

**SCERT, Telangana, Hyderabad**

**Diploma in Pre School Education  
(DPSE)**

**Reference Material (2<sup>nd</sup> Year)**

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# **PAPER – 5**

## **Development of Environmental concepts in Pre School Children**

## **Unit 1: EVS as an integrated study of area.**

### **1.0 INTRODUCTION:**

Early year's education aims to maximize children's whole development, which can be achieved through various indoor and outdoor activities provided by environmental education. Therefore, the integration of environmental education into early childhood education through meeting children's developmental needs as well as their needs to interact with the natural environment ( Wilson, 1996) is necessary to achieve the goals and outcomes of not only environmental education but also early childhood education ( Davis, 1998 Davis, 1999 Wilson, 1993 Wilson, , 2010). Moreover, it was reported that philosophical background and implementations of environmental education in early years is affected by early childhood education.

Recognizing the central role of education in environmental protection and preservation, the National Policy on Education (NPE) states that “There is a paramount need to create a consciousness of the Environment. It must permeate all ages and all sections of society, beginning with the child. Environmental consciousness should inform teaching in schools and colleges. This aspect will be integrated in the entire educational process”(NPE, 1986). The NPE, 1986 and the subsequent educational policies have positioned environmental awareness and education firmly in school education.

The National Curriculum Framework (NCF) 2005 recognizes the critical role of the environment as the context in children's learning by emphasizing 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 for meaningful learning” (NCF 2005).

The latest National Curriculum Framework (NCF) 2013 under its objectives 3.7 recognised the need and importance of environmental inputs in the development of children. Research evidences reveal that some aspects of development occur most efficiently at certain points in the life span. Thus it is important to use these “windows of opportunity” and ensure that the children get the needed environmental inputs and supports for a particular kind of learning and development at its “prime time” for desired outcomes.

#### **What is Early Childhood Environmental Education.**

Environmental Education in Early Childhood includes the development of

- sense of wonder
- appreciation for the beauty and mystery of the natural world
- opportunities to experience the joy of closeness to nature.
- respect for other creatures.

## **Fostering a sense of wonder is all about the development of environmental concepts in young children**

### **1.1 Objectives :**

#### **You will be able to**

- Understand the concept and nature of EVS in Early Childhood Education.
- Know , understand and appreciate the vision of EVS and its objectives as stated in the National Curriculum Frame Work – 2005.

### **1.2 Meaning, Scope And Importance Of EVS**

#### **Nature and Status**

EVS learning provides an opportunity for children to explore, investigate and develop an understanding of the natural, human, social and cultural dimensions of the local and wider environments. This area enables children to live as informed and caring members of the local, national and global communities at large.

EVS learning provides an opportunity for children to explore, investigate and develop an understanding of the natural, human, social and cultural dimensions of the local and wider environments. This area enables children to live as informed and caring members of the local, national and global communities at large.

Keeping its significance in view, EVS has been kept as one of the curricular areas in Early Childhood Education. The major focus area of this area is - learning *for* the environment, learning *about* the environment and learning *through* the environment. Thus, in this the concepts, issues and concerns related to the social, natural and cultural environment need to be transacted in an integrated manner. Treating natural environment (science) and social-cultural environment in isolation is to be discouraged (disciplinary approach). A thematic approach is necessitated to be followed to provide a holistic perspective of the environment. Due to the thematic nature of the area, the content/concepts would be derived from the child's family and immediate surroundings. The nature of this subject is process based and therefore emphasis should be placed on development of skills.

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 or understanding human processes 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.

When should Environmental Education begin - in the third grade? First grade? Preschool ? The answer is -- even earlier. Environmental education based on life experiences should begin during the very earliest years of life. Such experiences play a critical role in shaping lifelong attitudes, values, and patterns of behaviour toward natural environments.

Because young children learn about the environment by interacting with it, educators and other adults must attend to the frequency, nature, and quality of child-environment interactions during the early years. Many young children have limited opportunities for these experiences. In fact, regardless of where they live, young children spend most of their time in settings or doing activities that keep them essentially isolated from the natural world.

### 1.2.1) What is Environmental Studies?

Keeping its significance in view, preschool programme focuses on EVS has been kept as one of the curricular areas in –learning for the environment, learning for the environment, learning about the environment and learning through the environment. Thus, in preschool the concepts, issues and concerns related to the social, natural and cultural environment need to be transacted in an integrated manner. Treating natural environment (science) and social-cultural environment in isolation is to be discouraged (disciplinary approach). A thematic approach is necessitated to be followed to provide a holistic perspective of the environment. Due to the thematic nature of the subject, the content/concepts would be derived from the child’s family and immediate surroundings. The nature of this subject is process based and therefore emphasis should be placed on development of skills.

Environment literally means, surrounding in which we are living. Environment includes all those things on which we are directly or indirectly dependent for our survival, whether it is living component like animals, plants or non living component like soil, air water.

The word ‘Environment’ is derived from the French word ‘Environner’ which means to encircle, around or surround. As given by Environment Protection Act 1986, Environment is the sum total of land, water, air, interrelationships among themselves and also with the human beings and other living organisms.

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

**Natural Environment:** It includes all the a-biotic factors around us such as air, water, soil, rocks and landforms, as well as the biotic elements consisting of plants, animals and micro-organisms.

**Human-made Environment:** It is the human made environment which has been created 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.

