adoption</p> <p>Family as a microcosm; (Family values – gender, earning capacity, decision making, caste, religion perceptions etc.); changes in family value system – lead to changes in society; Festivals and family gatherings</p>	<p>Discussion with mother, grandparents and other relatives.</p> <p><i>Kya tum meri amma ho?</i> (NBT story)</p> <p>Family members, family photographs,</p>	<p>Asking questions from mother about her childhood.</p> <p>Story telling and discussion.</p> <p>Discussion on family values, habits within family; discussion on family occasions.</p>

<p><b>Feeling around with eyes shut</b></p> <p>With your eyes and ears closed can you identify the people/animals living with you merely by touching/smelling? By touching can you tell if anything is cold/hot, wet/ dry, smooth / rough, sticky / slippery, soft / hard? Are there some things which you are not allowed to touch? Do you feel uncomfortable when some people touch you?</p> <p><b>1. 2 Work and play</b></p> <p><b>Fun and fights at play!</b></p> <p>Do you play the same games at school that you play at home? What things do you use to play with? Does the school provide these? Do you fight while you play? How do you decide the rules for the games? Does anyone stop you from playing? Who and why? Do you play with every child (boys and girls) in your neighbourhood? Are you stopped from playing with certain children?</p>	<p>Sensitivity to people who are differently abled; Senses of smell and touch;, emotional response to a caress /slap; ‘good’ and ‘bad’ touch.</p> <p>Different games at home and school. Play as a way of social negotiation; rules of each game; fights and the need to negotiate – ideas of fair play. Restrictions on play; playmates from children of different gender or class/caste backgrounds.</p>	<p>Child’s daily life experience, observation; narratives related to smell and touch; materials for games and activities.</p> <p>Tom Sawyer – story ‘whitewashing the fence’ or any other story on ‘work’ and ‘play’.</p>	<p>Guessing game: Group activity where children touch different things with their eyes shut.</p> <p>Discussing and planning rules for local games and playing together in groups; writing them down.</p>
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<p><b>How they learnt their skills</b></p> <p>In your area do you know the people who do the following: make pots /stitch clothes/ make shoes/cure people/ build bridges / embroider / fly planes/ repair cycles / drive buses, etc? How well do you know them – their names, family etc? What tools do they use for their work? Where did they learn how to do these things?</p> <p><b>Fun at the fair/Circus</b></p> <p>Have you been to a fair or a circus? Which is the item you liked best – was it a ride, a game, something you saw / ate / bought? When do you fly kites? How do you make them fly?</p> <p><b>1.3 Animals</b></p> <p><b>Animals and their friends</b></p> <p>Which animals like to move around in groups? Which animals are shy and do not come near you? Have you seen animals playing with or riding on different animals?</p>	<p>Different occupations in the local region/ country; who does what work. Gender and work.</p> <p>Ways of recreation.</p> <p>Herds; group behaviour; animal-human interaction.</p>	<p>Local crafts persons and other professionals</p> <p>Circus/fair, a poem on <i>Mela</i>.</p> <p>Observation, child’s daily life experience, story on animals moving in groups, visuals</p>	<p>Drawing people with their professional tools; talking to some people and describe how they learnt their skills</p> <p>Kite-making and kiteflying activity in groups, making tops, writing a paragraph about an experience in a fair/circus.</p>
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<p><b>Who is attracted to flowers?</b></p> <p>Why do bees/butterflies come to flowers? How do people collect the honey from bee hives?</p> <p><b>Long ears or short?</b></p> <p>Which animals have ears? Which animals have hair on their body?</p>	<p>Honey from flowers; bee hive and basic idea of honey collection.</p> <p>Some animals have external ears. They also have hair.</p>	<p>Film; description Illustrated narratives/discussion with beekeepers on the process of honey collection.</p> <p>Child's observation, information/description and illustrations about animals.</p>	<p>Observation of flowers and the insects that visit them, drawing the flowers, insects;; discussion on colour, fragrance.</p> <p>Listing and classification of animals with and without ears; with and without hair; drawing them; feeling them.</p>
<p><b>1.4 PLANTS</b></p> <p><b>Roots of plants</b></p> <p>Do all plants need water to grow? Which part of the plant absorbs water from the soil? When you tug at grass, why does it not come out easily? Why do plants/trees not get uprooted when there is a strong wind? Which roots are eaten by people during famine when nothing else grows?</p>	<p>Plants need water; roots absorb water and hold it to the ground.</p> <p>Roots eaten normally by people like carrots, radish, sweet potato, and during famine.</p> <p>Aerial roots of some Plants</p>	<p>Child's observation, information about the roots eaten by people; pictures/specimes of roots.</p>	<p>Observation, collection, drawing of roots of different types, Observing trees/plants whose roots are affected by activities like construction/paving/plastering.</p> <p>Observation and discussion about swinging on <i>papal / bargad</i> aerial roots.</p>
<p><b>Flowers</b></p> <p>Which plants around us have flowers? Do they come only at some times of the year? How is the bud different from the flower? What are the different kinds of flowers we have seen – shapes, colours, petals, aroma, etc? What do we use flowers</p>	<p>Flowering plants; seasons; observation of buds blossoming into flowers; different shapes, colours, petals, aroma, etc.</p> <p>Flowers used in everyday life, festivals, etc. Floral motifs and designs on clothes, animals, pots,</p>	<p>Child's, observation, stories/ poems about flowers, a visit to a garden. Talking to flower sellers, gardeners, etc.</p>	<p>Drawing flower motifs for clothes, animals, pots, etc. Making floral decorations;</p> <p>Observing the flowers and buds, noting similarities and differences; observing /smelling and feeling different flowers.</p>

<p>for? Do you eat any flower? Have you seen flowers motif painted on clothes, walls, floors, pots, animals? Who sells flowers in our area? Where do these come from? How are flowers sold - for how much?</p>	<p>walls, etc. Knowing the local flower seller; some idea of the local unit of measurement (by cubit, fixed garland, each stem, etc.) and cost.</p>	<p>Local knowledge, information about domestic and wild plants (NBT books).</p>	<p>Listing of some common trees in the neighbourhood; discussion about ownership of trees; fruits that are not eaten by us.</p>
<p><b>Whom do trees belong to?</b> Which plants/trees around you are looked after by people – by whom? Which are not? Whom do they belong to? Who eats the fruit of trees that grow wild?</p>	<p>Neighbourhood and its plants; wild and domestic plants; Fruits eaten by people living in forests. Cutting trees.</p>	<p>Local knowledge, information about domestic and wild plants (NBT books).</p>	<p>Listing of some common trees in the neighbourhood; discussion about ownership of trees; fruits that are not eaten by us.</p>
<p><b>2. Food</b> <b>How we get our food</b> How does food reach us? Who grows it? How you seen vegetables and fruits growing? How you seen plants of rice/ wheat/ dal etc? What are the spices do you know? Which spices can we recognize by smelling or tasting.</p>	<p>From field to <i>mandi</i> - from market to house; grown by farmers; fruit trees, vegetables, cereals, pulses, oil seeds; Spices</p>	<p>Discussion with a vegetable seller/retailer in the <i>mandi</i>, / truck driver who transports food items.</p>	<p>Listing plants children know that provide them food; bringing samples; common spices, observing and drawing samples, recognizing them by smell and taste.</p>
<p><b>Special occasions</b> When do many people eat together? What food is eaten? Who cooks it? How is it served? Does you get a mid day meal meal in school? - What items? Who provides the mid day meal?</p>	<p>Community eating; Mid day meal (where applicable). Cultural diversity in foods associated with special occasions like festivals, family celebrations/ ceremonies etc. Boarding school.</p>	<p>Visit to a langar / such occasions, talking to people who cook on such occasions. Narratives about hostel food / pantry car of train.</p>	<p>Discussion on occasions at which there is community eating; Listing of the different foods eaten at different occasions; drawing and descriptions of the large utensil used on such occasions</p>

