DIPLOMA IN ELEMENTARY EDUCATION (D.El.Ed.)

Course-505

Learning Environmental Studies at Primary Level

Block -1
Importance of Teaching-Learning of EVS at Primary Level

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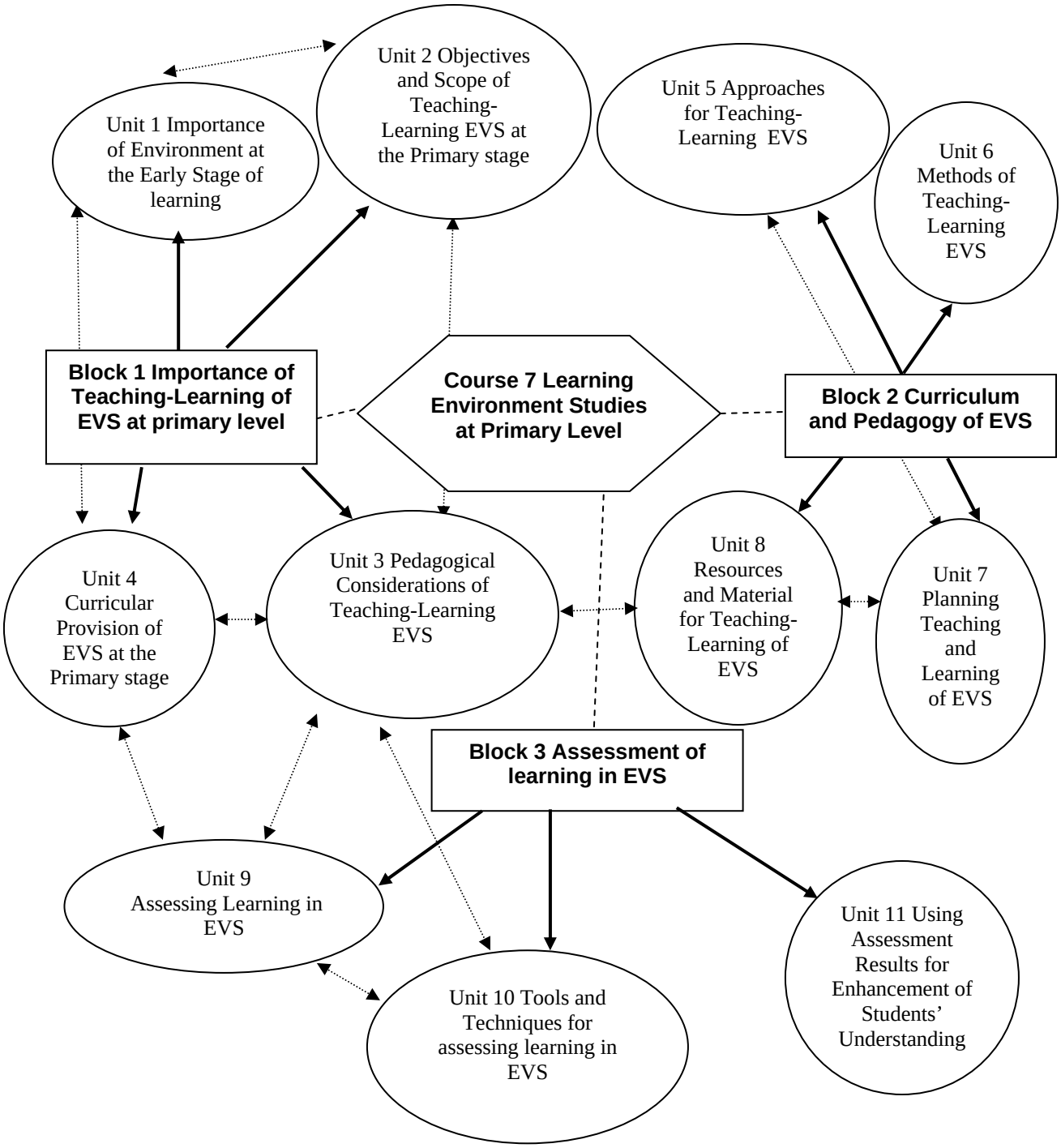
Course concept Map for Course-505 Learning of Environmental Studies at Primary Level



Credit Points (4=3+1)

Block	Unit	Name of Unit	Theory Study Hours		Practical Study
			Content	Activity	
Block-1: Importance of Teaching-Learning of EVS at Primary Level	**U1**	Importance of Environment at the Early Stage of learning	3	2	Understanding EVS in the context of NCF 2005 & new book
	U2	Objectives and Scope of Teaching- Learning EVS at the Primary stage	4	2	EVS a composite subject –Synergies with Science, Social Science and Environmental Science
	U3	Pedagogical considerations of EVS concepts	5	3	Field visit to understand socio-economic point of learning of specific issues
	U4	Curricular Provisions of EVS at the Primary stage	4	2	Case analysis of assessment of learning in EVS
Block 2: Curriculum and Pedagogy of EVS	**U5**	Approaches for Teaching-Learning EVS	4	2	Hands on activity on innovative teaching-learning ideas
	U6	Methods of Teaching-Learning EVS	5	4	Development of Teaching-learning materials on EVS
	U7	Planning Teaching and Learning of EVS	4	4	
	U8	Resources and Materials for Teaching-Learning of EVS	3	3	
Block 3: Assessment of learning in EVS	**U9**	Assessing Learning in EVS	4	3	
	U10	Tools and Techniques for assessing learning in EVS	4	3	
	U11	Using Assessment Results for Enhancement of Students' Understanding	3	4	
		Tutoring	15		
		Total	58	32	30
		Grand Total	**58+32+30=120 hrs.**		

Block 1

Importance of Teaching-Learning of EVS at Primary Level

Block Units

BLOCK INTRODUCTION

The course "Learning Environmental Studies at Primary Level is designed to forge an integrated perspective that draws upon insight from Science, Social Science and Environmental Science. Environmental Education at this level is all about preparing learners to become global citizen with ability to think critically, to develop sensitivity and respect for the natural and socio-cultural environment. The teacher plays a pivotal role in formal education system where teacher's active participation and innovativeness is crucial for effective teaching and learning to occur.

The course module has been designed so as to empower you with ideas for effective transaction and evaluation of environmental studies at the Primary stage making the situation complete learning centred.

General Objectives

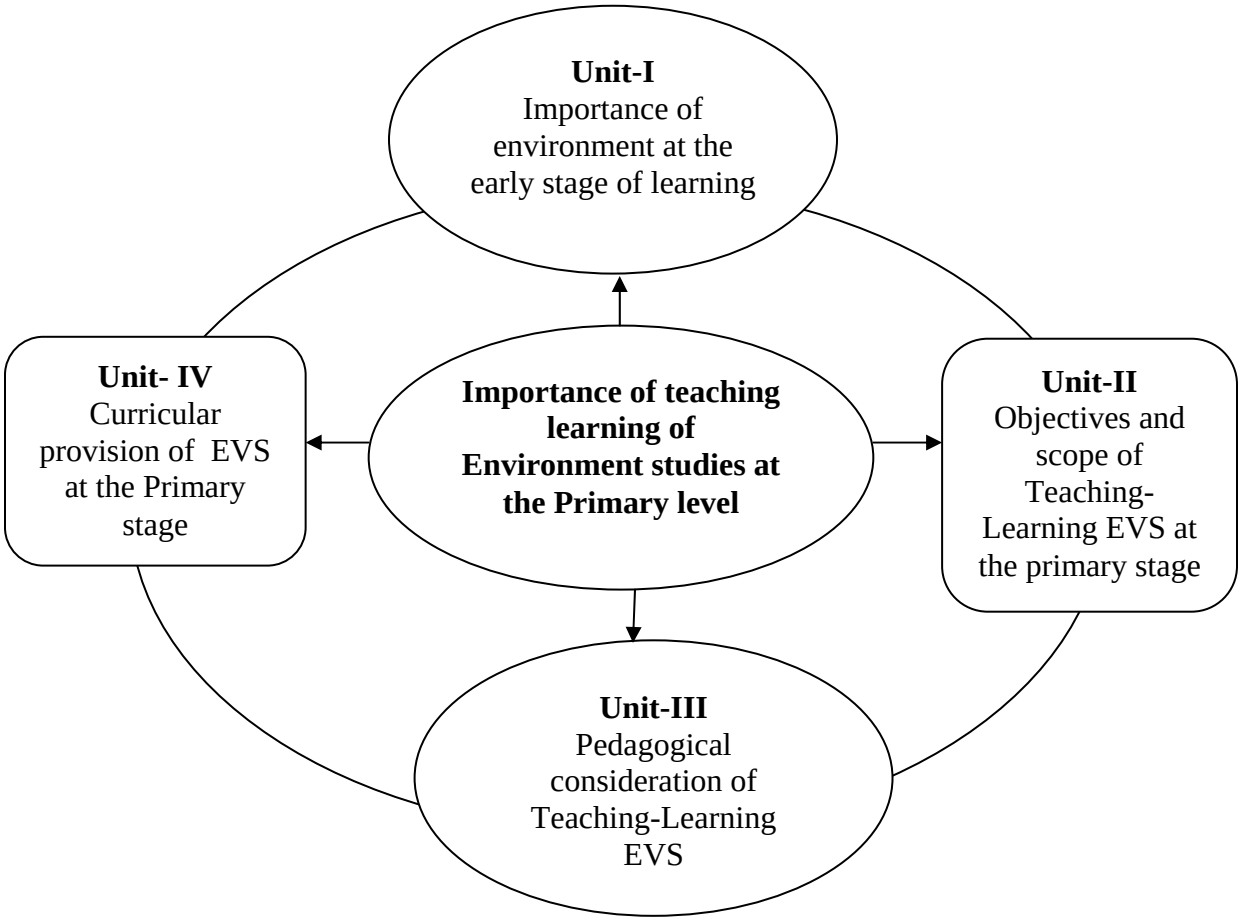
This Course is designed to

- develop understanding about the importance and concept of environment
- realise the importance of learning about environment at the Primary level of education
- visualise appropriate learning resources from the environment
- develop appropriate learning situation with focus on interactive and experimental learning
- assess learning levels, learning difficulties of each child and design appropriate strategies for future environment.

Specific Objectives

After going through this course, you will be able to

- explain the genesis of environmental studies at primary stage of education
- describe the objectives and scope of EVS at primary stage
- conduct real life based hands-on activities in the school
- select and use appropriate learning resources from the environment
- carry out effective continuous and comprehensive learning assessment



This block will empower you to

- explain importance of environment at the early stage of learning
- describe the objectives and scope of teaching EVS at the Primary stage
- do pedagogical organisation of EVS concepts at the Primary stage
- identify the curricular provision of EVS at the Primary stage

You as facilitators are responsible for empowering your pupils to take initiative in the learning of environment from the early stage. Your pupils will be involved in exploring their respective environment. They must get acquainted with the relevance of it in day to day life and help them to lead a comfortable life.

They will be able to feel the importance of environment and learning about their natural and socio-cultural environment through pedagogical organisation of its concepts and related curricular provision to get prepared to learn science at higher classes.

Unit-1 will familiarise you with the importance of understanding environment at the early stage of learning. This will empower you to have your own justification of getting familiarised with the concepts of environmental studies from the early stage of learning.

Unit-2 will help you to be aware of the reason of inclusion of environmental studies at Primary Stage, the necessity of teaching-learning EVS with special reference to NCF 2005 and values inherent in EVS.

Unit-3 comprises of pedagogical consideration of teaching-learning EVS which enables you to realise the characteristics of EVS, the learning process involved in learning EVS by the young learners, pedagogical organisation for teaching-learning of EVS and the expanding universe of the young learners.

Unit-4 involves curricular provision of EVS at the Primary stage highlighting the salient features and objectives of EVS.

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UNIT 1 IMPORTANCE OF ENVIRONMENT AT THE EARLY STAGE OF LEARNING

STRUCTURE

1.0 INTRODUCTION

In the earlier courses, you probably started with a fairly clear idea of the "subject" that you would be 'teaching-learning'. For example, when you hear the words 'Mathematics', 'Hindi' or 'English' you would more or less know the content and scope of the subject.

As you start this course on teaching-learning Environmental Studies, you may wonder what the content and scope of this would be.

The key word here is 'Environment'. This is a word that may have different meanings for different people. You might be familiar with the story about some blind men who encountered an elephant? Each person imagined what this creature may be like, depending on the part they touched—the tail, legs, the trunk, or ears. One thought that it was a snake, the other thought it was a pillar, the third one was convinced it was a rope, and yet another thought it was a fan. In fact, each person was justified in his/ her perception, but none of them could get the overall picture.

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The word 'Environment' is very much like this. Every person has an idea about what this means and what it includes. In their own way each one is right, and yet, sometimes the impressions remain like assorted pieces of a jigsaw puzzle.

This Unit will try to put together the different pieces to create the holistic picture. This will give you a better understanding of what constitutes the meaning and scope of Environment. The unit will also discuss how environment influences us from the moment we are born, and how we, as human beings, impact our environment, for better or for worse. We will also review as to why is it important to give children the space and opportunities to discover, explore, and develop as all-round individuals within their environment? You will also understand how this approach to teaching and learning provides the foundation of Education for Sustainability.

1.1 LEARNING OBJECTIVES

On completion of this unit, you will be able to:

- explain about a holistic perspective of environment.
- relate the influence of environment on a child's growth and learning.
- narrate the impact of immediate environment on the learning process of a child.