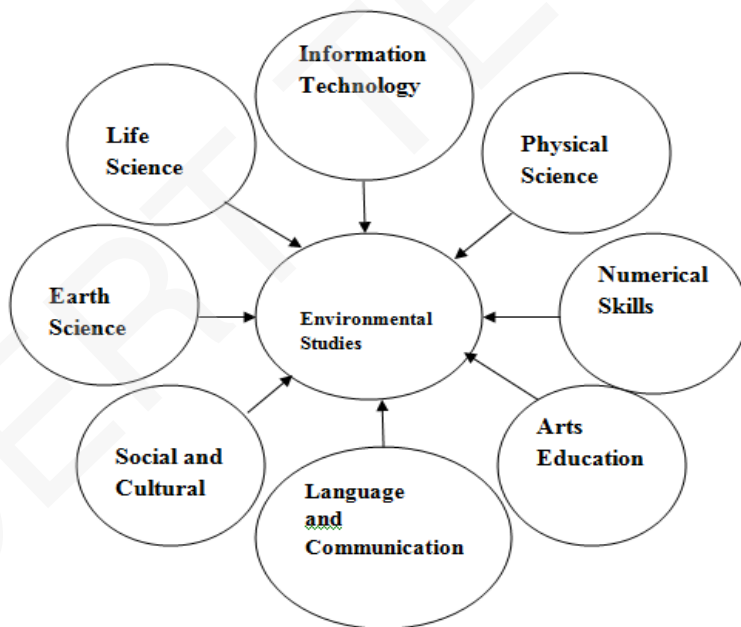
Culture is shaped by the natural environment and the interactions between individuals in a community. Culture differs from community to community and society to society. Our cultural characteristics, the food we eat, the clothes we wear, our traditions and norms, are shaped by our natural environment.

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

This shows that Environment is everything that surrounds us, of which we are also a part. We can conclude that environment includes all 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.” Hence Environmental study is not restricted to any one subject, but connected with all.

Environmental Science is the interdisciplinary field and requires the study of the interactions among the physical, chemical and biological components of the Environment with a focus on environmental pollution and degradation.

Environment studies are a multidisciplinary subject where different aspects are dealt with in a holistic approach. The science of Environment studies comprises various branches of studies like chemistry, physics, life science, medical science, agriculture, public health, sanitary engineering, geography, geology, atmospheric science, etc.



**Figure Interdisciplinary and Integrated perspective of EVS**

EVS content and skills utilize the teaching- learning process effectively in a way that the social, emotional and attitudinal values of the children are interwoven with the acquisition of knowledge, skills rather than teaching them as an add on activity or in an isolated manner.

### **1.2.2) Scope**

EVS, with the inherent values of environment and its conservation, is just not a subject/study area alone. It is a process leading to transformation of behaviours, and a way of life. It focuses on all the three domains of learning – cognitive, affective and behaviours/actions in a graded manner. The content and transactions of EVS thus recognizes respects and resonates with all forms of diversity in the local context. Teachers have a major role in this process.

Thus, the scope of EVS at the school level may be summarized as enabling children to:

- Connect with their natural and human made environment , understanding our dependence on the various components of environment (biotic, abiotic and human made)
- Develop a holistic understanding of their environment
- Develop a multidisciplinary perspective to understanding of our environmental issues/problems and appreciate the impact/s of our daily activities on its integrity.
- Develop favourable attitudes and habits to protect and preserve our environment

A careful reflection on the above objectives 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 resulting in an informed concern and care for the environment, its protection and conservation. Teachers and Schools play a critical role in supporting and helping children explore their environment and construct their own meaning from their interactions/experiences. By structuring and organizing 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 exists in the environment, ability to express feelings and thoughts, etc.

### **1.2.3. Importance:**

One of the major concerns of this millennium is taking good care of the environment which nurtures all of us. We have now been living in a situation where environmental degradation is occurring at an unprecedented pace. Hence the immediate need of the day is bringing about an awareness of the environment and its problems at all levels. Sincere efforts are needed to re-establish our links with the environment. We must protect the environment from 'ourselves'. It is our own life style, greed, selfishness and lack of awareness that is the starting point of all the problems related to the environment. The great scientist Albert Einstein has said "you cannot solve a problem with the same mind-set which created it at the first place". It is only when we truly begin to see ourselves as an indivisible part of the environment, and then there would be a fundamental shift in our mind set towards its conservation. Teachers play a significant role in the society because of their influence on the children with whom they interact.

An important challenge before us at present is to infuse in to the learning process, a spirit of question. In this process, environment becomes a medium for engaging young minds in the excitement of first-hand observation of nature and understanding the patterns and processes in the natural and social worlds. In this context, it has necessitated a relook in to the curriculum of teacher education, so as to "prepare the young minds to appreciate the importance of environment in a holistic manner, not only for human survival but also for all life forms on Earth". Recognising the central role of education in environmental protection and preservation, the National Policy on Education (NPE) states that "There is a paramount need to create a consciousness of the Environment. It must permeate all ages and all sections of society, beginning with the child. Environmental consciousness should inform teaching in schools and colleges. This aspect will be integrated in the entire educational process" (NPE, 1986). The NPE, 1986 and the subsequent educational policies have positioned environmental awareness and education firmly in school education.

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### **1.3 Objectives:**

**The major objectives of EVS Teaching- Learning is to enable children to:**

- **learn about the environment-** by developing an awareness of the natural, social and cultural environment. It deals with issues/concepts in an integrated manner through



various themes and activities related to daily life experiences, e.g. family, friends, plants and animals, etc.