<p><b>Tongue and Teeth</b> How do we taste different foods? How do teeth help us to eat – are all teeth similar? Which teeth have I dropped and how are the new ones different?</p> <p><b>Teeth, beaks and claws</b> Are the teeth of other animals similar to ours? Can we tell what birds eat by looking at their beaks? Are the claws of birds also different? Is their shape related to the food they eat?</p> <p><b>3. SHELTER</b> <b>Houses then and now</b> Do you live in houses similar to ones your grandparents lived in? Are houses now made of similar materials as was used then? What are the differences?</p> <p><b>Garbage?</b> What do you do with waste in your house? Where do you throw it? Do you reuse any waste materials? Who takes away the garbage?</p> <p><b>Where animals live</b> Do animals live in shelters? Which animals live in water? On land? Underground? Are there any animals that</p>	<p>Taste, tongue; teeth – types, milk teeth, permanent teeth. Tongue and speech.</p> <p>Teeth in some common animals; beaks and claws of birds – relationship with food they eat.</p> <p>House change over time; rural and urban differences, multi-storeyed houses along with slums in cities. Materials used have changed.</p> <p>Waste materials, waste in our houses, urban/rural waste. Reduce garbage.</p> <p>Diversity in animal habitat and shelters. Some structures like webs have other purposes.</p>	<p>Samples of different food items; peer observations; pictures or models of teeth.</p> <p>Visit to observe some animals; personal experiences; Visuals; (NBT books on birds.)</p> <p>Discussion with elders in the family. Visit to any old building in the area; changes in the construction of houses with time; houses in villages and cities.</p> <p>Newspaper articles and advertisements on waste/garbage.</p> <p>Stories/pictures of habitats and shelters animals use or make.</p>	<p>Observation of each other's teeth, tongue and mouth; counting teeth; drawing; experiments with different tasting items.</p> <p>Observation and drawings of beaks, claws and teeth of different animals, birds, etc.</p> <p>Making models of houses; collection of materials used to make houses. Drawing pictures of old and new buildings.</p> <p>Listing things thrown away as garbage, waste. Discussion on reduction of waste.</p> <p>Discussion, listing of animals with respect to their habitat and shelter.; making birds nests with scrap</p>
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<p>we see only at night? Where do they go during the day? Do we know of animals that make their own shelter?</p> <p><b>When birds make nests</b> When and why do birds make their shelter? Do all birds make nests? Where do different birds nest - when do they fly away? With what different materials do birds make their nests?</p> <p><b>Mapping our neighbourhood</b> Who are my neighbors? Do I have any of the following near my house – a school, grocery shop, market, well, river or pond? Where are they with respect to your house?</p> <p><b>4. WATER</b> <b>Water fit for drinking</b> What are the major natural sources of water in your area? Is the water fit for drinking – do you clean it at home? Do you know how dirty water can make you ill? Why do we not drink seawater? How is salt separated from seawater?</p>	<p>Birds make nests for laying eggs. Nesting habits of different birds vary. Different materials are used for nests.</p> <p>Introduction to the concept of giving directions with respect to any landmark; also a preliminary mapping process, further use of use of symbols, use of a scale.</p> <p>Natural sources; inland water and sea water; potable water; diarrhoea and other common water borne diseases, safe handling of water, purification of water.</p>	<p>Child’s observation; visuals; nest of any bird.</p> <p>Child’s experiences, enquiry, observation and previous knowledge of routes. Local map /chart of the school and its neighbourhood.</p> <p>Health personnel of the local area, library resource.</p>	<p>materials, making caves, rat holes etc in mud/sand pits.</p> <p>Observation of a bird’s nest and drawing pictures. Songs and poems; dance and movement to simulate bird flight.</p> <p>Discussion, enquiry from friends and neighbours; counting number of steps and estimation of distance for making a preliminary map.</p> <p>Discussion with the elders/health personnel about pollution of natural sources of water and its effects; demonstration/ group activity of simple methods of water purification; seperation of salt from saline water.</p>
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<p><b>Water sources</b></p> <p>Where do you see large amounts of water in your neighborhood? Is it a tank / pond / canal / river/dam? What do men / w o m e n / children / animals do with the water there? Is it used for bathing/ washing? Who bathes/ washes there and who does not? How can we ensure that this water is not made dirty?</p> <p>Do you find factories/ people dumping garbage or harmful materials in rivers or seas? Are some animals also facing problems due to what we do to the rivers or seas?</p>	<p>Reservoirs, canals, dams etc.; Different public activities at water bodies; protection of water bodies.</p> <p>Water as a scarce resource and the struggle for acquiring it (those who can exploit resources by digging deeper and deeper wells).</p>	<p>Film, photographs of dams/canals/tanks/ ponds etc., local knowledge. Narrative on the recent struggle of the panchayat's against Coke in Plachimada, Kerala.</p>	<p>Visit to the natural sources of water in the local area and observing what uses the water is put to. Discussion, and writing letters/making posters highlighting the misuse of the water body.</p>
<p><b>Our river/sea</b></p> <p>Which is the river closest to our locality? Do we find any change in the water flow in different seasons? Which are the big rivers we know of? Have you seen the sea? Which are the animals found in the sea/river?</p>	<p>Rivers and seas; seasonal change in water flow; animals in the sea/river. Water pollution and harmful effects on animals.</p>	<p>Local knowledge, Story on the lines of the SCERT, Delhi Class VI Civics – lesson called Yamuna.</p>	<p>Drawing/Painting/Make a model of a water body in the neighbourhood (using scrap materials) as well as the animals found in the river/sea.</p>
<p><b>Water vanishes when heated?</b></p> <p>Why do puddles dry? In which season do wet clothes dry easily? When do they dry with difficulty? Have you seen and wondered where water</p>	<p>Basic processes of evaporation and condensation</p>	<p>Child's daily observations and class room discussions.</p>	<p>Activity on water drying up from a wet cloth or dish of water in different conditions such as sunlight and shade.</p>

<p>droplets on the outside of a cold glass of water came from?</p>			
<p><b>5. TRAVEL</b> <b>Animals for transport</b> Have you traveled on a tonga / horse carriage? How is it different from travelling on a bus? Are the horses well looked after? Have you seen a horseshoe? Why is it used? What materials have you seen being transported using animals? Are there any special occasions when you ride on animals?</p>	<p>Use of animals for transport; sensitivity towards animals.</p>	<p>Personal experience of travel; songs about travel by tonga, etc.</p>	<p>Enacting instances of animals used for transport and people riding them.</p>
<p><b>Paying for travel</b> How do you pay for our travel by train/bus/boat etc? Who issues/checks the bus /rail ticket? Which currency notes and coins have you seen? Pictures of which animals can we see on a ten rupee note? Which symbol is found on every coin? How many scripts can you recognise on a note? Who is the person whose face is shown on every currency note? What coins/notes did our grandparents use when they were young?</p>	<p>Familiarity with currency notes and coins, national symbols, recognizing some language scripts; Introduction to Mahatma Gandhi Old coins, change.</p>	<p>Coins and currency notes; railway and bus tickets. Old coins/Pictures of old coins; visit to a museum</p>	<p>Enactment of a bus journey. Comparison of coins and currency notes; /Tracing of coins. Designing a school emblem/logo.</p>
<p><b>Travel to another place</b> Do you know anyone who has traveled very far from your</p>	<p>Different land forms, languages, clothing, food habits, some</p>	<p>Travelogue describing the place they have come from; description of a train</p>	<p>Reading and listening, discussion, writing about a traveling</p>

<p>village/city? Why did they go so far? What are they doing there? How do they travel when they visit your family?</p> <p><b>6. Things We Make And Do</b> <b><i>Building materials and tools</i></b></p> <p>How are bricks made? What tools have you seen being used for making a wall or a house?</p> <p>Is there a bridge to cross while coming to school? What kinds of bridges have we seen and where? How many kinds of bridges can we make?</p>	<p>idea of another country (only through a story/imaginary narrative).</p> <p>Process of making involves raw materials, tools, labour, energy—changes over time in these and in environment too.</p> <p>Materials and tools used for construction; Different skills of people at engaged in a construction activity.</p>	<p>/ ship / plane journey.</p> <p>Narratives and pictures of different bridges children cross, on the lines of the book – Going to school in India (by Lisa Heydlauff Penguin); of the process of construction, use of tools and materials.</p> <p>Observation of different bridges; making bridges.</p>	<p>experience of oneself or visiting relatives</p> <p>Making bricks; drawing and talking about different tools.</p> <p>Observing, drawing and describing different bridges and how people make their own local bridges from ropes, bamboo and logs of wood.</p> <p>Making toy bridges in school.</p>
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## CLASS V

### ENVIRONMENTAL STUDIES

Questions	Key Concepts / Issues	Suggested Resources	Suggested Activities
<p><b>1. Family and Friends</b> <b>1.1 RELATIONSHIPS</b> <b><i>Family tree</i></b></p> <p>Can you make a family tree with as many of your relatives you can get information about? Who are the relatives whom you have never seen? Where do they live?</p>	<p>Family in transition – Impact of larger socioeconomic forces are changing family structure and quality of life in families; Idea about several generations; how some people move away, some continue to live together, and how households get formed/ reformed at several places. How these are affecting roles, relationships, value systems, aspirations within a family.</p>	<p>A story woven around a family tree with old family photographs.</p>	<p>Activity - Write the names of all your family members along with their ages. How many generations have you been able to get details about?</p>
<p><b><i>Shifting from place to place</i></b></p> <p>Have you always lived at the place that you now live in? If not, where does your family come from?</p>	<p>Shifts in habitation migration / Transfers /demolition displacement Associated difficulties</p>	<p>Story of a migrating family or a family displaced by the construction of a dam or demolition of an urban slum.</p>	<p>Discussion or letter writing; drawing.</p>
<p><b><i>Who laughs the loudest?</i></b></p> <p>Who is the tallest/shortest in the family? Who has the</p>	<p>Basic ideas of measurement - of height;</p>	<p>Cartoons; narratives.</p>	<p>Mimicking people in the family – laugh and voices; drawing people</p>

<p>longest hair? How long? Who has the loudest voice/laugh in the house? From how far away can you hear it? Who speaks the softest? When does a child cry the loudest? When she is hungry-or angry? Who is the best cook in the family?</p>	<p>Observing and appreciating qualities and skills of relatives; observing infants.</p>		<p>in the family. Writing exercises about an infant they have observed.</p>
<p><b>Our likes and dislikes</b> Which is your favourite colour? Which is your friend's favourite colour? Which is your favourite food? What about your friends favourite food? Do you know your friends' likes and dislikes? Are there any smells you don't like (fish, mustard oils, garlic, eggs etc)? Do you eat fish?</p>	<p>Our bodies, our senses, our likes/dislikes vary e.g. our concept of foul / fragrant smell <i>Cultural influences of taste, smell, etc (to be discussed without stereotyping).</i></p>	<p>Narratives about preferences in taste, smells, colours in different cultural context.</p>	<p>Observation, discussion, describing and writing about a friend's likes/dislikes; a class survey about childrens favourite colour/food etc.</p>
<p><b>Feeling to read</b> Do you know how people read with their hands? Do you know someone who finds it difficult to walk / speak / see etc.? How do you think they learn to overcome the problem?</p>	<p>Awareness and sensitisation towards the problems of physically challenged;</p>	<p>Autobiography of Helen Keller; excerpt from her teacher's account of how she learnt; Braille sheet.</p>	<p>Activity with Braille paper (or simulated Braille paper).</p>
<p><b>1.2 WORK AND PLAY</b> <b>Team games – your heroes</b> Do you play any games in teams? Have you ever been captain of the team? Do boys and girls play together? Have you heard of any</p>	<p>Types of games / sports, importance of team spirit in games, gender stereotyping. Some idea of other</p>	<p>Library resources- Indian cricket team; narrative about some national and international players.</p>	<p>Collecting information, making picture albums ; posters of sports persons</p>