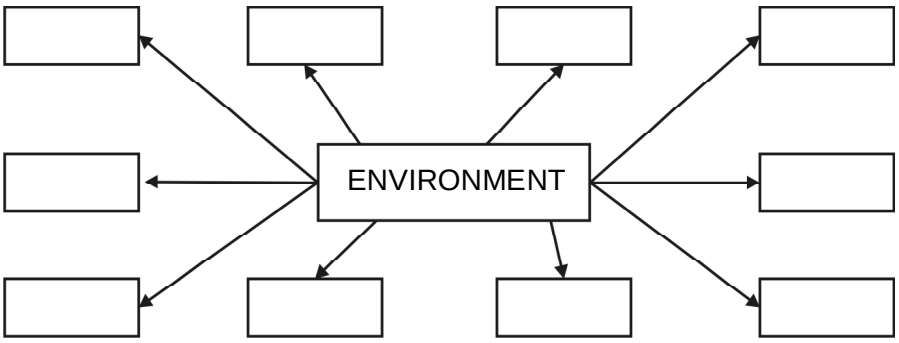
1.2 UNDERSTANDING ENVIRONMENT

What are the first two words that come to your mind when you hear the word "environment"?

_____ _____

For many of us, the word is associated with "Forests" or "Trees", or "Pollution". This is not an incorrect association, but rather a limited one.

Now try to fill in this word web by writing some other words that can be associated with the word environment.



In doing this exercise you have already expanded the sphere of the word 'environment'. If you were told that your word web too is somewhat limited, you may start to wonder what you have missed.

Let us start again to review this. Let us say that 'Environment' is simply the world around us—starting with our skin and reaching out in all directions, in ever-widening circles, until it embraces the universe". Would you agree?

The word environment is derived from the French word "environner" which means to encircle or surround. Thus, taken literally, the word connotes all that surrounds us, or the world around us. So what does the world that surrounds us include? It includes the natural environment and the socio-cultural environment.

Environment, taken in this sense, has no limits—it is whole, continuous and indivisible. It is common to all living organisms—plants, animals and humans. The air, water, land, rocks, plants and animals are as much part of the environment as we humans are. This is what we share with all other living organisms.

Broadly speaking, the environment can be considered as a composite of different aspects.

The **Natural Environment** includes all the a-biotic factors around you such as air, water, soil, rocks and landforms, as well as the biotic elements consisting of plants, animals and micro-organisms. As you know plants, animals and micro organisms are interdependent on each other and on the basic necessities like air, water and nutrients. These interdependencies lead to a variety of interactions between organisms and their environment.

Human-made Environment: Within this, and emerging from this, is the human-made environment which has been twisted by human for own requirement. It includes roads, buildings, industries, dams and other structures which provide goods and services to humans.

Socio-cultural Environment: Individual, family, community, religious, educational, economic and political institutions make our social environment. It is usually from the family that most key activities of society are carried out and one learns to live as a member of society.

Culture is shaped by the natural environment and the interactions between individuals in a community. Culture differs from community to community and society to society. Our cultural characteristics: the food we eat, the clothes we wear, our traditions and norms, are shaped by our natural environment.

The values, traditions, norms, customs, arts, history, folklore practised and followed by communities of individuals make up the socio-cultural environment.

In a nutshell, Environment is everything that surrounds me, of which I am also a part. A few thinkers have gone a step further by saying "environment includes all

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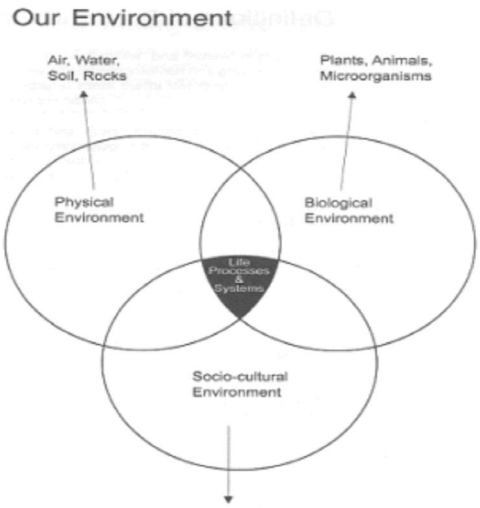
that is "within" and "outside" us. Thus we can say the environment includes not only the physical, geographic and biological conditions, but also socio-cultural, economic and political systems.

At a more comprehensive level, environment is defined as the complex of climatic, biotic, social and edaphic (produced or influenced by the soil) factors (sub-systems of the environment) that act upon an organism and determine its form and survival. It, therefore, includes everything that may directly affect the behaviour of a living organism or species, including light, air, water, soil and other living beings (Wikipedia). Thus environment can be conceived as a composite system consisting of several sub-systems. The interactions of these sub-systems bring about changes in the environment continuously. Hence, environment changes with changes in the sub-systems. As 'Change' is the fundamental characteristic of environment, our environment always remains 'dynamic' and not static. This is represented in the diagram.



Interaction of various components in our Environment

As you can see, our "word web" of environment has expanded considerably. It has become to include several sub-systems/factors influencing each other. That's why Environment is described as not only comprehensive but also as a composite/ complex and dynamic system. Many parts make up the environment as a whole, and those many parts and conditions of the environment are in continuous interaction. These dynamic interactions are of several kinds – from a simple dependency (a food chain) to intricate interdependencies (a food web).

The subject matter of environment thus permeates all subjects and disciplines, it transcends all ages and stages of life.

Check Your Progress -1

a. *From the words given below, choose at least 3 words that describe 'Environment':*

Comprehensive, static, defined, composite, surrounding, dynamic, biotic and abiotic, social atmosphere , flora and fauna.

b. *Which of these does the environment not include?*

Physical, geographic and biological conditions, societies, culture, economy, political systems, none.

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1.3 IMPORTANCE OF ENVIRONMENT IN THE DEVELOPMENT OF THE CHILD

As you have seen, we belong to our environment, grow up in it, learn from it, depend on it, contribute to it, and influence it, just as it influences us. This influence begins from the moment we are born, and continues throughout our life.

The world of the child begins with an awareness of its own body and gradually expands, in ever-widening circles to an exploration of the immediate surroundings—family and home, neighbourhood, school, and beyond.

Learning takes place first and foremost in the home and family. Even when children join school, the learning continues to take place, not only in the school, but at home and within the community.

The immediate environment is the primary context to which the child relates. It includes not just the physical structures and outdoor spaces, but equally the social and cultural world of stories and songs, festivals and get-togethers, family and community celebrations and occasions.

Valuable learning takes place through interactions with the immediate environment. Every day children experience the natural environment—seasons, heat, rain, cold, the sky, sun and moon, the different aspects of water, plants and animals. Sadly, caught up as they are in the busy routine of time tables, homework and examinations, children do not have the time and space to really explore and immerse themselves in these experiences. Most curricula do not provide the time and space for the joy of discovery and experiences true to life.

Children, especially young children, have a natural desire to learn and make sense of the world around them. It is critical that they are provided with an environment that enables and supports this learning.

The National Curriculum Framework 2005 (NCF 2005) recognizes this unique characteristic, as well as the opportunity. "Learning in the early years must hence be directed by the child's interests and priorities, and should be contextualised by his/her experiences, rather than being structured formally. An enabling environment for children would be that is rich in stimulation and experiences, that allows children to explore, experiment and freely express themselves, and one that is embedded in social relations that give them a sense of warmth, security and trust" **(NCF 2005, p66).**

Check Your Progress-2

a. Select the correct answer from the given option

What are the characteristics of an enabling environment for a child?

Stimulation, experience, no scope for experiment, warmth, insecurity, trust, free expression, static

b. Fill in the blanks

Child relates to his/her immediate Environment. This Environment becomes the …….. context for learning.(Primary, secondary, tertiary)

1.4 LINKING ENVIRONMENT TO THE CHILD

The period of eight years from class 1 to class 8 is one of tremendous development of the child. During this period there is a shaping of physique, reasoning, intellect, emotions and social skills, as well as values and attitudes that provide a strong life-long foundation. During this period the child is not only developing the foundation of academic learning, but is also 'learning for life'. The 'learning for life' takes place within this environment, which as we have now understood, includes every aspect of the world around us.

Poverty exposes children to terrible risk to their health development and education. They suffer severely as they have to undergo a poor environment. Once the environment is polluted all children become the first pray of the situation. They are at greater risk from environment hazards. They are different from adult in their physical size, immature organs, metabolic rate, behaviour, natural curiosity and lack of knowledge with the current trend of environmental degradation. They have fewer places to escape. They can even be exposed to harmful environmental hazards before birth.

On the other hand, children are dynamic and powerful forces for environment protection. They do have natural interest in nature and can easily be made instrumental for protection and preservation of their environment. They can easily be indulged in environmental activities and can contribute effectively.

The link between children and environment has been recognised in many international declaration and agreements over the past decade.

To mention a few of those are:

- Convention on the Rights of the Child(1989)
    - ❖ To combat disease and malnutrition including within the framework of primary health care

- Plan of Action for Implementing the Work Declaration the Survival Protection and Development of Children (1990)
    - ❖ To improve the environment by combating disease and malnutrition and promoting education
- The Habitat Agenda (1990)- The needs of children and youth, particularly with regard to their living environment have to be taken fully into account.
- Declaration of the Environment Leaders of the Eight on children's Environmental Health **(1997)**
    - ❖ Children face significant threats to health from an array of environmental hazards. They are particularly vulnerable to pollution Prevention of exposure is the single most effective means of protecting children against environmental threats.
- G8 Environment Ministers Communiqué (2001)
    - ❖ Development policies and implementation of action to provide children with a safe environment, including during pre-natal and post-natal development towards the highest attainable level of health.
- The Berlin Commitment for Children of Europe and Central Asia(2001)
    - ❖ Protect all children, irrespective of the social and economic conditions, they live in from environmental threats; create child-respecting urban and rural environments which enable all children to have access to a range of play and informal learning opportunities both at home and within their local communities.

The special session on children of the United Nation General Assembly in May 2002 provided an opportunity to world leaders to formally adopt principles together with a series of supporting action to make a world safe for children. The ten principles are:

- Leave no child out
- Put children first
- Care for every child
- Fight HIV/AIDS
- Stop harming and exploiting children
- Listen to children
- Educate every child
- Protect children from war
- Protect the earth for children
- Fight poverty: invest in children

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Source: Global movement for children (Http://www.gmfc.org/en**)**

Degraded environmental conditions and other physical hazards are common and inescapable for the poor in **densely** populated cities, where infectious diseases can spread rapidly. The air, soil and water pollution do not spare the children poor or rich. Ultimately the unhealthy environment affect all types of children what to speak about their education.

1.5 VALUING ENVIRONMENT FOR LEARNING

Environment forms an important aspect of learning. Children interact with their environment continuously. Everything in the environment attracts them. Children explore and experience different things in their environment, and derive meaning from them. This experience is unique to each child. The child continuously modifies this understanding as he or she further experiences /encounters new things in the surrounding environment. Thus environment provides the necessary stimuli for children to develop both physically and mentally. This initial experience of children needs to be considered, and expanded/integrated in the teaching-learning of environment, as it is within this concrete experience of children only that a real understanding of the environment can be developed. Thus the immediate environment of a child becomes an important medium of learning.

The NCF 2005 recognises the critical role of the environment as the context in children's learning by emphasising that "Learning takes place through interactions with the environment around, nature, things and people, both through actions and through language. The physical activity of moving, exploring, and doing things, on one's own, with one's peers or in the company of adults, and using language—to read, to express or ask, to listen and to interact—are the key processes through which learning occurs. The context in which learning takes place is thus of direct cognitive significance" (NCF 2005, **p18).**

The NCF 2005 **(p15):** also emphasises these points with respect to the environment and children's learnings

- All children are naturally motivated to learn and are capable of learning.
- Making meaning and developing the capacity for abstract thinking, reflection and work are the most important aspects of learning.
- Children learn in a variety of way – through experience, making and doing things, experimentation, reading, discussion, asking, listening, thinking and reflecting and expressing oneself in speech, movement or writing—both individually and with others. They require opportunities of all these kinds in the course of their development.
- Learning takes place both within the school and outside school. Learning is enriched if the two arenas interact with each other.

For this to happen, children need to be given adequate opportunities to relate to the environment around them, both physical and social; to nurture their curiosity—to do things, to ask questions and to pursue investigations and share their findings.

This is the essence of teaching and learning about the environment. As facilitators of this experience, you have the challenge of creating suitable opportunities for not only these experiences, but also developing in the children, the attitudes and values that will transform these into life-long learning. This is the broad aim of education for sustainable development.

1.6 LET US SUM UP

The term Environment is understood in different ways. As you have read **so far** environment covers a wide canvas, starting with the self and expanding to cover every aspect of the world around us.

- Environment is a complex and dynamic system.
- Environment includes natural, human-made, socio-cultural aspects.
- The subject matter of environment permeates all other subjects and disciplines.
- The environment provides the primary context for a child's learning. Children need to be given adequate opportunities to interact with their local environment and to build their understanding based on those interactions and experiences.
- The NCF 2005 recognises the critical role of environment as the context in children's learning.

1.7 MODEL ANSWERS TO CHECK YOUR PROGRESS

Check Your Progress -1

a. Comprehensive, continuous, surrounding, dynamic, encircling, biotic and abiotic

b. None

Check Your Progress-2

a. stimulation, experience, warmth, trust, free expression

b. primary

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1.8 SUGGESTED READINGS AND REFERENCES

- NCERT (2005) National Curriculum Framework 2005, New Delhi
- Syllabus for classes at the Elementary Level, NCERT, New Delhi.
- http:// www.unesco.org/mab/ind
- http:// www.greenteacher.org
- www.unep.org/ceh/chapter01.pdf

1.9 UNIT-END EXERCISES

i. What are some of the key processes through which learning occurs?

ii. How are these processes linked with the environment?