- **learn through the environment** -lays emphasis on using various objects, places, plants and animals in the immediate environment as learning resources;
- **learn for the environment** -emphasizes inculcation of values, attitudes and skills related to protection of the environment;
- **enhance/promote curiosity and creativity** in relation to the surroundings;
- **develop an appreciation for diversity** (language, family, habits, variations in plants, animals, culture, etc.) in the surroundings;
- **develop sensitivity** towards senior citizens, people with disability and disadvantaged groups of society, focusing on their strengths as well as the areas of concern.

#### **1.4: Significance Of Understanding About Environment: Vision Of This Discipline In The National Curriculum Frame Work – 2005.**

##### **1.4 .1 ) Significance Of Understanding About Environment:**

The rationale for Environmental Education during the Early Childhood years is based on two major premises.

- i. First, children must develop a sense of respect and caring for the natural environment during their first few years of life or be at risk for never developing such attitudes.
- ii. Second, positive interactions with the natural environment are an important part of healthy child development, and these interactions enhance learning and the quality of life over the span of one's lifetime.

Children who are close to nature relate to it as a source of wonder, joy, and awe. Wonder -- rather than books, words, or learning all the facts -- provides the direction and impetus for environmental education in early childhood. Environmental education during the early years should be based on this *sense of wonder and the joy of discovery*.

Children's appreciation for nature develops at a young age, so we have to begin environmental education as early as possible using child friendly approaches. National ECCE Curriculum Frame Work 2013 also focus on this which is very clear in one of its objective that ECCE programme should provide opportunities for young children to stimulate intellectual curiosity and develop conceptual understanding of the world around them by providing opportunities to explore, investigate and experiment.

#### 1.4. 1) NCF 2005 and Objectives of Environmental Studies

The National Curriculum Framework 2005 indicates some of the objectives of teaching science and Social Sciences at the primary stage as follows:

- to train children to locate and comprehend relationships between the natural, social and cultural environment;
- to develop an understanding based on observation and illustration, drawn from lived

#### **Broad objectives of the Early Childhood Care and Education programme are to:**

- Ensure each child is valued, respected, feels safe and secure and develops a positive self concept
- Enable a sound foundation for physical and motor development of each child- as per each child's potential
- Imbibe good nutrition routines, health habits, hygiene practices and self help skills
- Enable children for effective communication and foster both receptive and expressive language
- Promote development and integration of the senses
- Stimulate intellectual curiosity and develop conceptual understanding of the world around by providing opportunities to explore, investigate and experiment
- Enhance development of pro-social skills, social competence and emotional well being
- Develop sense of aesthetic appreciation and stimulate creative learning processes.
- Imbibe culturally and developmentally appropriate behavior and core human values of respect and love for fellow human beings.
- Enable a smooth transition from home to ECCE centre to formal schooling
- Enhance scope for overall personality development

*Source: National ECCE Curriculum Frame Work 2013*

experiences and physical, biological, social and cultural aspects of life, rather than abstractions;

- to create cognitive capacity and resourcefulness to make the child curious about social phenomena, starting with the family and moving on to wider spaces;
- to nurture the curiosity and creativity of the child particularly in relation to the natural environment (including artifacts and people);
- to develop an awareness about environmental issues;
- to engage the child in exploratory and hands-on activities to acquire basic cognitive and psychomotor skills through observation, classification, inference, etc.;
- to emphasize design and fabrication, estimation and measurement as a prelude to the development of technological and quantitative skills at later stages;
- to be able to critically address gender concerns and issues of marginalisation and oppression with values of equality and justice, and respect for human dignity and rights.

The NCF 2005 recognizes the critical role of the environment as the context in children's 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 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 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.

When EVS is looked from the context of ECCE, the developmental stages of young children clearly points out that their development depends on the kind of stimulation they receive from care takers and also their interaction with the immediate environment. Hence their interaction with the environment is inevitable for their development and learning.

The contents of EVS at this stage is spirally organized starting with the immediate experience of the child (known) moving out to the world she/he inhabits (unknown), more of concrete experiences to less abstract leading to an analysis of some of the factors that influence life on this planet. The focus of EVS at this level is to make children explore , enjoy , investigate and understand their immediate surroundings , their role in caring for the environment.

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. This is very important for young children as they learn everything experiencing through their senses. 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,)