<p>Indian team playing in another country? Which is your favourite team sport? Do you know any National level player?</p> <p><b>Local games/martial arts</b>  What are the local games / martial arts of your area? Do you know someone who is good at them? Have you seen a young acrobat or wrestler practicing? Who taught them? For how long have they learnt the art/game? What are the new games in your area that were not played earlier?  What do you do in the evenings for leisure? What if there is no TV? Who decides what programmes to watch?</p> <p><b>Blow hot blow cold</b>  How many times do you breathe in a minute – on sitting still, just after a run? How much can you expand your chest by breathing deeply? Can you make a glass cloudy by blowing on it? How do you blow to make something cold? Do you also blow to keep a fire going?</p>	<p>countries and national teams.  Gender, class stereotyping in play.</p> <p>Local and traditional martial art forms / games. Typical practice routines; teachers / gurus; changing patterns of local games.</p> <p>Changing nature of leisure.</p> <p>Our breathing – estimates of different rates; chest expansion and contraction in the child’s body while exhaling and inhaling; My breath – hot and humid; tacit understanding of cooling by blowing and helping a fire to burn.</p>	<p>Description or photographs of traditional martial arts, ‘Nat’, acrobat, boat race, etc.</p> <p>Story by Zakir Hussain – “<i>Usee se thanda usee se garam</i>” – Zubaan books.</p>	<p>Reading, discussion, collecting information and writing about local/martial games.</p> <p>Observation, , activity of breathing in and out and observing the difference (mirror/glass/on palm); measuring chest; counting heart beat and breathing rate , making and using a stethoscope</p>
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<p><b>Clean work – dirty work?</b></p> <p>Can you list ten different types of work that people do for you. In this list what work is seen as dirty and what is seen as clean? What would happen if there were no one to - clean our streets/our home / clear the garbage?</p>	<p>Dignity of Labour Dependence of society on such essential services. Choice of work as a societal value.</p>	<p>Extract from Gandhi's autobiography; narrative from another country - sweepers treated with dignity; story of a Valmiki boy discriminated in school because of parents' occupation.</p>	<p>Reading and discussion based on suggested resources.</p>
<p><b>1.3 ANIMALS</b></p> <p><b>How animals find their food?</b></p> <p>If you leave some food outside your house do some animals take it away? How do they find it? Do these animals also hear/speak/ see/ smell/eat/ sleep?</p>	<p>Sense organs; Comparison with humans – activities such as eating sleeping etc.</p>	<p>Information about animals' senses and other functions. Narratives about animals such as ants, bees, dogs, birds, snakes etc giving ideas about their senses.</p>	<p>Observation of animals to study their response sound, food, light and other stimuli.</p>
<p><b>What we take from animals?</b></p> <p>What animal products do we use for clothing, shelter, etc.?</p>	<p>Animal products used by us.</p>	<p>Child's daily life experience, information about products we obtain from animals.</p>	<p>Listing and drawing of items made from animal products.</p>
<p><b>Why is the tiger in danger?</b></p> <p>Why do people kill wild animals? Which are the animals that are poached?</p>	<p>Protection of wild life; selling of animal parts.</p>	<p>Excerpt from 'Man eaters of Kumaon' by Corbet.</p>	<p>Discussion, reading, poster making activity with a message to save wild life.</p>
<p><b>People who depend on animals</b></p> <p>Do you know people who catch/trap/hunt/entertain using animals? Have you seen how snake charmers /</p>	<p>Communities dependent upon animals; hunters restricted to smaller spaces; changing</p>	<p>Library resources; illustrations of pre-historic hunting scenes (Bhimbetka). Narrative of gujjars' or snake charmers'</p>	<p>Discussion on people whose livelihood depend on animals; drawing; Discussion on people</p>



<p>gujjars depend on animals? What do you understand by cruelty to animals? Do you think a snake charmer is cruel to the snake? Have you seen scenes of hunting in rock paintings or on ancient seals?</p>	<p>patterns of wild and domestic animals. To be sensitive about cruelty to animals; realize that people who depend on animals for their livelihood are not necessarily cruel to them. Basic idea of pre-historic hunters and the wild animals seen at that time.</p>	<p>relationships with animals. Child's observation; an story/narrative about an animal and its caretaker , e.g, mahouth/tonga wala Films/pictures of shooting, skins (tiger) of animals.</p>	<p>teasing/troubling animals at the zoo/other places.</p>
<p><b>1.4 PLANTS</b> <b><i>Growing plants</i></b> How does a plant grow from a seed? Can you grow a plant without seeds? How do you grow mangoes/ potatoes? Where does the seed come from? Have you seen seeds that fly/stick to your clothes/drift in the water?</p>	<p>Seed germination, root and shoot axis, baby plant, storage of food in the seed; seed dispersal.</p>	<p>Seeds, germinated seeds.</p>	<p>Study germination of some seeds, experiment to determine conditions suitable for germination (air and water).</p>
<p><b><i>Forests and forest people</i></b> Have you seen or heard about a forest? How do people live in forests? How is their life threatened by forests being cut? What kinds of foods do they collect from the plants there? What leaves are used for eating on? Do your parents remember places with trees/forests where there are none today? Why were the trees cut</p>	<p>Tribal life; effects of deforestation; communities dependent on forest products e.g., 'pattals', bamboo products, etc.</p>	<p>Information about tribal life, communities dependent on forest produce, effects of deforestation.</p>	<p>Exploring from parents, reading, and discussion.; tracing tree trunks.</p>

<p>and what is there today?</p> <p><b>Protected trees</b></p> <p>Have you heard of a park / sanctuary? Who looks after it? Does anybody own it? Have you seen a place where trees are worshiped or protected by the villagers?</p> <p><b>Plants that have come from far</b></p> <p>Does tea come from a plant? Where did people first grow tea and what does the plant look like? Does it grow only in some places/climates? What did people drink when there was no tea in India?</p> <p><b>2. Food</b></p> <p><b>When food gets spoilt</b></p> <p>How does food spoil? How do we know that food is spoilt? Which food spoil sooner than others? What can we do to prevent food from getting spoilt? What do we do to keep it fresh during travel? Why do we need to preserve food? Do you leave food in your plate?</p>	<p>Public / private ownership of trees / forests.</p> <p>Sacred groves; people's movements to protect their forests.</p> <p>Plants from different countries.</p> <p>Spoilage and wastage of food. Preservation of food, drying and pickling.</p>	<p>Story of the Chipko movement and the women's role in protecting trees.</p> <p>Song/poem from Chakmak: "Alu, mirchi, chajji; Kaun kahan se aye ji" Story about the Chinar tree coming to Kashmir.</p> <p>Sharing family experiences Interaction with a person involved with food production / preservation.</p>	<p>Enactment of chipko andolan; poster – 'save trees'; survey and identify any 'green belt' in your neighbourhood.</p> <p>Local knowledge, reading, and discussion, reciting the poem together; making tea.</p> <p>Keep some bread, other food for a few days – see how they spoil.</p>
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<p><b>Who produces the food we eat?</b></p> <p>Do you know of different kinds of farmers? Do all farmers own their land? How do farmers get the seeds they plant every year? What else besides seeds is required for a crop to grow?</p> <p><b>What did people grow earlier?</b></p> <p>Did your grandparents or any elderly person eat the same food you eat today? Do all of us eat the same kind of food? Why do we eat different kinds of food?</p> <p><b>When people do not get food</b></p> <p>Do you know of times when many people do not get enough food to eat? Have you seen where extra grain is stored? How do you know when you are hungry? Do you know of people who get ill because they do not have enough to eat?</p> <p><b>Our mouth – tastes and even digests food!</b></p> <p>How do we taste food? What happens in the mouth to the food we eat? Why do we give glucose to patients? What is glucose?</p>	<p>On different types of farmers. Hardships faced by subsistence farming, including seasonal migration. Need for irrigation, fertilizers.</p> <p>Changing food habits, changing crops grown in some areas. Different food habits in different places / cultures.</p> <p>Hunger, famine (as both a natural and man-made phenomenon); grain being spoilt in storage; nutrition deficiency diseases.</p> <p>Tasting food; chappati / rice becomes sweeter on chewing; digestion begins in the mouth; glucose is a sugar.</p>	<p>Farmers' narratives - Could take one example from Punjab and the other from AP. Story of a child missing school because of his/her family's seasonal migration. Family members. Visit to a farm.</p> <p>Information on food from different places.</p> <p>Print material on different calamities; Narrative of the Bengal famine as a man-made calamity; TV news bulletins etc.</p> <p>Child's experience; some samples of food items; story of someone on a glucose drip.</p>	<p>Study germination of seeds, experiment to determine conditions suitable for germination; Observations in any farm.</p> <p>Collection of samples or pictures of food from different places / cultures.</p> <p>Collection of pictures related to natural calamities; discussion on affects.</p> <p>Tasting activity, action of saliva on rice/chappati.</p>
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<p><b>Food for plants?</b> What do plants need for food? Do you know of any plants that eat insects? What do animals eat? Do all animals eat the same food? Do animals eat other animals?</p> <p><b>3. Shelter</b> <b>Why different houses</b> Why do you have different kind of houses in different places? Different houses in the same place?</p> <p><b>A shelter for everyone?</b> Does everyone have a shelter to live in? Why do people live together in villages, hamlets, colonies, neighborhoods?</p> <p><b>Ants live in colonies?</b> Do you know how bees/ants live together in colonies?</p> <p><b>Times of emergency</b> Have you heard of houses being damaged by Floods / earthquakes /cyclones/fires/storms/lightening? What would it have felt like? Who are the people who</p>	<p>Water, manure, air for plants; Insectivorous plants e.g. pitcher plant, Venus fly trap; basic idea of food chain/web.</p> <p>Variation in shelter: regional difference, difference due to climate and materials available, economic status, etc.</p> <p>Need for living close to others, the idea of neighbourhoods. Need for sharing resources and spaces, division of spaces.</p> <p>Ant or bee colony, social behaviour in insects.</p> <p>Disaster and trauma of losing one's home; community help; Hospitals, police stations, ambulance, shelters, fire station, first aid.</p>	<p>Pictures / visuals of insectivorous plants.</p> <p>Different houses in different climates and regions.</p> <p>Pictures of villages, colonies etc.</p> <p>A case study of social organisation in bees/ants.</p> <p>Newspaper clippings.</p>	<p>Observations and discussion on food for plants; making a model of a food chain/web.</p> <p>Making models of houses; collection of materials used to make houses in different places.</p> <p>Write and draw the area you live in, find out about people who work for everybody.</p> <p>Observations and drawings of ant colonies, different types of ants.</p> <p>Discussion, finding out about the hospital, police station, fire station, etc.</p>
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<p>come to help? What can you do to help others before the doctor comes? Where can we look for help at such times? Who runs such institutions?</p> <p><b>4. Water</b> <b><i>Water from where in earlier times?</i></b></p> <p>From where and how far did your grandparents get water? How far do you have to go for water? What are underground wells/'baolis'? Do you still see them being used? Have you seen a 'piaao'?</p> <p><b><i>Water flow</i></b></p> <p>From where do farmers get water to grow crops? Do all crops need the same amount of water? Have you seen water flowing upwards? What are the different ways in which you have seen water being lifted? How is flowing water used to grind grain?</p> <p><b><i>Plants and animals in water</i></b></p> <p>What kinds of animals and plants live in water? Are there weeds that are covering your pond / lake / river? Can you classify all the animals you see around</p>	<p>Estimates of distance measurement; changes in sources and water availability over time; community service especially for longdistance travellers.</p> <p>Sources for irrigation; different quantities of water for different crops; Different methods of lifting water; the use of a waterwheel.</p> <p>Animals and plant life in water; classification in terms of similarities and differences.</p>	<p>Illustrations, story of a 'baoli'/stepwell</p> <p>Farmer/any local person who works in fields, a plant/crop.</p> <p>Weeds of different kinds; pictures of plants and animals living in different habitats.</p>	<p>Enquiry from grand parents/ other elders; drawing, model making of a step well.</p> <p>Interaction with a farmer, visit to a field, making water wheel., activity with water wheel.</p> <p>Listing and classification; drawing of water body.</p>
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<p>you to show which ones live in water and which live on land?</p> <p><b>What floats, sinks or mixes?</b></p> <p>Have you ever seen anything floating in water? Can you classify as many things around you to see which float, which sink and which mix with water? Does oil mix with water? What are the similarities and differences in water, oil, milk, cold drink, etc.? How do we measure these?</p>	<p>Basic observations and classification related to floatation and solubility in water; oil and water are liquids that do not mix; basic concepts about liquids; litre as unit of measurement of volume.</p>	<p>Various materials to experiment with, such as, sugar, stone, oil, salt, sand etc.</p> <p>Story of the donkey and the salt/cotton bag.</p>	<p>Hands-on activity to observe solubility in water, floatation; discussion, interpretation.</p>
<p><b>Mosquitoes and malaria</b></p> <p>Is there any stagnant water in your locality? Do you find more mosquitoes in stagnant water? Is there any way to reduce the mosquitoes in water? Have you heard of malaria? In what season do you find more people getting ill with malaria?</p>	<p>Stagnant and flowing water; mosquitoes and malaria.</p>	<p>Health worker or a doctor. Newspaper articles on malaria etc.</p>	<p>Interaction with a community doctor; observation of site of stagnant/flowing water.</p>
<p><b>5. Travel</b></p> <p><b>Petrol or diesel</b></p> <p>Do all vehicles need petrol to run on? What other fuels do you know that are used for vehicles? What do trains run on? In the past what did they run</p>	<p>Fuels used in vehicles; Fuel is costly. Non renewable source.</p>	<p>Poems and songs about trains/cars etc.; Enquiry from adults; the story of 'petrol'.</p>	<p>Discussion, finding out different fuels used, comparison of cost of petrol and diesel.</p>