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UNIT 2 OBJECTIVES AND SCOPE OF TEACHING-LEARNING EVS AT THE PRIMARY STAGE

STRUCTURE

2.0 INTRODUCTION

As discussed in **Unit 1,** the Planet Earth, which is our home or habitat, constitutes our environment. It belongs to all of us and represents our present and future heritage. We are integrally linked with all the living things inhabiting the planet. It is increasingly being realized that our day-to-day activities are impacting this environment, which in turn is impacting us. As human beings continue to have significant impacts on the environment and its resources, education, appears to be the most promising tool for providing the general public (of all age groups) with an understanding of the intensity and ramifications of their actions and behaviour patterns on the environment, and to develop sensitivity and concern towards protection and conservation of environment.

In recognition of this central role of education in environmental protection and conservation, the National Policy on Education 1986 (NPE 1986) states "There is a paramount need to create a consciousness of the environment. It must permeate all ages and all sections of the society beginning with the child.

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Environmental consciousness should inform teaching in schools and colleges. This aspect will be integrated in the entire educational process".

The NPE 1986 and the subsequent educational policies (NCFSE, 2000, NCF 2005) have given environmental education an explicit place in school education. As a consequence, today, the infusion of environmental awareness and understanding has become an integral part of every pupil's curriculum (formal or non-formal), with a view to enabling them to explore and understand their environment, leading to informed concerns and values, and active participation in working for solving environmental problems /issues.

As you are aware, Environmental Education (EE) is introduced at the elementary level as Environmental Studies (EVS). EVS for classes III to V deals with the study of our environment (physical, biological and socio- cultural) with an emphasis on its preservation and conservation **(NCF 2005).**

In the earlier unit you have learnt about how environment plays an important role in children's growth and learning, and how certain values and behaviour towards environment could be effortlessly developed in the early years of children's education through engaging them in direct learning situations and experiences.

This unit is aimed at enumerating the significance and scope of EVS at the primary level, its broad objectives, and some of the values inherent in teaching-learning of EVS. It will empower you to develop knowledge, ideas, values and attitudes about the surrounding world of the learners and make them aware to inculcate habits of being more environment friendly.

2.1 LEARNING OBJECTIVES

On completion of the unit, you will be able to:

- narrate significance of EVS at Primary stage.
- explain the objectives of EVS.
- describe the values inherent in EVS, which need to be inculcated through teaching the subject.
- delimit the scope of teaching-learning EVS with special reference to NCF 2005.

2.2 WHY ENVIRONMENTAL STUDIES AT THE PRIMARY STAGE?

Although we understand the meaning of 'environment' in its broadest context and relate it to its values , many people still associate the term 'environment'

with only problems of 'water and air pollution', 'deforestation', 'vehicular pollution' 'waste disposal', etc. Many also wonder why a subject like Environmental Studies (EVS) is introduced at the primary stage instead of subjects like Science and Social Science and why children at such **a** young age should study about their environment and problems and issues associated with it. This is the same thing as asking questions like "Why EVS at the primary level?", "What is the significance of EVS?" etc.

EVS, at the primary stage, is an integrated subject area which draws upon insights from sciences (physical, chemical and biological), social studies (history, geography, political science, sociology etc) and environmental education (protection and conservation). It is aimed at developing in children a holistic or integrated perspective of the environment where he/she lives in . What does this mean?

You might be familiar with the names of some of the great educational philosophers and thinkers such as Pestalozzi, John Dewey, Maria Montessori, Rudolf Steiner, J. Krishnamurthy, Aurobindo and others. Almost each of these thinkers has invariably reflected on the aim of education as helping a child to develop as a 'wholesome individual', cultivating the moral, emotional, physical, psychological and spiritual dimensions of personality. In essence, they have visualized a 'holistic' education. Holistic education aims at helping students become the most that 'they can be'. This amounts to development of a child's intellectual, emotional, social, physical, artistic, creative and spiritual potential. This is done not by just rote learning in classes but through direct engagement or experience with the environment. Thus, it is child-centred. As its focus is on helping children "experience" rather than "teaching" it involves experiential learning. EVS, by enabling children to explore, understand, appreciate and value his/her environment, helps them derive meaning and joy of learning through connecting with their immediate environment, natural world and the community.

You may recall from the earlier description of environment that it is a composite of natural and human-made surroundings (socio-cultural). One of the main focuses of EVS is to expose children to the actual world they live in. The learning situations/experiences of EVS help children to explore and connect with their natural and human made surroundings. EVS helps children develop their own insights into the functioning of several things in their environment. Such interactions with their surrounding environment are immensely important in the healthy development of children. Such interactions also enhance children's learning capabilities by providing concrete learning experiences.

We depend on our environment for our existence and continuation of life. There is no doubt that each one of us shapes and is shaped by our environment. In this context, each one of us has a moral responsibility to protect and conserve it. We, by our thinking and actions, should help to make this planet a better and safer

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place to live in, not only for the present generation but also for the generations to come. In order to do so, an understanding of what constitutes our environment and its importance becomes a prerequisite.

EVS helps children to explore their immediate 'self' and beyond, to include his/her family (environment), neighbourhood, the locality and also the country. Teaching-learning experiences in EVS are visualised to help the child locate himself/herself in a larger context – as part of a community, the country, etc. This organization of learning experience brings in a concept of mutual dependence of 'self' with 'others' and the natural environment, providing the child with a holistic perspective of the environment and the Planet Earth which we share with all other living organisms, and appreciate the interdependence and interrelatedness of all living things and life support systems EVS, thus provides children with an understanding of how we interact with our environment – physical, biological, social and cultural, and how we are influenced by it.

Such an understanding would enable children to appreciate their intricate relationship with the environment, comprehend the various environmental problems and develop necessary insights and attitudes towards solving them. The approach in EVS goes beyond single subject approach and helps children use the contents and methods of science and social sciences and environment to solve environmental problems/issues in future.

The contents of EVS, for example, cover themes like food, water, shelter, etc. These discuss or deal with the real issues in children's immediate environment, connecting them with their real experiences at home, neighbourhood, community, etc. Such connections/linkages to real-life experiences and situations play a crucial role in developing and fostering in children lifelong attitudes, values, and conviction of actions and behaviours towards environment and its conservation. Thus, EVS not only provides a value education as regards environment, but is also a life-skill education as it encourages children to develop knowledge, ideas, values and attitudes about the world and how it works and learn to communicate and collaborate with other children and adults in their environment.

To summarize what has been described so far, EVS:

- helps children connect with their natural and human made environment and in understanding our dependence on the various components of environment (biotic, abiotic and human made).
- helps children develop a holistic understanding of their environment including socio-cultural environment.
- helps children in maintaining a multidisciplinary perspective to understanding of our environmental issues/problems and appreciate the impact/s of our daily activities on its integrity.

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Check your Progress-1

a. *Environmental Studies at the Primary level draws its contents from science, social science and environmental science. Hence it is a _____ subject area.*

(Composite, single, triple)

b. *Holistic education aims at _____ development of the child.*

i. Academic achievement

ii. Emotional development

iii. Skill development

iv. All round development

2.3 OBJECTIVES OF TEACHING-LEARNING EVS WITH SPECIAL REFERENCE TO NCF 2005

Recall the National Policy on Education 1986 which emphasised on the need for 'developing environmental consciousness for all ages beginning with the child' referred in the introduction to this unit. Studies of developmental and child psychologists have clearly shown that children come to the world with abundant curiosity and wonder. Their curiosity ranges from exploring their environment and neighbourhood to places and everything - animals, plants, materials, etc. They try to satisfy this urge through their interaction with the environment, first-hand experience, from their parents, teachers, peers and media and through a host of other sources. These innate abilities need to be encouraged, patterned and nurtured for individual and societal good.

The NCF 2005 indicates the following as some of the objectives of teaching EVS.

- 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);

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

The above objectives not only suggest the expected learning outcomes but also provide a framework for planning and organising learning experiences/situations for their attainment.

A careful reflection of objectives of teaching EVS as stated in the NCF 2005 would reveal that they are centred on developing in children curiosity and awareness about their surroundings, knowledge and understanding of their environment and their relationships or connections, developing affect attributes (appreciation, values and attitudes) and skills of observation and measurement, collection of information and its processing, creative expression, etc. All the above culminating in an informed concern and care for the environment, in other words conservation of the environment.

Schools can play a critical role in supporting and helping children explore their environment and derive their own meaning from their interactions/experiences. In doing so, children develop their understanding of the physical and human processes which interact to shape the environment. EVS at the primary level is intended to foster a reasoned and sensitive concern for the quality of the environment and for the management of the natural resources. By structuring and organising learning experiences for children to explore, understand and express their experiences, the transaction of EVS in the primary stage contributes to development of conceptual understanding, attitudes and values, skills and habits/practices relating to range of subjects/focus areas at the primary level.

Such learning experiences also introduce children to some of the hidden benefits such as development of appreciation and respect for nature and natural resources, diversity that exits in the environment, ability to express feelings and thoughts, etc.

To put the above in a nutshell, teaching-learning of EVS aims to:

- expose children to the real-life world (natural and socio-cultural).
- enable them to analyse, evaluate and draw inferences about problems and concerns related to environment.

- help them understand environmental issues.
- foster and nurture favourable attitudes and values towards environment.
- promote positive actions.

Check Your Progress-2

a. *The different objectives of EVS are listed in the NCF 2005. These are primarily centred on developing in children the following: (Tick the most appropriate)*

   i. *Curiosity and awareness about their surroundings,*

   ii. *Knowledge and understanding of their environment.*

   iii. *Knowledge of interdependence or connections in nature,*

   iv. *Affect attributes (appreciation, values and attitudes)*

   v. *Skills of observation and creative expression*

   vi. *All the above*

2.4 VALUES INHERENT IN ENVIRONMENTAL STUDIES

In the earlier section we studied about the significance of EVS at the primary school stage. As you know, EVS is more than just a 'subject area'. It is a learning process which is aimed to increase children's knowledge and awareness about the environment and associated problems/challenges, to develop the necessary skills and competencies to understand the dynamics of our interaction with the environment, and to foster environment-friendly behaviours. Environmental educationists greatly understand that 'knowledge about the environment' alone does not guarantee positive environmental action. This needs to be coupled with environmental-friendly attitudes and values. What are these values in EVS that need to be developed in children? An understanding of such environmental values will help a teacher to plan and organise appropriate learning experiences for fostering and nurturing these in children.

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What are Values?

Values are considered as broad affect attributes having enough bearing on the directions of one's perception, learning, views and opinions and behaviour in general. Values are the most powerful motivations of human and social behaviour. In this sense, values define people the parameters of their actions. They define what we accept as good, right or acceptable. We may have our own personally thought-out and constructed values through our interaction with our environment - physical, cultural, social, economic, etc. Children develop values at a much earlier stage of their life in a more or less absolute way through their observation and interaction with people around them (family, community and society) and through their concrete experience of events in the environment. The reinforcement they receive for their behaviours from their elders, siblings, teachers and peer group fixes the values which they carry forward for a longer duration.

In the next few paragraphs, let us try to understand why values are so important in the context of environment.

Recall what you learnt about environment. It was described as a composite of natural, cultural and human made factors. Every living organism, including humans, is dependent on this environment for their survival. It is becoming clearer and clearer today that most of the problems of environment are due to humans and their over-exploitative and consumerist behaviour. Human beings have over-exploited the environment and degraded it. We have always looked at our actions from only one point of view, i.e., how well that particular action would benefit the human community at large, and individuals in particular. We have always defined society as a composite of mankind. Perhaps, because of this narrow definition, we have almost isolated ourselves from all other living organisms in the environment. This alienation tendency has resulted in the generation of non-respectful behaviour towards all other living organisms in the environment.

You know well that our survival and well-being depend on the availability and supply of natural resources. We require natural resources (air, water, land, forests, etc.) to satisfy our basic needs and enjoy certain degree of comfort in life. Think for a minute, we are all influenced by the views, perceptions, values and expectations of our society and as individuals we make our own lifestyle choices that depend on consuming natural resources, to a greater or lesser extent. Look at your surroundings. We have constructed huge buildings with air conditioners, flyovers/bridges, dams and many such engineering marvels. At places we have even transformed natural environments into totally artificial or human made environments. In using natural resources for all these, we have altered the bio-physical world and created our own environment or landscapes. We have viewed

nature as an abundant supply of resources to satisfy all our needs. Mahatma Gandhi has rightly said "Nature has everything for man's needs but not for his greed".

We are increasingly beginning to understand that natural resources, once considered as infinite and abundant, are getting degraded and depleted. It is a fact all of us have the same basic needs in life which is to exist and flourish. We share the same natural resources with each other for our existence. These natural resources are not any one's property or inheritance. Conflicts and confrontations have resulted on sharing, accessing or in using natural resources for meeting the basic needs, resulting in disharmony in human relations – neighbourhood, societies, national and international disparities.

The time has come when we have to re-examine our attitude and broaden our perspective and thinking. It needs to be understood that we are an integral and inseparable component of our environment and we co-habit or share it with all other living organisms. This value and attitude needs to be engendered from early childhood.