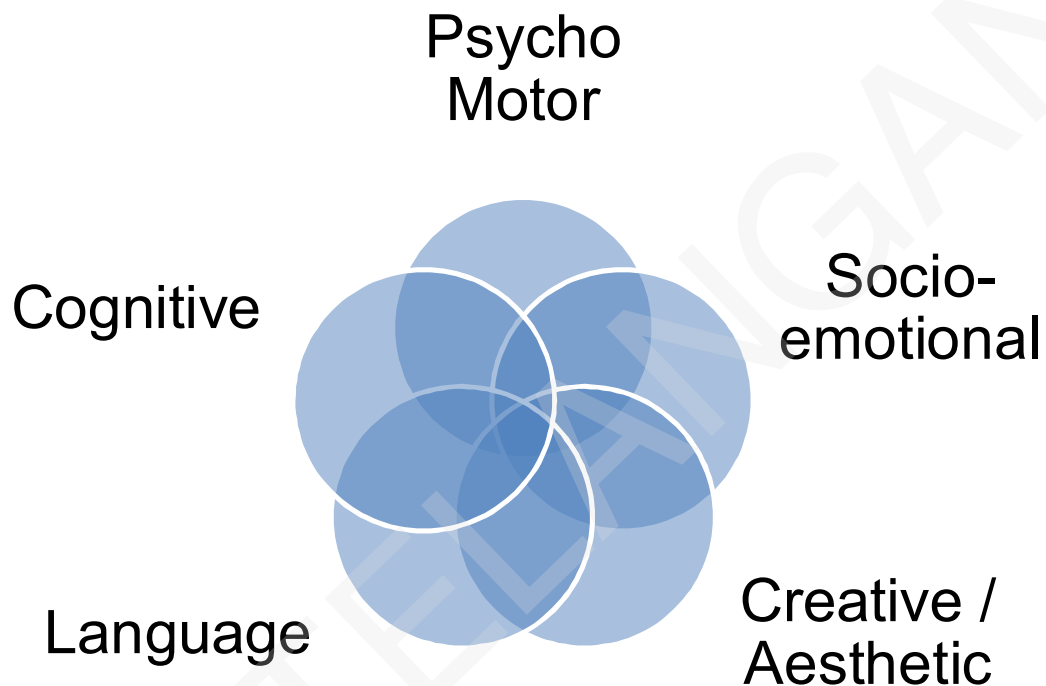
The teaching-learning of EVS is thus just not a study area for pre primary stage children, but is a experience ground for developing environmentally friendly attitudes, values, habits and behaviours. One can describe EVS as a permanent investment in creating a sustainable society. Hence, the scope of 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.

### **1.5: Integrated And Interdisciplinary Nature Of EVS.**

Environmental concepts in the Early Childhood Education are visualized as an integrated subject area which draws upon insights from sciences (physical, chemical and biological), social studies (history, geography, civics, etc) and environmental education (protection and

conservation). The approach in EVS goes beyond single subject approach and helps children to use the contents and methods of science and social sciences and environment to solve Environmental problems/issues in future. This integrated nature of EVS provides experiences and learning opportunities which are all interconnected. This helps the young children to connect and make meaningful connections between ideas and knowledge, which are meaningful to them. This type of learning employs an interdisciplinary approach which discourages the separation of learning activities into different subject areas, but rather promotes linking of experiences across the developmental domains.



Example: When you take up the following activities for FOOD WE EAT concept, it promotes development across all the domains

**1 Vegetable guessing bag:(cognitive)**

Try this activity to increase children's recognition and awareness of different vegetables. Place some vegetables (real or plastic) in a bag. Ask children to feel inside the bag and guess which vegetables are there. As a variation, blindfold children and place a vegetable in their hands. Ask them to guess what the vegetable is by feeling, smelling and even tasting it.

## **2 Drawing and colouring:(fine motor and language)**

Encourage children to draw their favourite food item and colour it. Display on the wall and encourage child to tell the class about her/his favourite food. This helps to know about each others favourite foods in the class.

## **3 Sing action song on healthy food :( motor, language and emotional)**

You can sing song related to the local food items.

## **4 Books and Posters: (language and cognitive)**

Create picture books about food and encourage every child to read and talk about it. Display posters on food we eat in the classroom. Let children identify and talk about it.

## **5 Tasting of food :( language and cognitive)**

Encourage children to take turns tasting new foods and describing to the group what the food tastes like. Children can also discuss the foods' appearance, smell and texture.

## **6 Planting vegetables / herbs :( psycho motor, socio –emotional, language, cognitive, aesthetic)**

Create a vegetable patch and encourage children to water and care for the plants. Use the exercise as an opportunity to discuss where food comes from and how it grows. Some easy to grow, edible produce includes tomatoes, and herbs.

## **7 Field Trip :(psycho motor , socio –emotional , language , cognitive , aesthetic)**

Field trip to vegetable / fruit market / grocery store / farm house etc .Try to have a clear objective in mind, something that you would like the children to gain from the experience.

Follow up the field trip with related activities like discussions, drawing pictures and food tasting. For example, visit a farm and watch a cow being milked. Then discuss with the children how yoghurt and cheese are made.

## **8 Learning about food in different cultures :( Socio emotional)**

Celebrating different cultures and festivals with food is delicious and fun for children. Show the pictures of different food items that are made specifically on the particular festival of all people in the community and encourage children to identify and talk about it.

Let's examine the above example .It clearly shows that the EVS experiences /concepts does not focus only one subject or one area of development. It is integrated and interconnected.

## **1.6 Emphasis On Holistic Learning.**

Holistic thinking or integrated perspective is the heart of Environmental Education. Many of the great educational philosophers and thinkers like Pestalozzi, John Dewey, Maria Montessori, Rudolf Steiner, Krishnamurthy, Aurobindo, etc., have 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 children be the 'most that they can be', which amounts to development of a child's intellectual, emotional, social, physical, artistic, creative and spiritual potentials. This is done not by just rote learning in classes but through direct engagement with the environment. EVS, by enabling children to explore, understand, appreciate and value their environment, helps them to derive meaning and joy of learning through connecting with their immediate environment, natural world and the community. Thus, it is child-centered and focuses on "experiential learning" rather than "teaching". EVS aims at developing in children a *holistic or integrated perspective* of our environment as a composite of natural and human-made surroundings with the intricate interactions and interdependence that exists. The approach in EVS goes beyond single subject approach and helps children to use the contents and methods of science and social sciences and environment to solve environmental problems/issues in future (Ravindranath, 2011).

### **1.6.1) What does 'Holistic Learning' mean?**

This is an approach that seeks to fully activate all aspects of the learner's personality (intellect, emotions, imagination, body) for more effective and comprehensive learning.