<p>on? What do tractors use as fuel? For what other purposes are petrol and diesel used? Find out the cost of a litre of petrol/diesel in your area? Do all vehicles run an equal distance on a litre of fuel?</p> <p><b>Rough and tough</b> Have you seen or been to a mountain? How and why do you think people make such difficult trips? How do you think they train for it?</p> <p><b>Ride on a spacecraft</b> What all do you see in the sky – at day time? And at night? How many of the things you see in the sky are man-made? Have you heard of people traveling in a space craft?</p> <p><b>Oldest buildings</b> Is there any well-known monument/historical place in your area that people come to visit? What are the oldest buildings around your area? Have you traveled far to see any historical monuments? Have you heard of those personalities who lived in these monuments or who built these?</p>	<p>Mountains, expeditions and the spirit of adventure; some idea of training for high altitude; national flag.</p> <p>The sky in the day and night. Basic exposure to the aerial view of the earth and what India looks like from there.</p> <p>Heritage buildings as a source of knowledge about our past; to be able to understand how they were built; materials used come from a variety of places, skills of the crafts person; Some historical personalities.</p>	<p>Excerpt from the autobiography of Bachendri Pal; Flag of India atop mount Everest; flags of some countries</p> <p>Story of Rakesh Sharma/ Kalpana Chawla.</p> <p>Oral narratives from people; pictures.</p>	<p>Act/dance to show climbing on a difficult mountain; Designing a flag for your school; identifying some other flags</p> <p>Observation from a terrace to draw its aerial view. Imagine yourself in a spacecraft giving an interview to the PM about what you see from there!</p> <p>Drawing pictures of the building or the monument in your neighbourhood or memory or imagination.</p>
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<p><b>6. Things we Make and Do</b>  <b>Growing Food</b>  How do we grow food? What tools do we use for preparing the field? For cutting and harvesting? For cutting and cooking different vegetables/ dishes? How do we water the crops? How do we lift water through a pump or a waterwheel? Can we make a water wheel, sprinkler, etc.?</p>	<p>After basic needs met, exploration leading to improving and overcoming human limitations; greater expression of creativity ; overuse of natural resources needs to be checked. Some idea of the story of a grain from the field to our plate – in terms of processes and the tools used. Different things made from the same grain, say, wheat/rice. Simple observations of water lifting in fields or in homes; making of a water wheel, sprinkler, etc.</p>	<p>Narratives; talking to elders, farmers, those involved in growing and cooking food. <i>'Dump se pump'</i> by Arvind Gupta.</p>	<p>Observing and talking about processes of growing food; drawing tools used in different processes; finding out about different dishes made from the same grain, say, wheat/rice. Making a simple waterwheel, sprinkler, pump.</p>
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# Curricular Expectations and Learning Indicators in Environmental Studies (EVS) at the Primary Stage

## I - How do children learn EVS?

We all are concerned that every school needs to provide opportunities where each child learns and happily engages in school level activities. This requires that the teaching-learning processes in each classroom must address the needs of all children- *cognitive/ age appropriate curriculum, conducive and non threatening classroom environment, encouraging school based assessment and reporting practices in the school*. If children find such learning environment they would be able to achieve more successfully. Thus there is a need to visualize their learning processes holistically rather than viewing child's progress in isolation. We all realize that children learn EVS when they are exposed to the real situations in their surroundings that help them construct, be aware, appreciate and get sensitized towards the environmental issues(natural, social and cultural) prevailing around. The learning process begins with the child's immediate environment i.e. self and family in the early classes and moving on further to the wider environment beyond neighbourhood and community at large. NCF-2005 recommends to follow an integrated and thematic approach- towards its teaching learning at the primary stage. Thematic approach needs to be followed in EVS in early classes and gradually making efforts to make them understand the issues and concerns related to natural and social environment in class V and onwards. Efforts need to be made to avoid giving direct information, definitions and descriptions as children construct their own knowledge using varied teaching and assessment strategies. However, this requires ensuring their active engagement participation in learning by exposing them to diverse experiences through a variety of sources within and outside the classrooms. According to their varied potential we all agree that assessment is carried out simultaneously i.e. during teaching learning and in natural setting. It allows us to identify the learning gaps and modify teaching-learning processes to suit the needs of all children. This would also help to provide timely feedback to the children to improve her/his future learning. The learning situations need to include a variety where children get the opportunities ensuring each child's(including the differently abled and the disadvantaged children) participation to observe, express, discuss, question, critically think, improvise, analyze- etc.

**While organizing the Teaching-Learning of EVS, the following pedagogical principles need to be kept in view:**

- Each child is unique and has strengths and weaknesses. Children learn and progress at different pace and style. Some children learn best visually, some by questioning, some others by describing and observing, accordingly opportunities need to be given to get exposed to various situations.
- Active participation of children is crucial in constructing knowledge, using environment as a *learning resource* that would provide meaningful learning as it would relate the *child's local knowledge with the school knowledge*.
- Classroom processes need to encourage to tap various sources other than the textbook. A teacher needs to encourage learning beyond four walls of the classroom and provide wider perspective of the environment around her/him.
- **Visuals play a major role in EVS learning.** Reading of visuals not only provides joy and ethos of writing material that develops critical thinking and analyzing skills but also supplement the text to reduce the content load. Picture reading activities in group with peers improves social interaction and provides more opportunities for construction of knowledge. *Care needs to be taken to adopt these visuals for children with visual difficulties.*
- EVS learning must find suitable ways to sensitize the children to the wide differences that exist within our society relating to gender discrimination, children with marginalized groups, and differently abled children, the elderly and the sick.
- Children enjoy and learn more with hands-on activities i.e. creating materials with locally available material , draw picture of their choice, art/ craft activities. Children are very happy and respond with enthusiasm when their creative ventures are appreciated rather than being rejected or left unnoticed, as unimportant by elders.
- Each child has an innate capacity to learn about things owing to the experiences and the information available to him/her. The child constructs new meanings based on previous knowledge and builds upon his/ her understanding. *Also, all the children do not learn in a uniform manner. However, children's unique ways of thinking and learning can become an opportunity as a learning resource in a classroom.* Different children's experiences can serve as the beginning to explore multiple facets of ideas in the lesson. *Sharing ideas and insights amongst peers provide for rich 'scaffolding' opportunities, rather than arrive at a 'right' answer.*
- **Difference of opinions and varied perspectives enrich the learning process and add quality to what is learnt.** Since learning and understanding do not take place in a linear way children's distant memories and past experiences also add to the process of making sense of things. To facilitate a more meaningful learning, it is essential that teachers/elders encourage the children to make critical analysis of their prior work/knowledge and then move on to the new concepts to be learnt.