It needs to be focused in children that environment does not mean only human beings; it is a community, and that community includes all living organisms. Human beings are only one of the members of this community, sharing all aspects of the environment with other members.

2.4.1 VALUING OUR ENVIRONMENT: THE INDIAN HERITAGE

We, in India, inherit a very rich heritage of valuing our environment. Prithivi Sukta of Atharva Veda, written by Rishi Atharvan, describes the Earth as "Mother" and all living beings as its offspring or children (Atharva Veda, hymn 17). Indian philosophy has always proclaimed all the inhabitants of the Earth as belonging to one family. This is reflected in the fundamental environmental value '*Vasudhaiva Kutumbakam*' meaning 'all that is on the Earth belongs to one single family'. They have a common origin and are interdependent. (Hitopadesha :1.3.71). This is a fundamental value of human and social survival.

Children need to be oriented that each one of us has a responsibility to develop and maintain a good quality of environment (natural and socio-cultural) for the survival and continuation of life on this Earth.

All the religions – Hinduism, Buddhism, Jainism, Islam, Christianity and Sikhism – have always emphasised a harmonious human connection with nature. The earlier referred *Atharva Veda*, a segment of our ancient Vedas is replete with references to protection and preservation of natural resources.

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A verse in the Rigveda says: "We offer our reverence to Nature's great bounties, to those who are old, and to the young, may we speak with the force at our command, the glory of all divine powers. May we not overlook any of them" Our great epics, The Mahabharata, Ramayana, Bhagavad Gita, Puranas and Smritis contain some of the earliest messages on ecological balance and the need for people's ethical treatment of nature. All these have emphasised living in 'harmony with nature' and have recognised that all natural elements hold divinity. Materials and resources on this Earth do not exist only for human use. They are worthwhile in themselves. All have an intrinsic value of their own.

Indian philosophy has evolved a world-view based on the motto "*Loka samasta sukhino bhavantu*" (Let the entire world be happy) thousands of years before any League of Nations or United Nations was thought of to avoid global strife. The Indian nation evolved this grand vision not by marching its armies and conquering the rest and offering peace; but by the inner-directed pursuit of universal values by the Rishis living in the forests and mountains of India (wikhipedia). Prithvi Sukta upholds the universal binding concepts of 'One Earth and One World', 'Common resources and Equity use' (J.L.Bhat, 1994).

Reflecting on the Indian Educational system, Rabindranath Tagore, our national poet, had commented that 'Education divorced from Nature' will bring untold harm to young children. The sense of isolation that is generated through such separation will cause great evil to mankind. Tagore based his philosophy on the fundamental postulate that man has a spontaneous and irresistible attraction for nature. This attraction is even more intense during the formative years of children. Hence he had called for providing children with large space for learning and this space is present in nature in an ample, diverse and beautiful measure. EVS through its transactional methodologies designed to help children explore, observe, express and wonder can introduce children to this grandeur.

Nature is beautiful. Poets and artists have given expressions to this in different forms. Becoming one with nature through observing, absorbing and enjoying soothes many of the psychological tensions and pressures we experience in our daily life. All of us, at one time or the other, would have felt the need to spend some time with Mother Nature. The fresh air, green plants, pure water, calm atmosphere all put together has a therapeutic value. There is beauty and grandeur in nature. Children need to be introduced to this beauty and encouraged to develop aesthetic values.

Earth belongs to every living organism on this world. It also belongs to the generations to come. In other words, nature and natural resources are not the sole property of any one generation alone. It is to be recognised that as we have the right to ask for a clean, healthy and beautiful environment, so have the generations to come. It is a moral binding on each generation to protect whatever little that is left and provide to the future generations. Save the environment for the future generations is one of the fundamental values of education for sustainable future.

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A Global Ethic

The importance of natural resources and the value of protecting and conserving these for the present and future generations is implicit in religions and philosophies around the world. The global **Earth Charter**—an international declaration of fundamental values and principles for building a just, sustainable and peaceful global society—encapsulates this value in the following words:

"Humanity is part of a vast evolving universe. Earth, our home, is alive with a unique community of life. The forces of nature make existence a demanding and uncertain adventure, but Earth has provided the conditions essential to life's evolution. The resilience of the community of life and the well-being of humanity depend upon preserving a healthy biosphere with all its ecological systems, a rich variety of plants and animals, fertile soils, pure waters, and clean air. The global environment with its finite resources is a common concern of all peoples. The protection of Earth's vitality, diversity, and beauty is a sacred trust"

The preamble of the Earth Charter states "the spirit of human solidarity and kinship with all life is strengthened when we live with reverence for the mystery of being, gratitude for the gift of life, and humility regarding the human place in nature". To lead a long and fruitful life on this planet Earth without jeopardizing the peace and tranquillity of others, we need to learn to coexist with other people in harmony. Living in harmony not only helps others but it helps the person living the harmonious life. (Source : web site www.earthcharter.com)

A little contemplation on the above values would reveal that they are not only abstract but also complex. This complexity is because they relate to ethical, aesthetic, social, moral, religious, economic and political underpinnings.

Check your Progress-3

a. *Values are part of our _____ behavioural system (affective or emotional, intellectual , skill/psychomotor)*

b. *Indian philosophy has always upheld the value "all that is on Earth belongs to one family". This is called as _____ (Ans: Vasudhaiva Kutumbakam, global earth charter, lokasamasta sukhino bhabantu)*

c. *Appreciation of the beauty of nature is a _____ value (Aesthetic/ moral/ religious/ economic).*

d. *This Earth belongs to not only this generation, but also to future generations. This understanding describes _____value (Moral, ethical, religious, aesthetic)*

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2.5 SCOPE OF TEACHING LEARNING EVS AT THE PRIMARY STAGE WITH SPECIAL REFERENCE TO NCF 2005

One of the criticisms levelled against EVS in traditional classrooms (prior to NCF 2005) was that it did not differ much from the classrooms of other subjects, in the sense it was more a 'one-way process'. Children learnt about environment by sitting passively in the classroom and receiving information from the teacher. This was compared to a "Mug and Jug model", where in children were more like a 'Mug' filled with information from a 'Jug' which was the teacher. Children were not engaged in exploratory activities making observations and connections and relating them to their own experiences, engaging in experimentation, or classifying objects to comprehend relations. Thus, the purpose of teaching EVS is not realized in most classrooms.

The main aim of EVS as spelt out in NCF 2005 is "to expose students to the real-life world, natural and social, in which they live; to enable them to analyse, evaluate, and draw inferences about problems and concerns related to the environment; to add, wherever possible, to our understanding of environmental issues; and to promote positive environmental actions in order to facilitate the move towards sustainable development". The NCF 2005 endorses the scope of EVS by emphasising that it has to raise awareness and understanding of children about their environment, building capacities to develop a holistic vision and participate in its protection and management his assertion gains importance as the world is increasingly moving towards protection and conservation of environment.

To achieve the above objectives, EVS is organised around three broad principles – **Learning about the environment; Learning through the environment** and **Learning for the environment**. Hence the scope of EVS is very wide. It ranges from using environment as a medium of learning, to all that one can do to protect and conserve it. The contents are spirally organized starting with the immediate experience of the child (known) moving out to the world she/he inhabits (unknown), leading to an analysis of some of the factors that influence life on this planet. The focus of EVS enlarges from the personal to the national and global (local to global), from physical dimension to the aesthetic dimension.

In NCF 2005, teaching-learning of EVS is visualised as including children's interaction with real life situations through actual engagement, reflections on day to day activities. This approach of learning is referred to as 'Learning by doing' which suggests that children actively construct their understanding or knowledge while directly interacting with their environment. In this approach children learn (construct new knowledge) by fitting new information together with what they already know, this helps build learning on what is known

(immediate environment- self and family) to understand the unknown (community, society, nation, world,)

The teaching-learning of EVS is thus just not a study area for primary stage children, but is a training ground for developing environmentally friendly attitudes, values, habits and behaviours. One can describe EVS as a permanent investment in creating a sustainable society. Hence, the scope of EVS lies in not only helping children explore and understand their environment but also in:

- developing positive attitudes, values and practices such as respect and care for all life on earth, compassion, caring for self and others, conservation of natural resources, appreciation of cooperative learning, sense of belonging, social responsibility, valuing culture, etc**.**
- generating positive and proactive actions in improving the quality of the environment
- promoting a conservation ethic and adoption of environment friendly practices and habits.

The above paragraphs have amply described the scope of Environmental Studies at the primary stage.

Check your Progress-4

a. EVS caters to three main principles. They are:

i. Learning _____ environment

ii. Learning _____ environment

iii. Learning _____ environment

b. The scope of EVS can best be described as: (tick the ones that you agree with)

i. It integrates several disciplines

ii. It is child centred

iii. It is constructivist approach

iv. It is teaching based

v. It is experiential

vi. It is learning based

Reflect

Just think to what extent does the EVS you transact in your classrooms, reflect the implicit and explicit scope of EVS as described, and to what extent does it comply with the following curricular provisions made in NCF 2005.

- Learning rather than on teaching
- Capacity building for critical thinking and problem-solving
- Locale specific environmental problems/issues
- Infusing environmental perspective to classroom subjects
- Multi-sourced and multidisciplinary approach to teaching-learning
- Participation in environmental activities and programmes
- Knowledge construction
- Empowerment rather than indoctrination

2.6 LET US SUM UP

The National Curriculum Framework 2005 emphasises the importance of environmental education in schools by stating "it should aim at preparing young minds to appreciate the importance of environment in a holistic manner, not only for human survival but for all life forms on Earth, to inculcate a positive attitude towards environment and to encourage pro-active action for a sustainable future (NCERT – Environmental Education in School Education).

Environmental Education (EE), introduced as EVS at the elementary education level, has important objectives such as

a) developing curiosity and awareness about the environment in children

b) developing knowledge and understanding of the environment and its inter-relationship with human beings including indigenous tradition and cultural practices related to the environment,

c) inculcating habits, values, attitudes and emotions to maintain and promote quality environment,

d) developing skills to solve environmental problems and an informed concern, etc.

Teachers have a critical role in helping children explore and experience their environment and make sense of these experiences in developing their own knowledge and understanding of the physical and human processes in the environment. Educational and Developmental Psychologists have clearly shown that young children learn best through concrete experience, manipulation of

materials and from their observation and interaction in their environment. Through the transaction of EVS teachers can also help foster a reasoned and sensitive concern for the quality of the environment and all natural resources.

Organising EVS effectively involves several challenges – content as well as pedagogical - and in addressing them a teacher has to make use of his/her own knowledge and understanding of the environment, insights into environment of the children and their developmental stages and a practical ability to guide students in their construction of knowledge. In other words, an EVS teacher would be more a mentor and facilitator encouraging, prompting, interacting, and stimulating children with good questions in the classroom and outside.

2.7 MODEL ANSWERS TO CHECK YOUR PROGRESS

Check your Progress-1

a. Composite

b. iv. All round development

Check Your Progress-2

a. vi. All the above

Check your Progress-3

a. affective or emotional

b. Vasudhaiva Kutumbakam

c. Aesthetic

d. ethical

Check your Progress-4

a. i. about, through, for

b. ii. It is child centred

2.8 SUGGESTED READINGS AND REFERENCES

- Ashish Kothari "Some crucial values in Environmental Education – A Note for Environmental Educationists, Kalpavriksh, New Delhi, 1986
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- NCERT (2008), Source Book on Assessment for Classes I-V, Environmental Studies, NCERT, New Delhi.
- Ravindranath.M.J "Attitudes and Values in Environmental Education – A Perspective. National Conference for the Missionary College Staff at the India Peace Centre, Nagpur, (1990).
- J.L.Bhat "Indian Approach to Environment: An Ethical Perspective, Proceedings of the Conference "Environmental Education for Sustainable Development", Indian Environmental Society, New Delhi 1994.

2.9 UNIT-END EXERCISES

i. What are Values? Explain in brief some of the values very much inherent to EVS?

ii. How does the scope of teaching-learning EVS compare with that of other subjects?

UNIT 3 PEDAGOGICAL CONSIDERATIONS OF TEACHING-LEARNING EVS

Notes

STRUCTURE

3.0 INTRODUCTION

The core subjects at the primary stage of teaching learning include language, Mathematics and Environmental Studies (EVS). It is through the teaching-learning

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of EVS that the child is helped to understand the processes and phenomena in the environment through integrating the spirit of science and social science subjects. This makes EVS a composite study area unlike the conventional science and social studies.

As you have learnt in **Unit 2**, the objectives of teaching-learning of EVS shall be realised by emphasising that learning of EVS has to raise awareness and understanding of children about their environment, build their capacities to develop a holistic vision of the environment, to participate in its protection and conservation..

In this unit, you will explore the unique characteristics of EVS and their implications for structuring the learning experiences for children. The Unit will also help you explore the provisions made in the curriculum for effective teaching-learning of EVS.

3.1 LEARNING OBJECTIVES

On completion of this Unit, you will be able to:

- explain the characteristics of 'Environmental Studies' as a composite subject.
- justify the implications of these characteristics for planning teaching-learning experiences
- use appropriate teaching-learning strategies for transacting EVS

3.2 CHARACTERISTICS OF EVS

Environmental Studies at primary level possesses some special characteristics which other subjects do not possess. It is somewhat different from other subjects in the following manner:

3.2.1 EVS is a Composite Area

EVS at the primary stage is a single study area. It is visualised as a composite study area drawing learning experiences/contents from physical, biological, chemical, social, cultural and other dimensions of study. The contents are organised around curricular themes like Food, Shelter, Water, Travel, etc. This thematic organisation is intended to correlate two or more disciplines of study or school subjects. This helps children to develop an inter-related and connected understanding of the subject studied rather than a fragmented view of it. For each theme, a web of possible connections of concepts and skills are suggested, which are to be developed over the period of primary grades. You will study more about these connections in the next unit.