- Holistic Learning is based on the principle of interconnectedness and wholeness. Thus the child is seen as a whole person with body, mind, emotions and spirit.
- Holistic Learning seeks to develop approaches to teaching and learning that foster connections between subjects, between learners through various forms of community.
- Holistic Learning seeks a dynamic balance in the learning situation between such elements as content and process, learning and assessment, and analytic and creative thinking.
- Holistic Learning is inclusive in terms of including a broad range of children and a variety of learning approaches to meet their diverse learning needs.

### **1.6.2) Why Is Holistic Learning Important?**

The holistic aim of the study of EVS is to bring about a transformation in the cognitive, affective and psychomotor behaviours of children. The transaction of this subject should entail an action-oriented, project centred, and participatory approach (NCERT, 2004).

Many of the great educational philosophers and thinkers like Pestalozzi, John Dewey, Maria Montessori, Rudolf Steiner, Krishnamurthy, Aurobindo, and Tagore have invariably reflected on the aims of education as helping a child to develop as a 'wholesome individual',

cultivating the moral, emotional, physical, psychological and spiritual dimensions of personality (NCERT, 2004)7. In essence they have visualized a ‘holistic’ education. Holistic education aims at helping children to be the ‘most that they can be’, which amounts to development of a child’s intellectual, emotional, social, physical, artistic, creative and spiritual potentials.

As the child development is rapid at this point , the holistic approach will enhance the child’s growth and development to the optimum.

### **What does holistic learning look like in practice?**

Programs in the early years must be integrated, whether they are in care settings or schools. They need to be focussed on helping children to make meaning across whatever categories we use to devise learning programs – domains, learning areas, etc. This is one of the main responsibilities of the teacher – and is not something which should be left to the children to do ‘in their heads’ or for families to make sense of at home.

Literacy and numeracy are embedded in meaningful (to the child) learning provided through play based experiences, investigations, inquiries and experiments. This does not preclude intentional teaching. As the Early Years Learning Framework says ‘Holistic approaches to teaching and learning recognize the connectedness of mind, body and spirit. When early childhood educators take a holistic approach they pay attention to children’s physical, personal, social, emotional and spiritual well-being as well as cognitive aspects of learning.’

As discussed earlier, the EVS programme do not focus on one area but gives equal importance to language ,numbers and all the other areas like personal, social and emotional development, physical development, sensorial development and creative development.

### **Conclusion and Summary.**

EVS learning provides an opportunity for children to explore, investigate and develop an understanding of the natural, human, social and cultural dimensions of the local and wider environments. This area enables children to live as informed and caring members of the local, national and global communities at large , which is real education.

Environmental studies in early years focus on developing

- Sense of wonder in children
- Providing opportunities to experience and interact and connect with the people and with immediate environment enabling the child to understand his/her role in making the place a better one to live..

Environment includes natural, human-made, socio-cultural aspects.

The nature of EVS is integrated and interdisciplinary leading to holistic approach.

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.

The National ECCE Curriculum frame work 2013 also focus on the holistic learning to stimulate intellectual curiosity and develop conceptual understanding of the world around by providing opportunities to explore, investigate and experiment.

**Exercises:**

1. Why does EVS learning need to be integrated in nature rather than a disciplinary one?  
Give two reasons.
2. Choose one EVS concept and plan activities suitable for 4 year children focusing on their holistic development.
3. Explain the objectives of EVS as given in NCF 2005.

## **UNIT 2: UNDERSTANDING THE LEARNER IN THE CONTEXT WITH THE ENVIRONMENT**

### **2.0: INTRODUCTION:**

Young children learn best through experiences that relate to what is already familiar and comfortable. Thus, the best place to start is in an environment similar to what they already know. For example, focus on a single tree in a backyard or playground before venturing into different kinds of trees.

Because children learn best through direct, concrete experiences, they need to be exposed in the outdoor environment to learn about it. The exposure should be provided on an almost daily basis. Provide ongoing, simple experiences with the grass, trees, and insects in environments close to school rather than spending time and energy arranging for trips to unfamiliar place. In addition to investigating the elements of the natural world already present in an outdoor setting, you can use many different strategies to transform a typical playground into an environmental yard. Start by adding bird feeders, flower and vegetable gardens, tree houses, tools for experimenting and investigating (for example, a magnifying glass, water hose pipe, magnet etc.).

Focus on "experiencing" rather than "teaching." Because young children learn through discovery and self-initiated activities, you should be more as a facilitator than a teacher. Learning among young children requires active involvement -- hands-on manipulation, sensory engagement, and self-initiated explorations. Young children should not be expected to "watch and listen" for any length of time, nor should they be expected to always follow your lead or agenda. Focus on what children find of interest rather than competing for attention through adult-selected activities and materials.

Demonstrate a personal interest in and enjoyment of the natural world. Your expressions of interest in and enjoyment of the natural world are critical to child's interest in the environment. In own sense of wonder, more than scientific knowledge, will ignite and sustain a child's love of nature.

Model caring and respect for the natural environment. You should model caring and respect for the world of nature. Talking to children about taking care of the Earth is far less effective than demonstrating simple ways of expressing care. Care and respect can be modeled by gently handling plants and animals in the classroom, establishing or maintaining outdoor habitats for wildlife, properly disposing of trash, and recycling or reusing as many materials as possible.

Young children often develop an emotional attachment to what is familiar and comfortable to them. If they are to develop a sense of connectedness with the natural world, they need frequent positive experiences with the outdoors. Providing opportunities for such experiences

and sharing them with young children is the essence of environmental education. Environmental education for the early years focuses primarily on young children exploring and enjoying the world of nature under the guidance and with the companionship of caring adults.