## 2 - What do we expect from EVS classrooms?

- Recognizing the mandate of the RTE Act, 2009 the overall development of a child, i.e., physical, socio-emotional, besides the cognitive needs to be focused on. All these aspects/dimensions can only *be nurtured through a whole range of learning experiences that a child participates in and beyond school*. To assess all these aspects, a comprehensive picture of a child's personality needs to be constructed which requires information about child's knowledge, comprehension, skills, values, interests, attitude and motivation in response to various learning situations and opportunities both in and out of the school. We all want children to learn EVS by developing those abilities/skills, and dispositions. *A wide range of suggestive indicators for learning has been drawn up so that teachers can plan learning tasks/activities to fully cover this range*. These would aim to achieve curricular expectation/learning outcomes at the end of particular periods or stages. The learning indicators have been identified for Classes III, IV and V. **Learning Indicators in EVS are process-oriented**. In class III, EVS curriculum expects learning from the immediate surroundings while in class V, curricular expectation need to provide learning related to natural and social environment so that by the time the child enters in class V, she/he would not find any learning gap in the curriculum transaction of Social Sciences and Science in class VI. The learning outcomes would be achieved through the sound and effective pedagogical processes. Initial attempts of children are stepping stones to learning as they provide a reference point and impetus to explore another way. In a supportive and stress free classroom, mistakes are used as opportunities. In EVS learning, the children's response would not be analyzed in right/wrong manner; rather it would provide and promote to put her/ his own point of view Children make efforts to analyze 'why' or 'how', they may make mistakes and use their own abilities to correct them. Helping the all children including those with special needs. Aim higher, accepting them for what they are and creatively 'scaffolding' their learning; all needs to be well enmeshed together. Process indicators of EVS learning for primary stage are given below:

## 3 – What are the curricular expectation/ Learning outcomes of EVS Learning?

CLASS III	CLASS V
<ol style="list-style-type: none"> <li>1. Awareness about immediate surroundings from lived experiences from various themes related to daily life such as Family, Friends, Plants, Animals, Food, Water, Shelter, Travel etc. (<i>Learning about the environment</i>).</li> <li>2. Develop various processes/skills through the interaction with immediate surroundings (learning through the environment)</li> <li>3. Value the immediate resources such as water, food, paper, fuel use at house and use them according to the need</li> <li>4. Enhance/Promote curiosity and creativity in relation to the immediate surroundings</li> <li>5. Learn to appreciate the diversity(language, family's food &amp; habits, family types, variations in plants, animals culture etc.) in the immediate surroundings.</li> <li>6. Attempt to develop sensitivity towards elderly/old, differently abled, and disadvantaged groups of the society with a focus on their strengths as well as areas of concern.</li> </ol>	<ol style="list-style-type: none"> <li>1. Awareness about natural and social environment from lived experiences from various themes (<i>Learning about the environment</i>).</li> <li>2. Understand the relationships between natural and social environment through various activities within and beyond classroom.</li> <li>3. Develop various processes/skills through the interaction with the natural and social environment (learning through the environment).</li> <li>4. Understand the need to conserve and protect the natural resources such as fuel, food, water, electricity at home and in the community and social environment (Learning for the environment).</li> <li>5. Develop curiosity and creativity about social (migrations of the families, various local traditional art forms, community eating, marriage celebrations etc.) and scientific phenomena (seed germination, breathing process spoilage and preservation of food) in the environment.</li> <li>6. Appreciate the variations (diversity) in natural (Plants in different countries) and social environment (tribal life in various places, community eating etc.) and respect them.</li> <li>7. Develop and reflects sensitivity towards old, differently challenged, gender and disadvantaged group of the society</li> <li>8. Awareness and sensitivity towards rights of self. i.e Right to education, right to food, dignity of labour, etc.</li> </ol>

#### 4 - What are the learning indicators of EVS Learning?

Broadly, the EVS learning is around ten processes as mentioned below. Thus the nature of learning indicators in EVS is process based. For classes III- V these learning indicators are same, however, the progression of learning from classes III- V can be seen through the complexity in the indicator. In

order to understand the nature of complexity class III to IV, IV to V, suggestive examples have been given along with each indicator.

1. *Observation and Reporting* – Explores shares, narrates and draws, picture-reading, makes pictures, collects and records information, tables and maps.
2. *Discussion* – Listens, talks, expresses opinions, finds out.
3. *Expression* – Expresses through gestures/ body movements, expresses verbally, expresses through drawing/writing/sculpting, expresses through creative writing.
4. *Explanation* – Reasoning, makes logical connections, describes events/situation, formulates one's own reasoning's, make simple gestures, thinks critically, and makes logical connections.
5. *Classification* – Identifies objects based on observable features, identifies similarities and differences in objects, sorts/groups objects based on observable features. Compares objects and classifies them based on physical features .
6. *Questioning* – Expresses curiosity, asks questions, raises critical questions, frame questions.
7. *Analysis* – defines situation/ event, identifies/predicts possible causes of any event/situation, making hypotheses and inferences
8. *Experimentation* – Improvises makes simple things and perform simple experiments.
9. *Concern for Justice and Equality* – Sensitivity towards the disadvantaged or differently abled, shows concern for environment
10. *Cooperation* – Takes responsibilities and takes initiatives, shares and works together with empathy.

## 5 - Learning Indicators in EVS for Primary Level (Classes III, IV, V)

Pedagogical Processes	Learning Indicators Class III	Learning Indicators Class IV	Learning Indicators Class V
<p>Observation and reporting:</p> <ul style="list-style-type: none"> <li>· Providing opportunities to expose children to the immediate surroundings (animals, plants, seasons, shelters, food, water, local transport) and in class V gradually to natural and social environment.</li> <li>· Providing opportunities with due consideration for children with visual difficulties for               <ul style="list-style-type: none"> <li>- Exploring the immediate surroundings and sharing experiences with others.</li> <li>- Collecting and recording the information.</li> <li>- Visiting different places .</li> </ul> </li> </ul>	<p>Observation and reporting:</p> <ul style="list-style-type: none"> <li>· Observes and explores environmental objects/plants/animals/local transports in the immediate surroundings. E.g., “identifies names of objects, local plants, animals, transport, and shelters, etc in their own language.”</li> </ul>	<p>Observation and reporting:</p> <ul style="list-style-type: none"> <li>· Observes and explores environmental objects, plants, animals, shelters simple phenomenon in the surroundings. For e.g., “identifies variations in plants (leaves, flowers), animals (bird’s beak, claws, feather, and nests) mode of transports, and variation in seasons, give examples of each”.</li> </ul>	<p>Observation and Reporting:</p> <ul style="list-style-type: none"> <li>· Observes and explores the natural and social environment, gradually moving from immediate to the wider environment.               <ul style="list-style-type: none"> <li>- E.g., “identifies objects, events phenomenon in natural &amp; social environment,</li> <li>- locate states on the map”.</li> </ul> </li> </ul>

<ul style="list-style-type: none"> <li>· Opportunities need to be given to share experiences based on their observations.</li> <li>- Equal opportunities to all children without any discrimination</li> <li>- Feedback and scaffolding for further improvement</li> <li>- Engaging children in small group for mutual learning.</li> </ul>	<ul style="list-style-type: none"> <li>· Shares and reports her observations on the collected information/objects /visited place through various ways. E.g., “shares brief details of plants (part), animals, food item eaten in the family, local games, local transport, nearby park, garden/field, post office, market in their own language orally”.</li> </ul>	<ul style="list-style-type: none"> <li>· Collects and reports her observations on the collected materials/ information through various ways : E.g., “reports information about variety of leaves, flowers, various modes of transport and report with peers/elders through orally as well as written form, drawings”.</li> <li>· Shares and reports variations in seasons, day night variations orally as well as in written form.</li> </ul>	<ul style="list-style-type: none"> <li>· Collects and records the details of observed objects/phenomenon/ events of natural and social environment in an organized manner. E.g., “while observing the sprouting of seeds(whole grain i.e. moong, chana), discussing ways how to collect and record the observation of each day(tabular form/draw)/ write”.</li> </ul>
<ul style="list-style-type: none"> <li>· Providing opportunities for integrating art activities with EVS learning such as using material for art work &amp; discuss in the class about the details of the dising/drawings.- Materials for hand on activities need to be provided.- Encouraging children about their creations</li> </ul>	<ul style="list-style-type: none"> <li>· Draws simple designs/ drawings/patterns that have been seen on different objects at home/school with the support of elders E.g., “draw floral designs, pattern of leaves/circle/square/triangles and colour them.”</li> </ul>	<ul style="list-style-type: none"> <li>· Draws simple designs, drawings patterns that have been seen by her or on her own E.g., “thumb or creative printing from various materials, rangolis using various patterns of her choice”. And label them</li> </ul>	<ul style="list-style-type: none"> <li>· Shares the details of the observed objects/events/phenomenon orally/ written/drawings/any other ways or her choice E.g., “ in an activity on survey of sources water in the neighbourhood, to share the process of survey followed by them, such as how many sources observed, who provided information ,”. how information was recorded, etc (tabular form/statements)</li> </ul>