Through establishing such connections and relationships through their immediate experiences, children develop abilities to comprehend more abstract concepts and relationships in environmental realm at higher levels of education.

3.2.2 EVS is Contextual

The context for EVS is the environment. EVS orients children to this. Since environment differs from place to place, the examples, events, practices used to teach environmental understanding will differ. A dated event in human history and the associated details and explanations will remain the same whether it is being discussed in a hill station or in a coastal town. So irrespective of whether your school is in Jammu & Kashmir or in Tamil Nadu or in Mizoram, your explanation on the significance of 1857 in India's movement for independence will be the same. Similarly a scientific explanation, say 'properties of water' will be the same, irrespective of the time and location where a teacher is explaining it.

This may not be the case with EVS. Most concepts in teaching-learning of EVS will vary from place to place and time to time. For example, teaching and learning about 'food habits' cannot follow the same plan and approach in different locations. So it is important for you to appreciate that EVS, as an area of teaching-learning, is extremely contextual. It is so because the perceptions and understanding of environment, problems and issues change with reference to the context—from place to place, time to time and even community to community. You as a teacher need to emphasise it before the learners while dealing with teaching of EVS.

3.2.3 EVS is Learner Centred

You as a teacher dealing with EVS need not focus much on your dialogue. Learners must not be passive listener of your talk and you need their appreciation. Rather focus of appreciation need to reversed.

EVS is Learner-centred and not teacher centred. It means that children's learning forms the core of the classroom transaction rather than teaching. This is based on the view that each child comes to school with his/her own perception and understanding of the world around. The child correlates this basic understanding with objects and experiences in the environment as he/she goes along in his/her journey and expands his/her knowledge base. Each child, therefore, has the background and the potential ability to formulate new knowledge of his/her surrounding/environment. By organising appropriate learning experiences or situations in EVS for children to explore, observe and expand their vision of their environment/world around them, they could be introduced to higher order learning and behaviours. Such an approach will have a greater engagement of the child in the learning process with longer retention of what is learnt.

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3.2.4 No Right, No Wrong

Recall your school days and student life. On how many occasions were you actually encouraged to challenge a statement in the text-book, or even an example that your teacher may have cited, which you did not agree with at all? Can you recall many such cases? Perhaps not! It is so because our present classroom situation and the associated teaching-learning processes, very often, do not tend to encourage a learner to question and debate. The learner is prohibited to do so because of many reasons may be personnel, psychological, emotional or even moral. We have exemplified in the previous point that teaching-learning of and for 'Environment' are contextual. Hence no single viewpoint or opinion may remain valid in all situations.

As a teacher, your role is to encourage your learner to probe and question what s/he is reading and discovering. Even you may have to instigate and provoke learners to raise question as and when it comes to their mind. You therefore need to support such learning processes through appropriate techniques which encourage self-driven learning process. It is also important for you as a teacher to help your learners understand that there are no absolute 'rights and wrongs' in EVS, and that an 'action' which seems very positive today may be discovered to be very environment-unfriendly in a different place, location and context.

3.2.5 'Values' are an Integral Component of EVS

Recall from Unit 2 that understanding of EVS among the young learners needs to be coupled with positive environmental attitudes and values. What are these values in EVS that need to be developed in children? Of course many of these are the much accepted 'universal values', but then a learners own home (social and natural) environment, the process of upbringing, her beliefs and faith (social) system, etc. together define her values. Please note that these values are integral to EVS because EVS learning places more focus on the affective domain of a child's psychology!

Respect for all life forms, appreciation of diversity (biological, social, cultural and religious, etc.), accepting differences, openness to multiple view points, peace, compassion and tolerance, etc. are values integral to EVS. An understanding of such environmental values will help you as a teacher to plan and organise appropriate learning experiences for fostering and nurturing them in children.

It is also important for you to note that 'values' which individuals should have not be tagged as 'good or bad' during the teaching-learning process. It is so, because as stated before, all values have a context (of my environment, my social background, faith in the system etc. It is my context from which I derive my 'values'. As a teacher it is therefore important for you to make an effort to understand the 'context of an individual learner' in order to help her or him review her/his value system.

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Check Your Progress-1

State true or false and also correct the incorrect statements:

a. *EVS is a single subject.*

b. *As a teacher of EVS, my role can be best performed if I specialise and focus on only one subject.*

c. *Concepts in EVS and their interpretation for learners are contextual.*

d. *As a teacher of EVS, I must pay attention only to the 'cognitive' growth and development of the child.*

e. *As a good teacher of EVS, I must ensure that those values which I practise in life need be practised by my learners as well.*

3.3 HOW DO CHILDREN LEARN?

So far we have learnt that EVS has the following unique features:

1. It is 'composite' in nature
2. EVS is 'contextual'
3. EVS is child-centred
4. There are no absolute 'right or wrong' in EVS
5. 'Values' are integral to EVS

It is essential to understand the meaning of saying of some great philosophers before trying to understand the learning process adopted by children. To summarise the view of a few:

Children are interested in real-life tasks and activities, pretending and fantasy, and rules and rituals. *–Friedrich Froebel*

School life should grow out of home life; teachers should know their children well, observe them and then plan, organise and document a purposeful curriculum. *–John Dewey*

The role of the parent and teacher is to be aware of these sensitive periods and design the environment to give the child the full opportunity to concentrate on those things the child is interested in—children learn from the environment around them: *–Maria Montessori*

The process of learning should be as far as possible a pleasurable one and not laborious. *–Mahatma Gandhi*

Educational thought lays emphasis on holistic development of the children and education paced according to the needs and capacities of the child

–Sri Aurobindo

The child learns so easily because he has a natural gift, but adults, because they are tyrants, ignore natural gifts and say that children must learn through the same process that they learned by. We insist upon forced mental feeding and our lessons become a form of torture. This is one of man's most cruel and wasteful mistakes.

–Tagore

For several centuries now, educationists, doctors and interested parents, have observed the behaviours and responses of children to understand their learning styles better. As you know, this has been a field of great research and analysis for a couple of centuries now. Researches have established that Children learn:

- Differently from adults
- Through real-life contexts
- By doing
- From their surroundings and environment
- By constructing and re-constructing meanings from experiences in their environment

These insights have significantly influenced the way curriculum are designed and developed all over the world. As you have already learnt, NCF 2005, to a very great extent, is influenced by the theory of **social constructivism**.

The NCF 2005 also reiterates these points:

- All children are naturally motivated to learn and are capable of learning.
- Making meaning and developing the capacity for abstract thinking, reflection and work are the most important aspects of learning.
- Children learn in a variety of ways through experience, making and doing things, experimentation, reading, discussion, asking, listening, thinking and reflecting, and expressing oneself in speech, movement or writing—both individually and with others. They require opportunities of all these kinds in the course of their development.

As a practicing teacher you have this wonderful opportunity to observe your students keenly to re-affirm learning processes and style of children, especially in the age group of 8-10 years. However, you will be able to make these observations meaningful, only when you inform yourself as a Teacher why should I learn about how children learn'. As educators, one can have very different answers to this question. However, one's answer to this question may largely

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influence the way one perceives, understands and transacts EVS. Your answer to this question will also help you appreciate the pedagogical considerations for EVS.

Young learns differently from adults: adults learns mostly with a cognitive approach emphasising on learning of concepts, principles and problem solving and gain mastery over the content area. He/she understand the benefit need be derived from learning areas and focusing on transfer of knowledge seriously. The need of the adult decides the area of learning and he/she learns with intention and formulate knowledge. Whereas the child is not very serious willing learner. Situation influence him/her to formulate knowledge by interacting with environment forces acting around. Influence of superior, peer and teachers, natural inquisitiveness and curiosity create learning situations for young learners mostly in societal contexts. Trial and error, habituation, intuition also play role in his/her learning so as to formulation and application of knowledge in identical situations. Focus need be more on affective domain to create motivation and interest so as to bring attitudinal change to learn in young learners. Emphasis on bring real life context, engaging learner in psychomotor activities, drawing surrounding environment in formulating knowledge and providing them learning experiences in their own environment.

Check Your Progress-2

a. Find the missing one -

Researches have established learning process of children :

i. _____

ii. through real life contexts

iii. by doing

iv. from their surroundings environment

v. by constructing and re-constructing meaning from experiences in their environment.

3.4 PEDAGOGICAL ORGANIZATION FOR TEACHING-LEARNING OF EVS

The above section helped you understand how children learn? What implications does this understanding bring for teaching-learning of EVS? In this section, we will help you explore connections between the nature of EVS, the way children learn and pedagogical strategies that can facilitate effective teaching-learning of EVS. Thus, in this section of the Unit, we will thus consolidate the various discussions so far and realise their significance for a teacher of EVS.

3.4.1 Let Child's Environment be his/her Learning Laboratory

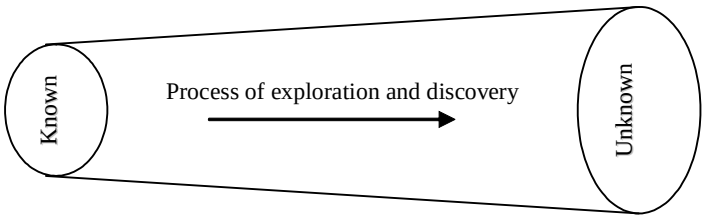
For you as an EVS teacher, it is important that you creatively utilise the immediate environment (school and community) of the child as the learning lab. The major advantages of this are:

1. It takes care of the fact that Environment is a 'composite' subject. It is so because your student is all the time operating in real-life situation and hence is observing and learning in a manner which is seamless and not limited by the boundaries of science or social science.
2. Learning through real-life processes and experiences is an effective way of learning among children. By using school and local environment as the learning ground, you ensure that your students follow their naturally preferred way of learning, thereby enhancing their learning, knowledge and competence.
3. It is said that learnings made from immediate environment and from real life experiences remains with the individual for a longer period of time. Also such learnings are easier to be recalled and applied in the later stage of life.
4. Bring in social context, and encourage cooperation and collaboration based learning within and outside the class.

3.4.2 Facilitate Exploration from 'Known to Unknown' and 'Coincrete to Abstract'

In the earlier years, it is said to be more effective to ensure that new concepts and information is explained 'in relation to' a known one. It is so because during this period the ability to learn abstract concepts is rather limited. Thus new information is recognised and understood by the child 'in relation' to an existing one.

When appropriate connections and linkages are made in the child's mind about his/her own immediate experiences, he/she is enabled to understand more abstract or sophisticated concepts and arguments later.



An example of this from the current EVS syllabus is the theme on 'Plants'. Traditionally in many textbooks, the concept of 'Plants' is introduced to young

children by providing explanations on 'typical parts of a plant'. However, in the current syllabus, keeping in mind the development and progression of concepts from concrete to abstract, the concept of 'plants' is first introduced through the theme of 'Food' which is familiar, starting with what plants do children eat; and what parts of a plant do they eat, etc.

The advantages of such an instructional design for EVS are that:

- Children learn about their environment through their environment.
- Locate new learnings on a tested and well developed ground.

3.4.3 Design Real-Life Based Learning in your Classrooms

Imagine yourself discussing availability of freshwater in a classroom in a remote village in Lohardaga or Dumka in Jharkhand. How would you compare it if you were to deal with the same concept with students in a school in Ranchi? Would your approach towards the topic remain the same? Perhaps not!

This pedagogical strategy of bringing about real-life examples in the classroom leads to effective transaction of EVS. It has several advantages:

- Locale-specific examples become an effective way of teaching-learning of EVS.
- Since 'environment' begins with me and my immediate surroundings, this approach of learning about EVS ensures effective results.
- EVS concepts get located in the environmental, social and cultural context of a child, ensuring that you are not alienating him/her from the reality, rather you are helping him/her connect information in the 'textbook' with that of her own life and surrounding.
- This helps you as a teacher to 'teach EVS contextually'.

With the younger age groups you can facilitate real-life based processes by encouraging children to explore and probe at home—with parents, grand-parents and other relevant members in their community. It is for this reason that when you read the NCERT EVS Syllabus (Annexed), the pedagogical organisation of EVS is 'web-based' which moves outwards 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 being a part of community, the country and also more tacitly, as located in this world."

NCF 2005: Syllabus for Classes at the Elementary Level; Pg 92

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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 its world, beginning from the immediate 'self ' to include its 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 analysed 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.

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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 travelled 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

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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 cognisance 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 sensitise 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.

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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 analyse the games they play, to see how traditional games or toys have changed since the time their grandparents were

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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'** sensitises 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.

3.4.4 Establish Links between and Across Disciplines

It is challenging to make lesson plans and adapt teaching-learning techniques which will help you in dissolving the conventional boundaries of science, social science etc. However the following two features of EVS help you in this:

- Positioning of EVS in the overall scheme of primary education is such that it provides a common interface of issues in social studies, sciences and environmental education.
- Syllabus of EVS (in grades 3 to 5) is thematic and not concept based.

3.4.5 Encourage Dialogues and Questioning

Do remember that ideas, notions and perspectives in 'environment' can be contested. It is so, because meaning and understanding of an idea/concept in 'environment' can change with time and location.