In the earlier unit you have learnt about what is EVS and its nature and how environment plays an important role in children's holistic 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 actively in direct learning situations and experiences

Objectives:

After going through the unit, you will be able to:

1. Understand and enjoy the way children learn from and about the environment.
2. Implement pedagogic practices to nurture learning about the environment.
3. Be sensitive to the diversity in the classroom

### **2.1: How children Learn: Revisiting Piaget ,Vygotsky , Bruner with respect to the attainment of concepts, multiple intelligence , exploration of the environment.**

Very young children learn about the world through their senses—sight, smell, touch, sound, and taste. They pick up cues about natural characteristics of objects in their world; they learn about things that are soft or hard, heavy or light, smooth or rough, hot or cold, sweet or sour, and so forth. They learn about shape, what happens when you drop something, what “round” means and how round objects behave. They learn so much that becomes background for formal learning later in life. The richer the sensory background, the broader the store of prior knowledge and understanding the child will bring to school.

Let's recollect what the eminent child psychologists say about how children develop and learn during early years.

#### 2.1.1 Jean Piaget

Jean Piaget developed his cognitive -developmental theory based on the idea that children actively construct knowledge as they explore and manipulate the world around them.

Jean Piaget's theory of cognitive development provides a framework for understanding how cognition, or thinking develops. ... So providing ample opportunities for children to interact with the environment through all their senses allows them to gain a better understanding of the world around them.

### 2.1.2 Lev Vygotsky

Lev Vygotsky believed that children learn about their world through physical interaction. Vygotsky's sociocultural theory asserts that learning is an essentially social process in which the support of parents, caregivers, peers and the wider society and culture plays a crucial role in the development of higher psychological functions.

Vygotsky's sociocultural theory asserts that learning is an essentially social process in which the support of parents, caregivers, peers and the wider society and culture plays a crucial role in the development of higher psychological functions

### 2.1.3 Jerome Bruner:

Discovery learning is an inquiry-based, constructivist learning theory that takes place in problem solving situations where the learner draws on his or her own past experience and existing knowledge to discover facts and relationships and new truths to be learned. Children interact with the world by exploring and manipulating objects, wrestling with questions and controversies, or performing experiments.

As a result, students may be more likely to remember concepts and knowledge discovered on their own. Models that are based upon discovery learning model include: guided discovery, problem-based learning, simulation-based learning, case-based learning, incidental learning, among others.

Discovery learning...

- encourages active engagement
- promotes motivation
- promotes autonomy, responsibility, independence
- develops creativity and problem solving skills.
- tailors learning experiences

Further Jerome Bruner proposed that children represent information and knowledge in their memory in three different but interrelated modes such as action-based, image based and language/symbol based. In other words he explained how this was possible through the concept of the **spiral curriculum** which involved information being structured so that complex ideas can be taught at a simplified level first where children learn more through concrete experiences, and then re-visited at more complex levels later on. Therefore, topics would be taught at levels of gradually increasing difficulty (hence the spiral analogy).

So in a nutshell the way children learn according to the educational philosophers is ....

In more recent times, scholars in Developmental Psychology and Child Development like Piaget, Bruner, Vygotsky, and Gardner have further emphasised, based on their research, play and activity as the child's natural modes of learning and that children living and learning in multiple social and cultural contexts influence children's learning and development. While Piaget emphasised that children constructed their knowledge by assimilating the experiences and then accommodating within their own understanding and that children are adjusting and using new information constantly to make sense of perceptions and experiences. Vygotsky viewed that children are actively engaged in social and cultural experiences and there is active interaction between children and more experienced others in the process of learning and development. Their basic tenets are that learning is an active and interactive process in which children learn through play and through interaction between children and more experienced others.

Children are actively engaged in their social and cultural experiences, they constantly adjust and use new information to make sense of perceptions and their experiences. Most importantly play leads to learning and development in children.

Based on the insights and philosophies of these practitioners and thinkers, early childhood care and education programmes should be based on an understanding of the patterns of development and learning that define the essential nature of childhood.

Now it's very clear that children learn through exploring and interacting their immediate environment – physical, natural, social environment using their senses, manipulating objects, experimenting, hands on experiences, interacting, questioning and imitating people, discovering on own sometimes and with the instructions from adult care givers. Hence the approaches dealt with EVS teaching and learning is best for children to interact with the world and learn about it

## **2.2: What children know?**

Children when they enter into the preschool they are developed physically, socially, mentally and language to some extent.

They have experiences with their oneself first, able to express their needs and wants, likes, dislikes, know family members, moves and interacts confidently within the known environment. Communication is also at level where he/she can communicate clearly. Uses his body in a more balanced and coordinated way. Starts enjoying the company of peer group. Child starts interacting with the natural, physical and manmade environment to start knowing. Very curious, enthusiastic, loves to experiment and explore. This nature of children at this age encourages them to get involved in the EVS activities as they are eager to understand and explore their immediate world.

Our young children strive to be:

- Happy and healthy
- Inquirer
- Confident

- Communicative
- Creative
- Caring
- Open-minded
- Resilient
- Sensitive to diversity
- Respectful
- Mindful
- Life-long learner( Source: National ECCE Curriculum Frame Work)

### **2.3: Diversity in the classroom:**

You should borne in mind that EVS learning must find suitable ways to sensitize the children to the wide differences and discrimination that exist within our society relating to gender, children from marginalized groups, and differently able children, and the elderly and the sick.