<ul style="list-style-type: none"> <li>· Providing opportunities to reflect on the work done by self, peer group through verbal and non verbal ways .</li> </ul>	<ul style="list-style-type: none"> <li>· Appreciates and reflects on her observations, work done by self and others. E.g., “Reading and enjoying signboards, pictures, posters in the locality, school (shops name, posters related to prevention of disease notice board etc) and reflects on them verbally or through gestures”.</li> </ul>	<ul style="list-style-type: none"> <li>· Appreciates and reflects on the work done by others and self E.g., “ reflecting on work i.e. drawings/ creative work done by peer group/ self, enjoying reading posters, sign boards in locality through orally/ written forms/ gestures”.</li> </ul>	<ul style="list-style-type: none"> <li>· Reflects on the observation report of peer group and takes feedback from others. E.g., “reflects on sprouts of various seeds, done by peer and accepts feedback on that.”</li> </ul>
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<b>Discussion: (Pedagogical Processes)</b>	<b>Learning Indicators: III</b>	<b>Learning Indicators: IV</b>	<b>Learning Indicators: V</b>
<ul style="list-style-type: none"> <li>· Creating a conducive environment for group work where children are well aware of each other’s strengths and utilizing opportunities to discuss and share personal experiences.</li> <li>- Providing equal opportunities to all children to share personal experiences by devising various ways</li> <li>- Opportunities to listen’s other’s points of view</li> </ul>	<ul style="list-style-type: none"> <li>· Involves in group discussions related to the problems seen in immediate surroundings. o E.g., “wastage of water, littering and throwing garbage use of plastic bags, food wastage in the family,</li> </ul>	<ul style="list-style-type: none"> <li>· Engages and participates in discussions on the themes related to her day to day life. o E.g., “discusses on common topics such as spoilage of wastage of food causes of noise and water pollution need for bridges and level crossing, how to resolve dispute in games”.</li> </ul>	<ul style="list-style-type: none"> <li>· Participates actively in group discussion in the class on the issues related to natural and social environment. o E.g., “on a topic defined role in the family and school, asking them (before giving their opinion) to discuss their personal experiences, listen to other’s views on gender discrimination in work at home(cooking food, fetching water, cleaning house and utensils). Later asking groups to give their opinion and reflects on this issue”.</li> </ul>



<ul style="list-style-type: none"> <li>· Providing opportunities to all children for expressing views and ideas in the class, without discriminating them.</li> <li>- Creating opportunities for Learning from each other's experiences.</li> </ul>	<ul style="list-style-type: none"> <li>· Listens to others experiences/ideas in group discussion on the problems / themes related to immediate surroundings <ul style="list-style-type: none"> <li>o E.g., "where do their family get water, who fills water in the family, do their family discriminate in the community/public places".</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>· Listens to others on the themes related to day to day life such as peer experiences related to food items eaten in the family, ways of cooking in the family, source of water in the locality.</li> </ul>	<ul style="list-style-type: none"> <li>· Listens carefully other's experiences/ opinion in the group and wait for her turn E.g., "on a topic related to animals/ birds in our lives, providing them opportunities to talk to some people who keep animals for their livelihood i.e. snakes, parrot and asking them to express their opinion".</li> </ul>
<ul style="list-style-type: none"> <li>· Making comments that relate to the topic being discussed with their daily life situation</li> </ul>	<ul style="list-style-type: none"> <li>· Shares experiences verbally and accepts feedback given by peers group on her work. <ul style="list-style-type: none"> <li>o E.g., 'Water in Our Life', and narrating one's own experiences of where s/he has seen people wasting water such as while cleaning the houses, utensils, clothes, vehicles, and reflects her views".</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>· Shares experiences or gives her own views in group or individually and accept feedback given by others on her work. <ul style="list-style-type: none"> <li>o E.g. , "sharing experiences related to visited place (mela, festival, historical place) verbally or in written form, giving her own views/ opinion on the problem related to water in her day to day life, problems for using plastics".</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>· Shares one's experiences/opinions on the issues related to social and natural environment.</li> </ul>
<ul style="list-style-type: none"> <li>· Engaging children in open-endedactivities to make the discussionenriching- Opportunities to discuss familyexperiences, new paper clippings, otherincidents..</li> </ul>	<ul style="list-style-type: none"> <li>· Reflects on others work/views in a groupo E.g., "suggests how can the use ofplastic bags can be reduced, how todispose garbage in the locality".</li> </ul>	<ul style="list-style-type: none"> <li>· Reflects on others work/ views/ opinion ingroup or asked by teacher individually in theclasso E.g., "giving feedback to peer on writtenwork/ drawing, giving opinion on ways to reducing wastage of water, reducing use ofplastic".</li> </ul>	<ul style="list-style-type: none"> <li>· Reflects on othersexperiences/ideas and acceptsfeedback from others on one'sideas/thoughts with openness ingroup activities/discussion. E.g., "harms/dangers in using plasticand suggest ways what can be done".</li> </ul>

			· Finds out from other available sources such as discusses with elders/ teacher/peer group to get more details on any topic related to day to day life.
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<b>Expression: (Pedagogical Processes)</b>	<b>Learning Indicators: III</b>	<b>Learning Indicators: IV</b>	<b>Learning Indicators: V</b>
· Providing opportunities for sharing one's own feelings (through various ways), ideas and listening to others in classroom situations; - Providing materials such as clay, paper, other objects or any locally available material for their expressions.	· Expresses one's feelings / ideas through orally /verbally form in a creative writing exercise on – "If I could fly like a bird", she can describe her own ideas creatively where would I like to go? She describes how does she interact with family as well as others who cannot see, speak or hear? How does she help them with their work?	· Expresses one's feelings/ ideas through various ways orally/ written /gestures i.e. she could orally express feelings what help she could do for elders, differently abled. She could creatively express in written form if she were police what work I could do	· Expresses ideas, feelings of self, others through gestures, body movement, drawings, sculpting (non-verbal expressions)
	· Uses appropriate language/gestures to show care, respect and accept the people as they are.	· Use appropriate language, gestures to show care, respect for others. o E.g., "shows concerns for animals, respect elders, old people in the family/locality".	· Use appropriate language, gestures to show care, respect for others. E.g. "shows concerns for animals, respect elders, old people in the family/locality".

<ul style="list-style-type: none"> <li>· Creating situations to express opinions on issues such as defined gender roles (discrimination seen at home in work done by mother/ father) in family, school, playground; on issues of discrimination of the under privileged</li> </ul>	<ul style="list-style-type: none"> <li>· Expresses views/opinion on problems related to day to day life and misuse of environmental resources. E.g., “ reduce wastage of food, water in school/family”.</li> </ul>	<ul style="list-style-type: none"> <li>· Expresses her feelings/ideas on any event/ situation/objects through creative expressions by using locally available material.</li> </ul>	<ul style="list-style-type: none"> <li>· Expresses/shares one’s own ideas/feelings or others through writing in a creative manner.</li> </ul>
<ul style="list-style-type: none"> <li>· Using mobility aids like wheelchair, crutches, white cane etc.</li> </ul>	<ul style="list-style-type: none"> <li>· Creates designs by using variety of material by using fallen dry leaves, flowers, clay and pebbles, etc.</li> </ul>	<ul style="list-style-type: none"> <li>· Creates designs by using variety of material by using fallen dry leaves, flowers, clay and pebbles, etc.</li> </ul>	<ul style="list-style-type: none"> <li>· Creates designs by using variety of material by using fallen dry leaves, flowers, clay and pebble</li> </ul>
<ul style="list-style-type: none"> <li>· Involving all children as active participants in all activities and creative play</li> </ul>			

<b>Explanation: (Pedagogical Processes)</b>	<b>Learning Indicators: III</b>	<b>Learning Indicators: IV</b>	<b>Learning Indicators: V</b>
<ul style="list-style-type: none"> <li>· Providing opportunities and getting children involved in making guesses/estimates by asking simple questions, creating situations, showing pictures, etc.</li> </ul>	<ul style="list-style-type: none"> <li>· Makes her own guesses and gives her own reasoning on any event/situation in day-to-day life. e.g., “how many hand spans will cover the table/desk”? “Where do animals drink water other than the pets?” “How many mugs of water are required to fill a bucket”?</li> </ul>	<ul style="list-style-type: none"> <li>· Recognizes that there can be more than one possible explanation of an event / activity. E.g., “describes beauty of Taj Mahal, monuments, process of water purification followed at home”.</li> </ul>	<ul style="list-style-type: none"> <li>· Recognizes that there can be more than one possible explanation of an event / activity. E.g., “describes beauty of Taj Mahal, monuments, process of water purification followed at home”.</li> </ul>

<ul style="list-style-type: none"> <li>· Providing opportunities to understand one's relationship with others; e.g. relationship with close and distant relatives;</li> </ul>	<ul style="list-style-type: none"> <li>· Explains the relationships of self with other members of the family and depicts through drawings and written language. E.g. makes family tree (depicting only two generations (father/grandfather))</li> </ul>	<ul style="list-style-type: none"> <li>· Makes one own guesses and formulates her own reasoning's on any seen event/phenomenon in day to day life. E.g., "how much water is required to cook the rice for four people; how much food will be required for 2 day journey by train for her family".</li> </ul>	<ul style="list-style-type: none"> <li>· Describes any event/ phenomenon/ situation in one's own way (verbally/ written/ non verbal). E.g., "she is able to reason out why people living in Juggies are displaced from their homes, why do we need to keep pickles in the sun during its process of making etc".</li> </ul>
<ul style="list-style-type: none"> <li>· Encouraging children to think of different ways (divergent thinking of any explanation) of solution of any problem e.g. different ways to go to principal's room. Which do they think is the longest/shortest route and explain. Children with no vision should be allowed to use their mobility stick to walk different paths beforehand. This will encourage them to participate with other children in the activities</li> </ul>		<ul style="list-style-type: none"> <li>· Seeing relationships of self with others. E.g., "she explains the relationships of family members with self and also relationships among themselves. She can depict this by drawing family tree". (more than two generations)</li> </ul>	<ul style="list-style-type: none"> <li>· Identifies the reasons of any problem/ event phenomenon in natural and social environment. E.g, "making logical connections why does food spoil more in summer than winter seasons, how do we know food is spoils sooner than others".</li> </ul>