Opportunities to talk, discuss and have a dialogue help children to articulate and share their ideas and experiences. The syllabus provides many such opportunities. For example, the theme of 'Travel' in the EVS Syllabus provides you, as a teacher, with a lot of scope of letting children enter into dialogue with each other. This theme provides each child with an opportunity to create his/her very own 'travel log book'. Even if two children in your class travel to the same place, or take the same journey, yet their accounts of the journey could differ from each other at certain points.

At this point of time, encourage them to have 'peer talk' to find out why their experiences of the same places can be so different. Create a confident learning setting for them, where if required, they feel comfortable questioning some information provided in the textbook.

Such learning strategies bring many advantages, such as:

- Children learn to think critically and to analyse their own experiences
- At the same time, children also grow up to be sensitive to others' viewpoints and beliefs. They learn to be different and appreciate diversity of thoughts, experiences, people, food, languages, environment and above all socio-cultural traditions, practices and beliefs
- Such experiences help children develop 'group/social skills'. These provide them some of the earliest experiences of dealing in a 'group', working with group members—learning to 'listen' to them and 'talk' to them.
- Children with such experiences in their early years of life, grow up to be good citizens of a democratic society.

You will learn more details about several of these teaching-learning methods in Block 2 of this Course.

3.4.6 Your Role as an EVS Teacher

By now you, as a teacher, will appreciate that it is required that EVS is taught and learnt in a very different manner from most other subjects. The learner must be encouraged to understand what the textbook says, and then through appropriate learning strategies, s/he must be supported by the teacher to explore and discuss the relevance of these concepts in his/her life.

For a teacher like you, nurturing learning among students in such learning environment would be exciting yet challenging. This will require that you, as a teacher, review and enhance your role in the teaching-learning process.

Traditionally a teacher was seen as the '**provider/giver of knowledge'**. In this role, the teacher's main role was to 'teach'—add new knowledge to the child's thinking and understanding.

Till the very recent times, a good teacher was also expected to be a '**facilitator'** in the classroom—facilitating learning among students. That means, helping and guiding children explore and discover through her experiences and construct knowledge based on these experiences.

However, with newer research and emerging thinking on learning and education, today a teacher is expected to be not only a teacher and a facilitator, but also a co-learner. This change visualised in teacher's role is based on the fundamental understanding that learning is a life-long process. Learning takes place in all circumstances and situations irrespective of one's age. As a result no individual, including a teacher, can have with him/her all the knowledge in the world. There is always something new to learn about. Thus, there could be occasions in the classroom, where the teacher may need to say 'I do not know, I shall find out and

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learn about this.' Such a statement does not mean that I am a poor/bad performing teacher. It only means that I am a co-learner (with my learners), exploring and discovering new ideas and processes around me.

ACTIVITY-1

Prepare an action plan on your role to act as a facilitator in teaching any theme in EVS.

3.5 EXPANDING THE CHILD'S UNIVERSE

The syllabus for EVS (**classes III-V**) is thematic in approach rather than being structured around individual topic/s (as it used to be in the earlier years). It is woven around six common themes – Family and friends, Food, Shelter, Water, Travel and Things we make and do. As you would have read in **Unit 2**, these themes provide real-life links to the children's daily experiences. This begins by helping children explore their immediate 'self' to include his/her family (environment), and expand to gradually include neighbourhood, the locality, country and the world.

Thematic organisation of content in EVS helps dissolve the conventional subject boundaries created in the formal education system. It also encourages the learner to realise the linkages between the various subjects.

Thematic structuring of the contents in EVS cuts across the boundaries of several disciplines such as social sciences, sciences, languages, history, geography, civics, etc., developing in children an interdisciplinary perspective (contributions of various disciplines) to understanding environment and environmental problems and their solutions because this is related to our life and lifestyles. EVS, thus, is an interdisciplinary study of how humans interact with their environment – physical, biological, social and cultural.

As a teacher, let us try to understand the implications of thematic organisation of concepts for teaching-learning process. Let us take an example of the theme '**Water**'.

If 'Water' was to be taught and learnt through discreet subject boundaries of science and social science, perhaps one would need to look through the Geography textbook to understand the distribution of water on earth. Now to understand how the earlier generations accessed and used water, one would need to browse through the textbooks of social science. Then to understand the need of water for plants and animals, you would be required to refer the Biology textbook.

However, in the case of EVS, various aspects of 'Water'—scientific, social and historical—are dealt within a common larger theme and not necessarily as physics and chemistry of water.

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In the syllabus, the contents of EVS explore the different dimensions of certain themes like food, water, shelter, etc. These discuss or deal with real issues of children by connecting them with children's real experiences at home, neighbourhood, community, etc. Such connections to real life experiences and situations play a crucial role in developing and fostering lifelong attitudes, values and conviction of actions and behaviours towards environment and its conservation. Thus, EVS is not only values education, as regards environment but is also life-skill education as it encourages children to develop knowledge, ideas, values and attitudes about the world and how it works and learn to communicate and collaborate with other children and adults in their environment. You can learn more about the thematic structure and the syllabus in the subsequent Unit.

Check Your Progress-3

Fill in the blanks

a. *The syllabus of EVS is organised in a …….. manner.*

b. *The 6 main themes of the EVS syllabus are:*

   i. …….. *ii. ……..* *iii. ……..*

   iv. …….. *v. ……..* *vi. ……..*

c. *The EVS syllabus is aimed to forge an …….. perspective of learning at the primary stage of schooling (integrated, multiple, individual)*

3.6 LET US SUM UP

In this Unit, we have learnt about features that make EVS different from most other subjects; and the implications of this for pedagogical considerations for EVS. The Unit also discussed key curricular provisions for enabling effective teaching-learning of EVS at the primary stage of education.

You learnt that EVS is a composite subject and draws links to most other subjects. EVS is contextual and locale-specific (as problems and issues of environment are specific to the local environment/locales and solutions to these problems/ issues may not be right and wrong). EVS issues may not have a single right answer. Thus, a good EVS learning environment must encourage dialogues, debates and questioning. Strengthening analytical and critical thinking skills among learners are thus critical during EVS teaching.

Through this Unit, you have realised that your most significant role as a teacher is that of a facilitator and co-learner who not only encourages children to learn

by experiencing, exploring and discovering, but also learns with her learner. A good teacher must be sensitive that 'values' form integral part of EVS and hence s/he must be able to deal with values (in the classroom) in a very prudent manner. Some examples of these are provided in **Block 2** of this Course.

While studying this unit, you learnt about desirable pedagogical considerations to be made for effective transaction of EVS. In the earlier section of this Unit, you have further learnt that curricular provisions built in for EVS are different from many other subjects at the primary stage. EVS syllabus is organised in a 'thematic' manner. In this Unit, you have also learnt and realised that thematic organisation of the EVS syllabus is very suitable for dealing with the unique features of EVS and how these themes can be effectively transacted in your class.

In the next Unit you will see how these considerations are reflected in the EVS textbooks for **classes 3 to 5**, and learn more about the teaching-learning opportunities these provide.

3.7 MODEL ANSWERS TO CHECK YOUR PROGRESS

Check Your Progress -1

a. False, EVS is a single study area

b. False, As a teacher of EVS my role can be best performed if I do specialise and focus on multiple subject areas.

c. True,

d. False, As a teacher of EVS, I must pay attention to holistic growth and development of the child

e. True

Check Your Progress -2

a. i. differently as adult

Check Your Progress -3

a. Holistic

b. 2

i. Family and Friends

ii. Food

iii. Shelter

iv. Water

Notes

v. Travel

vi. Things We Make and Do

c. Integrated

3.8 SUGGESTED READINGS AND REFERENCES

- http://www.mceecdya.edu.au/verve/_resources/effectivelearningissues08_file.pdf accessed in August 2011
- http://web.mac.com/sharondeleon/FC/CDES_115_files How%20Do%20Children%20 Learn.pdf; accessed in August 2011
- NCERT (2005) National Curriculum Framework 2005, New Delhi
- Syllabus for classes at the Elementary Level, NCERT, New Delhi.
- Shivani Jain and Shefali Atrey , Centre for Environment Education, India; An Innovative Approach to Biodiversity Conservation Education; Journal of Biological Sciences; September 2011; International Union for Biological Sciences
- NCERT, 2005, Habitat and Learning, NCERT, New Delhi
- www.moef.nic.in
- www.ceeindia.org
- www.paryavaranmitra.in
- http://moef.nic.in/divisions/ee/ngc/index_ngc.html
- www.ncert.nic.in
- www.atozteacherstuff.com (for thematic unit plans)

3.9 UNIT-END EXERCISES

i. How can be compared with other subjects of teaching-learning at the primary stage? List and explain key features of EVS as a composite subject.

ii. Based on your experiences of working with children and the discussions in this Unit, what pedagogical considerations do you think can make EVS teaching-learning process effective and why?

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UNIT 4 CURRICULAR PROVISIONS OF EVS AT THE PRIMARY STAGE

STRUCTURE

4.0 INTRODUCTION

As you have read in the earlier units the word Environment includes everything around us. The content of environment permeates all subjects and disciplines.

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You have also seen that the National Curriculum Framework 2005 has re-emphasised the recommendation of NCF 2000 that Environmental Studies should be taught as an integrated course for the entire primary stage.

Hence the syllabus of EVS based on the NCF 2005 is designed to provide an integrated perspective that draws upon insights from sciences, social sciences and environmental education. It is important to be acquainted the organisation of the syllabus in order to better understand and use the text books.

You may have seen, and may be teaching EVS textbooks, in classes 3, 4, and 5. You may have concerns, questions, difficulties, as well as positive experiences in using the textbooks.

This unit will help to address some of your concerns and doubts, and also to understand, and therefore, use the textbooks more effectively to achieve the objectives of EVS as related in the NCF 2005.

4.1 LEARNING OBJECTIVES

On the completion of this unit you should be able to:

- explain the reflection of the objectives of NCF 2005 in the EVS syllabus.
- narrate the rationale of the thematic approach in the syllabus.
- describe the process and the rationale of the organisation of the content in EVS textbooks.
- discuss the variety of features of the textbooks.
- use the textbooks as an effective teaching-learning tool/aid
- discuss the process of going beyond textbooks and classroom to meet the challenges of curricular provisions.

4.2 NCF 2005: OBJECTIVES OF ENVIRONMENTAL STUDIES

As you have read in the previous units, the present EVS syllabus is designed to forge an integrated perspective for the primary stage of schooling that draws upon insights from Sciences, Social Science, and Environmental Education.

The National Curriculum Framework 2005 indicates objectives of teaching science and social studies at the primary stage. These have been discussed in unit-2. When you read examine the list you will realise and find that it covers not just the scholastic, but also a range of other behaviours and skills which do not conventionally fit into a single “subject” or “discipline”. You will also note that there is development of a number of co-scholastic areas like abilities, attitudes and values.

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These objectives are reflected in the curricular provisions and organisation of the NCERT syllabus for EVS.

4.2.1 From NCF Objectives to the Syllabus

Environmental Studies at the primary stage is perceived as an approach to learning of environment in its totality without being burdened by any disciplinary considerations.

The NCERT syllabus attempts to reflect the above realisation and understanding in a number of ways:

- The syllabus is organised not as a list of "topics" but as "themes". And, each theme has a few sub-themes.
- The sub-themes are organised in a spiral and progressive manner with emphasis on integration.
- The sub-themes allow for a connected and inter-related understanding to develop.
- The themes in the syllabus do not begin by listing key concepts, or rather key questions which allow each child to think, apply, and develop his/her own understanding and articulate their own learning's and ideas.
- The thematic approach helps to bring in perspectives from different subjects and disciplines.
- The activities are only suggestive, and can be easily adapted to suit the local situations.

4.2.2 Thematic Approach in the Syllabus

Recall from Unit 1 that a child's understanding of 'environment' begins with us (and our inner-self) and grows in an ever expanding series of concentric circles to include family, neighbourhood, school, community.

The thematic structuring of the content is visualised to help the child locate himself/ herself in a larger context – as part of a community, the country, etc. This thematic organisation also brings in a concept of mutual dependence of 'self' with 'others' and natural environment, providing the child with a holistic perspective of the environment and the Planet Earth which we share with all other living organisms that is plants, animals and micro-organisms, interdependent and interrelatedness of all living things and life support systems.

A significant feature of the syllabus is that it is 'integrated' in nature. It proposes themes which allow for a connected and inter-related understanding of different aspects of different environment – natural and soci-cultureal to develop.

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The syllabus for classes III, IV, V is woven around six common themes.

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

(Please refer NCF 2005 syllabus for EVS given in **Unit-3)**

The content of the themes is derived from the child's own experiences rather than a prescriptive body of knowledge or subject. These are presented based on the way a child encounters these in daily life. Starting with these personal experiences the child easily "connects" and builds links with theoretical knowledge.

Thus the child's understanding of 'Environment' grows in concentric circles.

The same themes are carried through the three years, moving outwards from the immediate 'self' of the child, to include his/her family, the neighbourhood, the locality, and the community. Thus the child begins with an exploration of the familiar, and expands his/her horizons as he/she growns. At the same time the child is also able to locate herself in different contexts – as a family member, a member of the school community, and future as a citizen of the town/city and country.

Given below is a sample of how the spiral of theme and sub-themes builds over the three years.

Theme - Family and Friends
Sub-Theme - Work and Play

Class III	Class IV	Class V
Work Around Me • Different occupations, idea of working time and leisure time; work inside and outside homes - gender, age, caste, economic etc aspects.	**Fun and Fights at Play** • Different games at home and school. • Play as a way of social negotiation^ rules of each game; fights and the need	• Team Games - Your Heroes • Types of games/sports, importance of team spirit in games, gender stereotyping.