Children are born belonging to different culture, which is not only influenced by traditional practices, heritage and ancestral knowledge, but also by the experiences, values and beliefs of individual families and communities. Respecting diversity means within the curriculum valuing and reflecting the practices, values and beliefs of families. You as a teacher should honour the histories, cultures, languages, traditions, child rearing practices and lifestyle choices of families. You have to value children's different capacities and abilities and respect differences in families' home lives. You also have to recognize that diversity contributes to the richness of our society and provides a valid evidence base about ways of knowing.

When you respect the diversity of families and communities, and the aspirations they hold for children, then you will be able to foster children's motivation to learn and reinforce their sense of themselves as competent learners. They make curriculum decisions that uphold all children's rights to have their cultures, identities, abilities and strengths acknowledged and valued, and respond to the complexity of children's and families' lives. You should think critically about opportunities and dilemmas that can arise from diversity and take action to redress unfairness. The diversity in the classroom provides opportunities to learn about similarities and difference and about interdependence and how we can learn to live together.

Taking into consideration of this diversity, as a teacher you should plan activities which suits the needs of all children and encourages children to participate by providing equal opportunities to every irrespective of language, ethnicity , socio cultural background. Plan such that every child learns from others.

A diverse classroom is one in which both the students and the teacher are accepting of all people, regardless of their race, culture, or religion. This acceptance is evidenced by the books that are read, the activities that are completed, and the lessons that are taught.

Look children as happy, healthy and confident; each child with unique identity, grounded in their individual strengths and capacities; and with respect for their unique social, linguistic, and cultural heritage and diversity. As children grow and learn, they explore, enquire, make discoveries and apply their understanding to become self regulated lifelong learners. Furthermore, they are sensitive to diversity, are communicative, caring and creative in their relationship with people and environment.

#### **2.4: Approaches to learn about the environment:**

Early child hood teachers should use a mixed approach in classroom transactions .The latest child development theories and knowledge on brain development declare that all children do not learn in similar way .Each child has his/her own style of learning. If catered to this need then only all children will reach to the maximum potential they hold. Hence it is said that an effective teacher, to be able to communicate well, should use a mixed approach ie a combination of teaching-learning methods. Selecting an appropriate method depends on two key factors:

- The nature of content being transacted and dealt with in the class: As a teacher handling young children, you would appreciate that based on the nature of topic being discussed in the classroom, you need to find a suitable teaching learning method. Some topics, like Fruits , Vegetables ,Animals , and Food choices’ may require that children are taken to a vegetable/fruit market and that they engage themselves in observation, surveying, etc.Sometimes you may have to organize a cooking class where children are given opportunities to make salad on their own under your guidance, hence you have to plan for hands on experiences

- The second important factor which you should consider while deciding on a teaching-learning method, is the preferred learning styles of the children. All children have different intellectual abilities and learning styles as they think and learn differently. There are various ways of classifying differences in learning styles. Some learning styles classifications include:

- Left and right brain thinkers
- Auditory, visual and kinaesthetic learners

Each learner will have a preferred way in which to process information. The key consideration for you as a teacher is not only to rely on one teaching strategy. It is important to remember that some children don’t learn very well by just listening. Some may have a more limited attention span than others and may like activity in class. Understanding the many ways in which people learn is crucial when selecting an appropriate teaching-learning method.

So we have to consider the diverse range of skills including singing songs, making music, riding bikes, playing games, building block constructions, exploring , experimenting, drawing and painting pictures to name just a few. All of this happens without formal schooling, but rather as a result of natural curiosity in social and physical interaction with their world.

Then what are the appropriate approaches suitable for young children to learn with joy. Lets discuss..

#### 2.4.1 Inquiry based learning.

Very young children have a natural curiosity and wonderment about their world, which makes preschool a fun place to be. It is also why inquiry based learning in preschool works so well. The ways in which children play, explore and question are delightful, but more importantly, they are also fundamental to their early cognitive development.

Then how do we nurture and further develop the child's inquiring mind that will support their lifelong learning journey. Let's explore..

Children are naturally curious. They want to know how things work and why things happen. Children naturally think like a scientist as they try to understand the world around them. You can help support their scientific thinking and explorations by integrating child-led investigations or inquiry learning into your curriculum.

What is Inquiry Learning?

Inquiry means, Investigation, examination. Inquiry learning encourages children to learn through investigating, questioning and problem-solving. Inquiry learning is child-led investigations. Inquiry-based learning is not just asking children what they wants to know BUT it's about triggering curiosity in them to know about the world around them..

Why Inquiry Learning is important in early years ?

Young children have a natural curiosity and wonder about their world, which makes them enjoy with everything they encounter in day to day life.. It is also why [inquiry-based learning in preschool](#) works so well. The ways in which children play, explore and question are delightful, but more importantly, they are also fundamental to their development. Children in their early years try to understand the world around them by exploring through their senses, seeing, hearing, touching, tasting and smelling. So inquiry learning starts from their babyhood itself and it moves to preschools along with them.

How do the Preschool environment and the programme support the Inquiry Learning in children?

Provide sensory rich experiences for children to explore discover and ask questions.

- A sensory table or bin or basket is an easy way to provide different opportunities for children to explore by touching, feeling, seeing, smelling.
- Take a basket collect different things from the environment and encourage children explore.