		<ul style="list-style-type: none"> <li>· Using evidences/ information to make simple predictions with the support of elders/ on her own. For example using information about mode of transport she could predict fuel consumption in different vehicles.</li> </ul>	
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<b>Classification: (Pedagogical Processes)</b>	<b>Learning Indicators: III</b>	<b>Learning Indicators: IV</b>	<b>Learning Indicators: V</b>
<ul style="list-style-type: none"> <li>· Creating and utilizing classroom for group work; activity site by depicting various objects in the classroom to develop discrimination skills/identifying skills</li> </ul>	<ul style="list-style-type: none"> <li>· Identifies objects, plants, animals, food items based on their observable features in the surroundings</li> </ul>	<ul style="list-style-type: none"> <li>· Identifies objects, plants, animals, food items based on their observable features in the surroundings</li> </ul>	<ul style="list-style-type: none"> <li>· Identifies similarities or differences in various environmental objects, plants, animals, food items based on their observable features.</li> </ul>
<ul style="list-style-type: none"> <li>· Providing material &amp; objects for grouping to get the hands-on experiences; for.</li> <li>- Sorting objects by providing material of various size, colour, texture in small group and giving activities to sort out/group objects, based on one criteria at a time</li> <li>- Gradually (in classes IV/ V) providing opportunities to group based on two or more than two criteria at a time</li> </ul>	<ul style="list-style-type: none"> <li>· Engages actively in sorting the objects by one/two observable features at a time. E.g., “sorting objects on the basis of one/two visible features at a time e.g. (size, colour, shape, texture etc. classify leaves on the basis of their smell, colour, shapes, texture)”.</li> </ul>	<ul style="list-style-type: none"> <li>· Differentiates/ discriminates environmental objects, animals, plants, food items based on their observable features.</li> </ul>	<ul style="list-style-type: none"> <li>· Sequences / sorts by their size, shapes, colours, texture</li> </ul>

	<ul style="list-style-type: none"> <li>· Groups objects/animals/plants according to similarities in relation to their appearance/habitat/food/movement. E.g., “looking for similarities and differences in different ways of cooking – like frying, roasting, steaming; - Sorting things that are made from rice and wheat;</li> </ul>	<ul style="list-style-type: none"> <li>· Engages actively and sorts/ group objects, plants, animals based on two common features at a time. o E.g., “ groups animal’s pictures having beak and claws in one group and animals who do not have these features in other category”.</li> </ul>	<ul style="list-style-type: none"> <li>· Classifies/ make categories of the objects, leaves, picture of plants, animals, food items, etc. based on two or more than two features at a time. o E.g., “group flowers based sambhar, tea and then sorting these in to solids and liquids”.</li> </ul>
	<ul style="list-style-type: none"> <li>· Classifies objects/animals/plants according to differences in relation to their appearance/habitat/food/movement. E.g., “Making a list of foods that one often eats such as dals, vegetables, rice, soup, water, roti,, biscuits, sambhar, tea, and then sorting these into solids and liquids”.</li> </ul>	<ul style="list-style-type: none"> <li>· Compares objects, plants, animals, mode of transport, food items, shelters of animals based on their similarities and differences as per their observable features. E.g., “compares various mode of transport having common features i.e. having 4 wheels, driven by petrol, driven and observes differences in them such as size of wheels (small, big), sounds of vehicles”.</li> </ul>	<ul style="list-style-type: none"> <li>· Compare objects plants, animals, food items based on their similarities and differences as per their observable features more minutely. E.g., “Listening the differently materials seen in the buildings nearby- sand, cement, steel, bricks, and aluminum and classifying these in various ways”.</li> </ul>

<b>Questioning: (Pedagogical Processes)</b>	<b>Learning Indicators: III</b>	<b>Learning Indicators: IV</b>	<b>Learning Indicators: V</b>
<ul style="list-style-type: none"> <li>· Providing opportunities for</li> <li>- new ideas/questions to emerge</li> <li>- Framing questions for own queries and sharing with peers/elders;</li> <li>- Constructing knowledge by using various resources other than the textbook i.e peer group interaction,</li> </ul>			

group work, puzzles, variety of concrete material			
	<ul style="list-style-type: none"> <li>· Expresses curiosity on any phenomenon/ event/celebration at home/in the immediate surroundings</li> <li>· E.g., “rainbow and cloud formation, customs followed in family”</li> </ul>	<ul style="list-style-type: none"> <li>· Expresses curiosity on observations on the new objects/ event/ phenomenon (not only of immediate surroundings but by seeing other ways i.e. T.V, films, newspapers).</li> </ul>	<ul style="list-style-type: none"> <li>· Expresses curiosity while observing new objects/situation /phenomenon in the natural and social environment.</li> </ul>
<ul style="list-style-type: none"> <li>· Creating supportive climate where children have a freedom to raise questions;</li> </ul>	<ul style="list-style-type: none"> <li>· a.)Asks questions that demonstrates a range of thinking skills (what, why, where) e.g. “Why do we not eat all the vegetables throughout the year?” “Why does my four-month old sister only drink milk?”</li> <li>· 2.b)Generates/frames questions on her own on familiar objects/animals/plants and events in the immediate surroundings. e.g. “from where do plants get water?” “Where do lizards go in winter?” “What happens if there are heavy rains?” “How is rain both good and bad for the environment?” “What will happen if birds could not fly but only</li> </ul>	<ul style="list-style-type: none"> <li>· Asks questions/ frame questions of higher order (not only of what, &amp; where level but want to know why and how level) to know the answer. .E.g. “why do we preserve winters (some) vegetables, for summers , why do we need to keep preserved food items in sun. Why do some areas in the locality/colony only get regular water supply”</li> </ul>	<ul style="list-style-type: none"> <li>· a) Asks and frames questions to find out more details.</li> <li>b)Ask questions independently or with classmates, to explore a topic further. E.g., “while working cooperatively in a group, plan their flower garden by posing questions (what flowers grow best in the available soil and lightening conditions?, what materials will be needed to maintain the garden?) and gathering data to address these questions.”</li> </ul>

	<p>walk on their feet?          “Why dals/seeds are soaked before cooking; why round, smooth pebbles are found near the river side; how grass and small plants grow on their own, without being planted by anyone”.</p>		
	<ul style="list-style-type: none"> <li>· Reflects critically on various issues of social and cultural discrimination. (Related to working children, girls/women, elderly and differently abled).</li> </ul>	<ul style="list-style-type: none"> <li>· Expresses her creativity through various ways E.g“. asking questions, framing questions in class activities, creates new work etc”</li> </ul>	<ul style="list-style-type: none"> <li>· Raises critical questions on the displayed material such as posters/advertisements new items in school/ neighborhood.</li> </ul>
		<ul style="list-style-type: none"> <li>· Reflects critically on various issues related to social/cultural aspects to child’s life. E.g. gender discrimination in the family, school, neighborhood visit to Ojha’s, Bhagats for treatment</li> </ul>	
		<ul style="list-style-type: none"> <li>· Accepts feedback given by peers/ elders on one’s own work/ view and gives feedback to others objectively.</li> </ul>	



<b>Analyzing: (Pedagogical Processes)</b>	<b>Learning Indicators: III</b>	<b>Learning Indicators: IV</b>	<b>Learning Indicators: V</b>
<ul style="list-style-type: none"> <li>· Creating situations and encouraging children to predict;</li> </ul>	<ul style="list-style-type: none"> <li>· Defines situation or events in her simple language.</li> </ul>	<ul style="list-style-type: none"> <li>· a). Describes situation/ event/ phenomenon in her own language in a sequential manner as seen by her E.g. ,“changes seen in sprouting of seeds, changes seen in various seasons” .</li> <li>· b). Summarize information and opinion about a selected problem or issues E.g., “ What difficulties if there would be no bridge to cross over?” .</li> </ul>	<ul style="list-style-type: none"> <li>· Reads and analyses pictures, photographs, textual material on her own/support of elders. E.g. “after observing picture of a fort/visit to a fort analyzes the reasons why kings built huge walls, big gates, huge boundary walls etc” .</li> </ul>
	<ul style="list-style-type: none"> <li>· Predicts and identifies probable reasons of any event/situation/phenomenon seen /observed E.g., “ predict that a ten spoonful of water would fill a bowl or identifies why do a wet surface would dry more quickly when exposed to wind” .</li> </ul>	<ul style="list-style-type: none"> <li>· Predicts/ identifies probable reasons of any situation/event/phenomenon seen by her E.g., “predicting/ identifying why six month old child cannot eat, why some old people cannot eat hard things, why river gets spoilt”;</li> <li>· Making a guess of how far s/he can roll a ball along the ground and then measuring how far it actually goes.”</li> <li>· Thinking of three different ways to go</li> </ul>	

	<p>· Makes simple inferences (reasoning); E.g. , “ between the shapes and size of vessels and the water stored in them. e.g. Taking vessels of different shapes and sizes and predicting and testing which one contains more/less water, etc.?”</p>	<p>From the classroom to the principal’s room. Which do s/he think is the longest /shortest route?”</p> <p>· Makes simple inferences on any event/ situation / phenomenon seen by her E.g., “all things cannot dissolve in water, sugar/salt dissolves fast in warm water than the cold water, River’s water pollutes due to cleaning utensils, clothes, bathing animals, throwing garbage in water or near water”.</p>	<p>· Predicts the reasons (cause and effect) about different scientific phenomenon seen by her. E.g., “why dal/whole grains are soaked before cooking; why smooth pebbles are found near the river side’s; why does the curd get sour more in summer than in winters?”</p> <p>· Draws simple inference of any observed event or phenomenon in the natural environment. E.g. “discussing possible reasons and derives their conclusion”.</p>
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<b>Hands on activities: (Pedagogical</b>	<b>Learning Indicators: III</b>	<b>Learning Indicators: IV</b>	<b>Learning Indicators: V</b>
<p>· Providing opportunities for individual/group work (activities/hand on activities) for children to manipulate, try out, improvise innovate by using locally available material.</p>	<p>· Creates simple objects (clay/locally available material) and engages in handson activities through pictorial instructions or with the support of elders. E.g. “improvising/making a toy-train from empty matchboxes, simple jigsaw puzzle using cardboard; creating pictures of different animals with dried leaves.”</p>	<p>· Makes/ creates simple objects/ simple model with the locally available material on her own with the support of her elders.</p>	<p>o Makes/ creates simple objects /model with the locally available material on her own with the support of elders.</p>
	<p>· Tries out/manipulate with the given material/objects /hands on activities with the support of elders/independently. e.g., putting water in various containers to demonstrate water takes the shape of any container, flows down and feels wet;</p>	<p>· Conducts simple hands-on-activities in group situation E.g. “dissolves sugar, salt, sand, wood shavings in water and share results.”</p>	<p>o Performs simple experimental objects/materials under the guidance of elders.</p>
		<p>· Demonstrates that water takes shape of the container E.g., “. demonstrates by using different shape vessels</p>	<p>o Conducts simple hands-on activities /experiments in the group with the support of elders. E.g., “what dissolves in water and what does not (sugar, chalk, salt etc.)” and write their own observations.</p>