Working Children

- Sensitise 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.

Games We Play

- Leisure games in school and outside, past and present; for some play is work
- to negotiate - ideas of fair play.
- Restrictions on play; playmates from children of different gender or class/caste backgrounds.

How They Learnt Their Skills

- Different occupations in the local region/ country.
- Who does what work?
- Gender and work.

Fun at the Fair/ Circus

- Ways of recreation.
- Some idea of other countries and national teams.
- Gender, class stereotyping in play.

Local Games, Martial Arts

- Local and traditional martial art forms/games. Typical practice routines; teachers; changing patterns of local games.
- Changing nature of leisure.

Blow Hot - Blow Cold

- 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.

Clean Work- Dirty Work

- Dignity of Labour
- Dependence of society on such essential services.
- Choice of work as a societal value.

As illustrated above, the NCERT syllabus follows a suggestive format rather than a prescriptive one. It indicates 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 his/her learning process (NCERT Syllabus p91).

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

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complicated histories and are today quite different from the way sciences or social sciences are practised in the real world of specialised 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.

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The table given below illustrates the relationship between EVS objectives, its contents and transaction.

Theme: **Shelter** –EVS III *(Ref: Environmental Studies: NCERT, www.ncert.nic.in, pdf)***)**

Broad Objective	Theme	Appropriate questions	Key concepts/ issues	Suggested resources	Suggested activities
To train children to locate and comprehend relationships between the natural, social and cultural environment	Shelter	Mapping my neighbourhood, How big is your school? What kind of a of building is it? Please draw a picture of your school and classroom. Do you know your way around your neighbourhood? Please explain to some one the way to reach the post office or the bus stand from your house.	Neighbourhood, mapping and representation in two dimensions and directions.	Survey of different areas of the school, survey of the neighbourhood.	Estimating distances, marking locations of places and drawing/ mapping from different perspectives, drawing a map of the route from your house to the nearest shop.

Check Your Progress-1

a. Fill in the blanks to complete the following objectives of EVS as stated in NCF 2005.

i. To train children to locate and comprehend _____ between the natural and socio- cultural environment(relationship, interconnection, association)

ii. To nurture the _____ and _____ of the child particularly in relation to the natural environment including artefacts and people. (curiosity, interest, apathy) (creativity, intelligence, aptitude)

iii. To develop an _____ about environmental issues(awareness, alertness, attentiveness)

iv. To engage the child in exploratory and _____ activities to acquire basic cognitive and psychomotor skills through observation, classification, inference, etc.(hands-on, day-to-day, on-the-job)

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Read and Reflect

- What is the meaning of "theme"? How do does it differ from "topic"?
- Why do you think the theme of Family and Friends includes the sub-theme Work and Play?
- Why do you think the sub-theme of Work and Play includes issues of dignity of labour, and working children?

4.3 FROM THE SYLLABUS TO THE TEXTBOOKS

The EVS textbooks for classes III, IV and V have been developed based on the framework provided by the NCERT syllabus 2005 and the overall philosophy and approach of the NCF 2005.

Conventionally textbooks present a certain body of information in an organised manner with a thrust on 'imparting' it to the students. For teachers the textbook becomes a tool for planning and structuring their instruction to teach the contents. The teacher prepares a lesson plan and conducts the lesson.

- **Do you agree with this?**
- **Is this the process you follow in your teaching of different subjects?**

While this is traditionally the role of the textbook and the teacher, the NCF 2005 emphasises that learners formulate their own knowledge by connecting new ideas to existing ones on the basis of material/activities (experiences). In this context, the textbook is seen not as the "be all and end all" tool in the hands of the teacher, but rather one of the sources that support the creation of knowledge—a beginning in the process of teaching and learning.

The challenge in developing such textbooks was to organise and present the contents in a way that look at the environment as a totality and avoid 'compartmentalising' it into 'subjects' like science and social science.

The approach was to achieve an integration of the different aspects of a theme, and provide space for each child to explore and discover the world around.

- **Have you used the new EVS textbooks (based on NCF 2005)?** How are the contents organised in your EVS books?
- **How are these textbooks different?**

The following section shares the understanding which has shaped the content and format of the EVS textbooks and suggests how to best use the textbook as a tool in your new role as a facilitator of learning.

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4.4 THE EVS TEXTBOOKS

The selection and organisation of the content of the textbooks, the treatment of the themes, and the methodologies built-in, all come together to provide space for each child to become an active participant in looking around, exploring and discovering.

This section discusses some key features of the design and structure of the textbooks.

4.4.1 The Title

'Looking Around" is the title of the EVS textbooks for **classes 3, 4, and 5**.

- **What does this title communicate?**
- **How do you think that this title reflects the objectives of Environmental Education and the spirit of NCF 2005?**

'Looking Around" indicates the perspective that identifies with the process of teaching and learning about the environment. It assumes that the surroundings provide ample scope for observing, experiencing and connecting. It underlines that we can learn much by interacting with the world around us. It invites the child to become an active participant in look around themselves, exploring and discovering.

In the Classroom

You could begin the year by spending some time actually discussing the title of the book with the students. This will provide a good introduction to the concept of environment (as discussed in Unit 1) and how every one of us can learn about the environment from our own surroundings.

4.4.2 The Selection and Organisation of Content

Just as the title of the books has moved away from the "subject" label, the organisation of content of the book also moves away from the traditional "topics".

The syllabus for Class III to V is woven around the six interconnected themes. These themes provide opportunity for introducing aspects of science, social science and environmental education. As you know the six themes are:

1. Family and Friends-Relationships, work and play, Animals and Plants
2. Food
3. Shelter

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4. Water
5. Travel
6. Thing We Make and Do

Each theme includes a number of sub-themes that touch upon different dimensions of the theme from the syllabus. These are organised in a cyclical and progressive manner with emphasis on integration.

The contents of the book are not organised thematically in the way that all lessons related to the sub-themes are given as a unit. Rather lessons related to different themes follow one another.

- **Have you already used the textbooks?**
- **How have you organised the sequence of lessons?**
- **As thematic units? As given in the book? In any other way?**

As a Teacher

The thematic organisation of the contents provides the opportunity to cut across subjects and topics. You may, if you feel appropriate, deal with all the lessons under a particular theme as a unit. Or you could go by the sequence of lessons as in the book. What is more important is that you encourage students to make the linkages between lessons, and take opportunities to cross reference, not only to the lessons in the current book, but also the EVS textbook of the previous year. Whichever way you do it, the important thing is to make the links that help consolidate the learning.

4.4.3 Integration

As has been discussed earlier the subject of EVS naturally lends itself to integration – within subjects, across themes, with the world of school and the everyday world.

Besides thematic integration that synergises different subjects, integration is also built in through the different approaches and methods of transaction, assessment, and the 'values' being promoted. This supports the belief that when watertight compartments between subjects are broken, it can enrich not just the 'content' but also the process and outcomes of teaching and learning.

A young child's world is organised not as neatly organised bodies of knowledge, but rather it is a body of integrated experience of interacting and making sense of the world around. While organising the revised curriculum and the new textbooks the key concern has been to look at the environment as a totality and avoid approaching it in compartmentalised subjects like different streams of "science" and "social science". Therefore that concepts that are typically dealt in biology

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like plants, or animals that are studied in zoology, or botany , or which are at the primary stage framed in the categories of 'living and non-living, are introduced not as categories but through the child's familiar experiences and surroundings. For example asking a child to list all the animals, birds, plants that he/she sees around can bring in an integrated perspective that all are part of a larger picture. For the teacher and the students the textbook is one of the means to understand and build on these observations and make their own connections.

The other important feature of the EVS textbooks is the seamless integration of social aspects with pure-science concepts and the multi-dimensional, plural realities of how we live. India being a geographically and culturally vast and diverse country it is important that we learn not only about our own environments, which are familiar to us (which can be the starting point), but also about how different people live, why there are differences, and what are the similarities despite the differences. The themes about Family and Friends (Relationships), Food, Shelter, Water, Travel, the Work We Do, offer ample scope for exposure to, and understanding of diversity. Thus the books aim at integration, and encourage the spirit and process of exploring and discovering the diversity and pluralism in the world around.

4.4.4 The Variety of Formats

The thematic organisation of the syllabus provides scope for using a wide variety of formats of lessons. These include stories, narratives, interviews, diary, news reports, poems, discussion, etc. which draw from, and build upon the child's experiences and perceptions. This is clearly seen in different formats of the lessons in all the three books.

The mix of formats, including the variety of visuals also support the different learning styles of children – some children may be more attracted by the visuals; some may make personal emotive links with the narrative; some may enjoy the challenge provided by the exercises (develop cognitive skills), and some may be attracted by the science/history/geography/language aspects.

The diverse sources of the content, and the variety of formats for presenting the content itself opens up great scope for children's curiosity, vocalisation, empathy, experimentation, exploration and discovery, and free expression.

While going through the lessons, students are automatically introduced to a variety of writing styles and formats. Thus the lessons provide interesting examples, and exercises for language learning. This supports the belief that watertight compartments between subjects can be broken, enriching not just the 'content' but also the 'communication' aspects of teaching and learning.

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As a Teacher

One way to make the lessons more interesting is to share with the children from where and how the ideas of the lesson were developed. This will help to reinforce the idea that learning can happen anywhere from anyone and not only in the class, from textbooks.

Some examples:

Lesson based on real people and their real experiences.

To name a few:

Class IV	Lesson 5	Anita and the Honeybees
	Lesson 26	Defence Officer: Wahida
Class V	Lesson 9	Up You Go!
	Lesson 11	Sunita in Space
	Lesson 20	Whose Forests

You can use the examples to encourage students to share their dreams of what they would like to do when they grow up and to support them to work towards this.

Lessons based on real incidents, real stories

Several lessons draw upon interviews and interactions with ordinary people who in their own way, have achieved something.

Class IV	Lesson 10	Hu Tu Tu, Hu Tu Tu (A Story of Three Sisters)
Class V	Lesson 17	Across the Wall

It would be interesting to tell the students that these lessons had their origin in small news items in the newspapers,or documentary films. The textbook writers actually contacted these people and talked to them and found out their stories.

Lessons based on real places

Class IV	Lesson 1	Going to School
Class IV	Lesson 6	Omana's Journey
Class IV	Lesson 11	The Valley of Flowers
Class IV	Lesson 23	Pochampalli
Class V	Lesson 10	Walls Tell Stories
Class V	Lesson 13	A Shelter So High!

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Read and Reflect

- From the list given above, identify which kinds of lessons in the EVS textbooks that you are using, can provide opportunities for the following:
- These lessons provide opportunity to learn about what motivates people to take on unusual and challenging jobs and occupations.
- These lessons are good opportunities to bring in perspectives of geography and history. This reinforces the concept of EVS as infusing science and social science aspects into an integrated way of understanding one's world.
- These lessons tell us that we can discover and learn a lot from our own elders, neighbours and people that we interact within our daily life. These should be recognised and valued as resources for learning and teaching, the textbook is not the only source of knowledge.
- These lessons provide an opportunity to use maps and other audio-visual supplements, and open up the curiosity and spirit of discovery in the students. The exercises bring in cross-disciplinary aspects, necessitating use of mathematics, history, and language.

4.4.5 Variety of Teaching-Learning Activities

Learning-by-doing, or activity approach is integral to the process of experiential learning. Such learning is more fun for the learner and teaching more fun for the teacher. Based on this premise the EVS textbooks include a wide range of teaching-learning methodologies to involve children in relating to their immediate environment (from family to community; natural to human-made).

The activities are integrated into the lessons rather than placed at the end of the lessons. These are seen as integral to the process of understanding the lesson, and building links with each one's personal context and experience.

The suggested activities help develop a range of skills including observation, recording, written and oral expression, classifying and categorising, psychomotor skills as well as creative and aesthetic sensibilities.

The objective of the activities and exercises is not so much to evaluate the students' knowledge but to provide an opportunity to students to express themselves. The students should be given enough time to work on the activities and exercises they should not be rushed as each student learns at his/her own pace.

The activities can serve not only as learning tools but also tools for evaluation as well. They provide opportunities for group and cooperative learning. They also help to sensitise learners to diversity, as well as similarities within the social and cultural context.

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In the Classroom

You are welcome to innovate, develop and use teaching aids or other material/ activities/exercises which fulfill the aim of the lessons. You can also encourage students to create and develop material to enrich and support the lessons.

***Sample of Range of Activities**

a.	Puzzles	Class III p 54	Match Birds and Food
		Class IV p 19	Colour and Find
b.	Games	Class III p 43	Dumb Charades
		Class III p 156-157	Web of Life
c.	Collections	Class III p 112	Stamp Collection
d.	Craft	Class III p 56, p 75	Origami, Toy Train
e.	Art	Class III p 60, 61	Drawing pictures & Line drawing
f.	Cooking	Class III p 65	Make and Eat
g.	Map Reading	Class III p 152	Symbols
		Class V p 91	Golconda Fort
h.	Experiments	Class V p 64	Dissolving substances

Check your progress -2

a. Which kinds of activities from the examples listed above can help in all the following?

i. provide opportunities for children to participate in different kinds of learning experiences that involve engagement of diverse senses and abilities (creative expression, body movement etc.).

ii. encourage group work and peer learning

iii. build life skills of cooperation, sharing, negotiation and organisation.

4.4.6 Supporting Different Learning Styles

The variety of activities and exercises help to foster the multiple intelligences, giving children with different skills and abilities opportunities to participate, and thereby contribute to building confidence.

Several exercise and activities in the lessons support imagination and creative expression not only written and oral, but also through drawing and performing which could be well integrated into arts and drama classes.

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As a teacher, you need to take the opportunities offered by the books to actively involve children who may not respond as well to the more traditional linguistic or logical ways of instruction, and to develop their innate abilities and potentials.

Some examples:

Class III	Drawing faces and expressions (p 46-47)
Class IV	Imagining and acting (p 9)
Class IV	Imagining and drawing (p 136)
Class V	Imaging, designing (p 85, 86)

- **Do you think that arts and craft activities can be a part of EVS teaching and learning?**
- **What is the link between art and craft and environment?**

4.4.7 Dealing with Social Issues

It is accepted that educating about the environment goes beyond the understanding of nature and scientific phenomena and processes. EVS is a process to expose students to the real world, natural and social, in which we all live; to enable them to become aware of environmental concerns and issues; to enable them to analyse, evaluate and draw inferences; and to promote positive environmental actions at the individual and collective levels.

The themes as well as the formats of the lessons in the textbooks introduce several social and cultural issues. For some children these may be a part of their daily life (issues related to access to food and water, family processes etc.) while for other these may not be things that they had ever thought of.

Some examples:

Class III	Lesson 6	The Food We Eat
Class III	Lesson 21	Families can be Different
Class IV	Lesson 22	The World in My Hand
Class V	Lesson 16	Who Will Do This Work
Class V	Lesson 18	No Place For Us?

Such lessons provide an opportunity to get children to think about things that they either take for granted, or that they avoid thinking about. E.g. Who they eat with (Class IV, page 167), who they share water/food with (Class IV p 182), who does the cleaning in their school/home (Class V p 153).

Dealing with such lessons may be more challenging. There may be students who are at the receiving end of some practices (discrimination) and would relate to the lessons/stories in a different way. In every class there would be students who

may be affected by biases-religious, social, gender, and even individual differences. As teachers, while we may be aware of the situations, we may feel that this does not fall within the boundaries of the curriculum or classroom teaching. It is important not to avoid such issues, or questions that may arise from the lesson, but it is equally important to deal with the issues with sensitivity to the experiences of the students in your class.

- **Have you ever had to deal with such issues?**
  - **Some children being discriminated because of their social or economic background?**
  - **Are there children in your class who come from such backgrounds?**
  - **Have you already taught some of these lessons in your class? Have you found these difficult to handle? Why?**

It is very important that such students are not made conscious of this, but rather feel that they are not the only ones with such experiences. The discussion in the class needs to be facilitated so that all students can freely discuss such issues without shame or embarrassment.

In the Classroom

Perhaps the most challenging task is to not impose our own value systems and notions of right or wrong, and allow the free sharing of students' experiences and ideas.

4.5 GOING BEYOND THE CLASSROOM AND THE TEXTBOOK

NCF 2005 recommends that children's life at school must be linked with their life outside the school.

"Learning takes place through interactions with the environment around, nature, things and people, both through actions and through language. The physical activity of moving, exploring and doing things on one's own, with one's peers or in the company of adults, and using language to read, to express or ask, to listen and to interact - are the key processes – through which learning occurs". (NCF 2005 p18)

It further states "The curriculum must enable children to find their voices, nurture their curiosity to do things, to ask questions and to pursue investigations, sharing and integrating their experiences with school knowledge rather than the ability to reproduce textual knowledge". (NCF 2005 p13)

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The organisation of content and the activities, and questions in the NCERT textbook encourage students to interact outside and beyond the textbooks and the class.

Talking to family (especially elders), community members and collecting information that relates the lesson to their own life is a key characteristic of the textbooks. Every lesson provides series of opportunities for this.

A few examples:

Linking the characters in the lessons to the child's own life.

Class III, lesson 6, Chottu's House

- Chhotu divided the pipe into different parts. Write the names of different parts of your house.

Class IV, Lesson 22, World in My Home

- Do you know anybody who thinks like Akshay's grandmother? What do you think Akshay should do?

Encouraging children to bring in and share their personal context and experience.

Class III, Lesson 14, The Story of Food

- Table of who does what work in their house

Class IV, Lesson 1, Going to School

- Can you ride a bicycle? If yes, who taught you to ride?
- Have you ever been in a thick jungle?

  If yes, please write your feelings about the jungles.

Class V, Lesson 21, Like Father Like Daughter

- Is your hair and skin like that of anyone else in your family?

  If yes, then please name the person.

Encourage children to talk to parents, and elders and community members to find out and collect information.

Class III, Lesson 16, Games We Play

- Find out from elders what games they played when they were children.

Class IV, Lesson 12, Changing Times

- Talk to grandparents and find out when he/she was 8/9 years old where did he/she live? Did they have a toilet in their house?

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Class V, Lesson 12, What If It Finishes?

- Find out from elders, when they were young what was used to cook food at home?

Encouraging children to go to different sites in the neighbourhood to observe, record, interview and investigate.

Class III, Lesson 8, Flying High

- Bird watching and recording observations.

Class IV, Lesson 12, Changing Times

- Visit to construction site and interviewing to workers about the construction. Note down your discussions and write a report.

Class V, Lesson 8, A Treat for Mosquitoes

- School campus – check and investigation
- Visit to a farm and writing a report on its environment.

- **Do you feel that such lessons and exercises will take too much extra time?**
- **What are three ways in which such lessons will be useful? Will enrich the teaching learning experience?**

In the Classroom

It is very important to provide the time and space to the students to make the connections between the lessons and their own lives and experiences, and to the community.

This will help each student to relate at a personal level to the lessons, and not to treat the content only as something to be memorised and reproduced for the exams. Asking questions that allow the students relate what they are learning in school to things happening outside, encouraging students to answer in their own words and from their own experiences, rather than simply memorising and getting the "right" answer—all these are small but important steps in helping children to develop their understanding.

It is important to support the understanding that there are multiple sources of knowledge and all these need to be valued and respected. It also provides opportunities to involve parents and community in the child's learning process.

Most importantly it helps you, as the teacher, to contextualise your teaching to suit your specific situation, students, constraints and opportunities. It allows you to go beyond the textbook and create more situations/illustrations/examples and contexts to enrich your classroom transactions.

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4.6 CHALLENGES INVOLVED IN TRANSACTING EVS

Based on what you have studied so far and your own and your own teaching-learning experiences, you would agree that many of the following are certainly strengths of EVS:

- The contents of EVS are organised thematically.
- Contents of the EVS are drawn from the children's own environment.
- Children learn about their environment through exploring and experiencing it, gathering and analysing information based on their observations and experiences, and constructing their own knowledge, enriching and enhancing it.
- Learning is planned to progress from what the child already knows, to what is to be learnt, from local to global, or from the immediate environment to community and society and beyond.
- Chapters begin with key questions initiating children into thinking and constructing their own knowledge.
- Provides scope for children's expressions – oral and written and other creative expressions, etc.

While the above are the inherent curricular strengths of EVS, its desired results depend much on the classroom teacher. As you would be well aware, different teachers would face different challenges in their regular teaching – in terms of the curriculum, classroom transactions, time and resource management, as well as dealing with individual students. These may change from time to time. The transaction of the EVS curriculum involves several additional challenges.

As you have already studied in the earlier units, EVS calls for a learner-centred approach in its transaction rather than the traditional teacher-centered approach. In other words, in the teaching-learning of EVS, learner becomes the focus rather than the teacher. As children come to the school with their own experience and understanding of their environment (which is unique to him/her), an EVS teacher has to provide learning experiences within this concrete environment of the children, enabling them to build connections/relationships and learn from the environment. It needs to be appreciated that children do not live in a generalised or contrived environment. They live in an environment which is unique to them. We need to ask the question, are we helping children to explore and understand this environment which they experience or an environment which the teacher, as an adult, has experienced?

This involves contextualising children's learning. Contextualising learning involves relating the contents of the EVS to the real world situations, enabling

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children in establishing connections with what they observe and experience in their immediate environment and construct their own knowledge and understanding and applications – from self –to - family- community- society. This is what NCF 2005 emphasises as 'knowledge construction' by children and differentiates it from the 'knowledge being passed on' to the children through a rote learning method.

Because of this shift in emphasis, NCF 2005 visualises that schools should help children construct knowledge while drawing upon their diverse experiences. As you would have experienced, in the EVS textbooks revised after NCF 2005, the learning experiences are planned to provide enormous scope for children's knowledge construction. Children need to be helped to make connections between their observations and experiences in their environment and derive meaning (new information /knowledge) or connect with their previous knowledge or which they have already mastered. As mentioned in the earlier units, this requires teachers to develop a deeper understanding and insights into the way children learn and assimilate knowledge from their daily experiences.

Educational psychologists have shown that learning occurs most only when learners process new information in such a way that it makes sense to them in their own frames of reference (memory, experience, feelings etc) and learning will be more efficient when learners work in groups or teams (collaboratively and cooperatively).

The above approach to learning and teaching is based on the theory of learning viz., constructivism. This approach requires teachers to plan and organise learning experiences that incorporate as many different forms of learning situations / experience as possible (social, cultural, physical, biological, etc.) for children in working toward the desired learning objectives. This is clearly a challenge to teachers in the transaction of EVS, as it requires the teacher to make a conscious shift from teaching to learning, particularly when the teacher, himself / herself, has learnt through a traditional /conventional approach of classroom teaching.

Transacting EVS (integrated themes) requires teachers to move beyond the individual boundaries of disciplines (their own subject specialisations) and plan appropriate learning experiences to help children synthesise multiple perspectives and develop integrated concepts. This requires teachers to be more flexible in their approach to understanding of the concepts itself, integrate key or leading questions in their transaction and develop insights into the issues discussed.

We have seen that learning experiences in EVS must encompass a wide range of activities to help develop children's understanding and skills. Children construct their own knowledge of the environment and progress on their learning continuum at their individual pace. When such is the dynamism involved in children's learning, the question that comes up is, should all children be assessed at a single point of time and that too through a single mode or tool of assessment?

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Considering the dynamic nature of children's learning, the NCF, 2005 has emphasised the concept of dynamic assessment. This is yet another challenge, as it demands teachers to gather more knowledge about how children think, understand and relate to environment, what are the difficulties they encounter, how they carry out EVS activities and projects, etc.

Check Your Progress-3

a. List some of the key challenges involved in the transaction of EVS.

b. What are the characteristics of a learner-centred approach?

c. Contextualising EVS means: (Tick the appropriate)

i. Transacting EVS contents from simple to complex

ii. Transacting EVS contents from known to unknown

iii. Transacting EVS contents with examples

iv. Transacting EVS contents by relating it to real life situations and immediate environment of the learners

4.7 LET US SUM UP

You have seen how the syllabus for EVS for classes 3, 4, and 5 reflects the philosophy and approach of the NCF 2005. You also have an idea about the thinking and process that guided the development of the textbooks within the framework of this syllabus. This background has helped you to understand the organisation and format of the textbooks. The unit has discussed the key features of the textbooks and indicated how these can be effectively used in the teaching and learning of EVS at the primary level.

To sum up, the opportunities provided in the textbooks will help students to:

- explore the surroundings and use the environment as a learning resource
- link their daily life experiences and existing knowledge to develop new learning.
- construct meanings of the world around them.
- see the links between their experiences and the textbook knowledge.
- sharpen skills of observation, exploration, recording and reporting.
- develop a range of life skills including team work, communication, negotiation, critical reflection, decision making and problem solving.
- appreciate diversity and celebrate differences across regions, cultures and socio-economic environments.
- change from being passive recipients of information to active participants in the learning process.

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In this context both the textbooks and the teachers take on a new role as facilitators to encourage learners to reflect, analyse and interpret in the process of knowledge construction.

In this process your role as a teacher becomes that of a guide—providing support in the journey to discovery and understanding. The textbooks provide a roadmap for the journey. At the same time, each teacher knows best the environment of his/her students, their interests and backgrounds, and their stage of intellectual development. Each teacher is also better aware of the constraints of his/her own situation in terms of time, numbers, resources and comfort or familiarity with subject. It is up to you as a teacher how better to use the textbooks as an aid to shape a suitable learning environment for each student.

4.8 MODEL ANSWERS TO CHECK YOUR PROGRESS

Check Your Progress-1

a. i. relationships

ii. curiosity, creativity

iii. awareness

iv. hands-on

Check Your Progress-2

Suggest your experiences

Check Your Progress-3

c. iv. Transacting EVS contents by relating it to real life situations and immediate environment of the learners

4.9 SUGGESTED READINGS AND REFERENCES

- NCERT (2005) National Curriculum Framework 2005, New Delhi
- NCERT (2007), Environmental Studies – Looking around, Textbook for class IV,New Delhi.
- NCERT (1991): Elementary Teacher Education Curriculum, Guidelines and Syllabi, New Delhi.
- Syllabus for classes at the Elementary Level, NCERT, New Delhi.

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- www.eelink.net (A directory of internet resources on environment education)
- www.envis.nic.in (Listing of various ENVIS nodes and their activities)
- http://www.esdtoolkit.org
- http://www.greenteacher.org
- www.kidsgreen.org

4.10 UNIT-END EXERCISES

i. In the context of teaching-learning of EVS "the role of the teacher changes from being a supplier of knowledge to an active facilitator, and to a co-learner in the process of knowledge construction in which the children are engaged." (NCF 2005)

Comment on this statement with reference to the rationale, approach and design of the EVS textbooks.