<b>Concerns for Justice and Equality: (Pedagogical Processes)</b>	<b>Learning Indicators: III</b>	<b>Learning Indicators: IV</b>	<b>Learning Indicators: V</b>
<ul style="list-style-type: none"> <li>· Providing opportunities for activities and sharing experiences in an unbiased classroom environment to show respect and acceptance of people as they are such as reading stories/narratives that promote respect, care, empathy, gender sensitivity and problem solving.</li> </ul>	<ul style="list-style-type: none"> <li>· Develops sensitivity towards plants, animals, environment needs of differently-abled children, and learns to express feelings in different ways.</li> </ul>	<ul style="list-style-type: none"> <li>o Reflects sensitivity towards the needs of differently-abled children, and learns to express feelings in different ways</li> </ul>	<ul style="list-style-type: none"> <li>o Reflects sensitivity towards plants, animals, old, young ones, differently-abled etc. E.g. “protection of forest , species of various animals, such as poaching of tiger.”</li> </ul>
	<ul style="list-style-type: none"> <li>· Expresses concern for equality and for justice for disadvantaged group of society, and gives her own opinion</li> </ul>	<ul style="list-style-type: none"> <li>o Expresses concern for equality and for justice for disadvantaged group of society, and gives her own opinion</li> </ul>	<ul style="list-style-type: none"> <li>o Voices opinion and attempts to take initiatives for equality.</li> </ul>
<ul style="list-style-type: none"> <li>· Creating unbiased classroom environment and giving equal opportunities to all; e.g. a child could make a ramp for physically handicapped people in her drawing, write a poem for her classmate who cannot see but has many other skills.</li> </ul>	<ul style="list-style-type: none"> <li>· Avoids wastage of material and suggests ways for reuse of material in day to day life</li> </ul>	<ul style="list-style-type: none"> <li>· Describe in detail how to show respect for the environment and avoid wastage of material and suggest ways to reduce wastage for reuse of material. E.g., “ recycle”; “clean up school premises”.</li> </ul>	<ul style="list-style-type: none"> <li>· Describe and document the steps involved in supporting actions that positively affect the school environment E.g. “ involved in school clean up, campaign”; “group projects”; “putting used paper in the recycle bins”; “conserving materials” , “ not to throw leftover food in the grounds”.</li> </ul>

· Developing themes and activities that are inclusive of culture, language and diversity	· Shows no biases in behavior (E.g. “sitting, eating, working, sharing with all irrespective of traditional and cultural biases”).	· Shows no biases in behavior E.g. “sitting, eating, working, sharing with all irrespective of traditional and cultural biases”.	· Show concerns in any situation on gender differences/ biases with children in family and school such as defined gender roles in the family, caste discrimination and children belonging to marginalized sections of the society, etc.
· Using appropriate words and statements with peers when speaking , sharing and taking turns			· Shows sensitivity towards plants, animals, old, young ones, differently abled, etc

<b>Cooperation: (Pedagogical Processes)</b>	<b>Learning Indicators: III</b>	<b>Learning Indicators: IV</b>	<b>Learning Indicators: V</b>
· Creating situations for group work and whole class activities in the class by - Providing opportunities to act as group leader, as a team member - Giving responsibilities	· Engages in group work and share things with peers.	o Engages and cooperates in group work calmly.” E.g.,” collage work, Mural “etc.	o Engages and cooperates in group more work calmly; listen and work with other children.
· Creating and utilizing classroom environment for group learning	· Accept responsibility for age appropriate tasks E.g., “turning off the lights when not in use; not wasting paper; throwing litter in the bin”; organizing belongings;”	o Accepts responsibility to lead the group for certain expected tasks, undertaken in the classroom. E.g., “making a to –do list;” “staying on a given task”.	o Accepts and takes responsibility in a more refined manner .E.g., “learning from mistakes”; “encouraging others to do the things in a right way.”

<p>· Providing opportunities to identify their own strengths and areas which need improvement with the support of peer group and elders</p>	<p>· Expresses empathy for others. E.g., “Extend helps/support to friends when required.”</p>	<p>o Shows respect for other children and adults. E.g., “taking turns ; letting others to finish an activity or asks to join them</p>	<p>o Recognize and accept individual differences. E.g. “Describing the problem without blaming.”</p>
<p>· Create situations to learn things in a collective manner</p>	<p>· Follows rules made for games or other collective tasks undertaken in the school/home.</p>	<p>· Follow rules and understand the reasoning behind that. E.g., “listening to others without interrupting.”</p>	<p>o Follow rules made by group members for better functioning of the group E.g. “using dustbin, making queue for the mid day meal, follow instruction for not using polythene , avoiding the fire crackers on festivals.</p>
	<p>· Works with others to solve problems. e.g., children are asked to turn to the child next to them and work cooperatively in answering a question; solves a problem by working with others, sharing ideas, and testing the solutions</p>	<p>· Work with others and appreciate contributions of others in class activities. E.g. “work in cooperative group to design a flower garden for their school”</p>	<p>· a) Exercise appropriate control in independent and group activities. E.g., “focus on group or independent task to completion.”</p> <p>b.) Address challenges using appropriate social and coping skills. E.g., “doing things for other people;” changes activity when told ‘NO ‘ or presented with an alternative by teacher or peer</p>

	<ul style="list-style-type: none"> <li>· Shows some responsibility for his/her own health, and the health and well being of others. E.g. , “practices good personal hygiene and cleanliness; discusses healthy habits, and practice self-control by abstaining from actions that harm one’s self as well as others”.</li> </ul>		<ul style="list-style-type: none"> <li>· Working through challenges in a small group. E.g., “learns to negotiate and appreciate the difference of opinion / view point of other members”.</li> </ul>
	<ul style="list-style-type: none"> <li>· Creating and utilizing school environment for group learning E.g., “ takes a pollution walk, gathering examples of litter and trash”.</li> </ul>		

## Guidelines for users

Curricular expectations or learning outcomes and learning indicators for classes III and V have been developed to facilitate teachers/other stakeholders with the understanding to undertake this exercise holistically. Some general guidelines for users are as under:

- The curricular expectations of Environmental studies (EVS) have been developed for classes III and V. These outcomes are identified keeping in view the objectives of teaching-learning of EVS, derived from the recommendations of National Curriculum Framework -2005. The learning outcomes for class III have been identified in relation to child's immediate surroundings as children of this stage view the environment in a holistic way rather than compartmentalized into natural and social environment. While the learning outcomes for class V have been identified, focusing gradually moving from immediate environment to the natural and social environment.
- In order to achieve these learning outcomes, what kind of pedagogical processes are necessary to be required, have been discussed in the column one. As EVS learning is process-oriented its content has to be derived from child's real life experiences, as per the need and context. The column two discusses and suggests this aspect at length along with examples.
- The column two - four presents the various learning indicators of EVS. A conscious attempt has been made not to provide these indicators in the form of rubric or outcome based assessment standards. The reason being, by providing assessment rubrics which focus on testing or on product without taking care of child's process of learning. Testing knowledge, skills likely to have 'wash back' effects on curricular expectations. Thus these indicators are not summative in nature.
- The learning outcomes and pedagogical processes and learning indicators do not correspond one to one. The reason being learning outcomes are to be achieved over a period of time with the regular interaction with children, as these are related to child's abilities, skills, values, attitudes and other personal, social qualities. Thus various processes need to achieve the expected learning outcomes. The progress of child's learning on each process can be seen through some indicators. These indicators have been given class-wise and are suggestive in nature.
- Learning Indicators for each class include examples to understand the extension of learning. For example, the level of complexity and extension of learning from class III to V can be understood easily. These examples would help you to understand length, depth and width of each broad process indicator more easily.



**This Handbook is the Personal Copy of Shri/Smt. ....**

**.....**

**EVS teacher of .....School, .....**

**My special efforts towards enhancing Quality of EVS Education in my school are as under:**

<b>A.</b>	<b>Five best Activity Based Worksheets prepared by me for pupils' understanding of Concepts in EVS syllabus. (Write titles)</b>
1	
2	
3	
4	
5	
<b>B</b>	<b>Five pedagogic initiatives/ strategies/best practices adopted by me for improving teaching-learning process in my EVS class.</b>
1	
2	
3	
4	
5	
<b>C</b>	<b>Five good practices adopted by me for monitoring the progress of pupils' learning in my EVS class.</b>
1	
2	
3	
4	
5	

<b>D</b>	<b>Five prominent examples in which training inputs are being used by me in my day-to-day interactions with my students for quality improvement in my EVS class.</b>
1	
2	
3	
4	
5	
<b>E</b>	<b>Five examples of professional support I provide to my fellow teachers teaching EVS.</b>
1	
2	
3	
4	
5	

Your beliefs become your thoughts,  
Your thoughts become your words,  
Your words become your actions,  
Your actions become your habits,  
Your habits become your values,  
Your values become your destiny.

- Mahatma Gandhi

There is no end to education. It is not that you read a book, pass an examination, and finish with education. The whole of life, from the moment you are born to the moment you die, is a process of learning.

- J. Krishnamurti

Education is the best friend. An educated person is respected everywhere. Education beats the beauty and the youth.

- Chanakya

The highest education is that which does not merely give us information but makes our life in harmony with all existence.

- Rabindranath Tagore

Education is the manifestation of the perfection already in man.

- Swami Vivekananda