- Provoke children’s curiosity with a variety of experiences that integrate your curriculum with your children’s interests.
- Integrating your children’ interests hook them in and keep them engaged in the activity. Try seeing how you can integrate your children’s interests plus your preschool learning theme.
- Ask open-ended questions to prompt deeper thinking.
- Questions like “What do you think...” or “What else would you try” help prompt your children to dig deeper in their thoughts.
- Create an opportunity for exploration and play.

#### 2.4.2 Learning through exploration:

Children in preschool age love to explore their immediate environment as preschool teachers we have great opportunity to use this interest of exploration for learning process. Young children enjoy exploring but are not safe always. Hence preschool teachers have to keep in mind the safety of children while planning explorative activities for children.

#### Exploring is good

Young children learn about the world through their senses- tasting, touching, seeing, and smelling this helps them to understand how things are same or different from each other by trying to explore they learn to solve problems. They learn be discovery all this helps in their physical growths social emotional and intellectual growth. Exploration doesn’t happen in a vacuum. Children encourage / interact with things people while playing. Hence as young teachers you need to plan play way activities which encourages children to explore and ask questions like why, what, how, leading to learning. Exploring books also help children to explore the world

Very young children learn about the world through their senses—sight, smell, touch, sound, and taste. They pick up cues about natural characteristics of objects in their world; they learn about things that are soft or hard, heavy or light, smooth or rough, hot or cold, sweet or sour, and so forth. They learn about shape, what happens when you drop something, what “round” means and how round objects behave. They learn so much that becomes background for formal learning later in life. The richer the sensory background, the broader the store of prior knowledge and understanding the child will bring to school.

### 2.4.3 Learning by discussion.

A class discussion is different from the usual circle time. It is a meeting that brings children together to discuss ideas, solve problems, organize the day, plan activities, or celebrate what goes well.

Discussion methods are a variety of forums for open-ended, collaborative exchange of ideas among a teacher and children or among children for the purpose of furthering their thinking, learning, problem solving, understanding,.

Implementing classroom discussions during in a preschool has many benefits. The advantages include: Increases children's' interests and engagement as they are actively engaged and there is a recognition for their ideas /answer. Just reading and writing in a preschool classroom does serve the objective of education.

What do children gain from class discussions:

They learn to

- listen and respond to others.
- ask questions and share information
- set expectations together.
- think about time.
- solve problems and make decisions together.
- plan what to study and how to share knowledge. “What are some ways you could show what you learned about eggs?”
- build relationships and gain a sense of community. “You had a very long talk, and you made a plan that works!”

Every day in the morning for 10 minutes you can conduct class discussion on any EVS concepts.

### 2.4.4 Field Visits

A field trip or excursion is a journey by a group of people to a place away from their normal environment. Visits to zoos, gardens, parks and museums are part of school life. Yet often such visits are just picnics. Recognising the educational opportunities offered by such visits, you, as a teacher, can make these ‘picnics’ into joyful learning outings.

The field visits provides first hand experiences to children in gaining Environmental concepts. They can provide the space for the development of several skills including observation, investigation, monitoring, mapping, collecting data and analysing it, critical thinking and problem solving.

For example If you want children to know about the plant life then consider the following...

Plants constitute a major part of the environment. Plants are classified into three major categories considering the structure of the stems. They are the herbs, shrubs and trees. Keeping in view the objectives of the field trip, various aspects to be observed are:

- Different plants
- Barks of the trees
- Size of the plant and tree
- Variety in shapes, sizes, number. and texture of leaves
- Differences seen in the size and shapes of seeds and fruits
- Differences seen in the flowers of plants

After the visit, next day in the class, discuss about the diversity in the plant world, its significance and future concerns. Emphasise on the types of plants, differences in leaves, fruits, seeds and their habitat. The following questions may also be discussed:

- How are two plants different from one another?
- In what ways do these two plants relate to one another?

#### 2.4.5 Use of poem and narration.

The following given example helps to understand children through poem about tree. The poems can be of facts or fiction related to EVS concepts Children enjoy learning with poems and rhymes.

Exp:

Leaves are green

Leaves are brown

Leaves are big

Leaves are small falling on my head.

If you want your little one to learn a specific procedure (very important), put it to music. Exp. “This is the way we wash our hands, wash our hands, wash our hands. This is the way we wash our hands so early in the morning.” You can replace “wash our hands” with whatever you are teaching at the moment. If you encourage the child to mimic what you are doing

while you sing, you will be modeling for her how you do the particular job, and she will be practicing the skill as you sing.

#### 2.4.6: Why storytelling in Environmental Education:

Stories can be considered childhood's language. Children are natural storytellers, they think of their lives in terms of story. The story line or plot is the glue that holds all the elements of the story together. If you want your little one to remember a sequence of events or steps in a procedure, make up a story that links all the pieces together. Combine a story sequence with images to make an even more effective learning experience

Children learn both formally and informally many things, including natural environment. It is believed that environmental awareness in children at a very young age with the development of bond with nature. In context of environmental education story has been considered an effective strategy in cases in which direct experience is not possible, however storytelling can be considered an effective strategy across the curriculum, especially when it comes to young children experiences with environment.

Storytelling is an invaluable tool for environmental education since it requires children a detailed examination of the world around them. The introduction of storytelling helps children connect their pre-science thinking with what they are learning as they mature. Framing lessons in the context of a connections between the world of imagination and the world of observation.

Storytelling is a powerful way to set for all learning. In particular, the long existence of ancient stories that help us connect to nature make these connections deeper. Many cultures have different stories for why the world looks like it does, and children can develop their understanding of the other cultures by comparing these stories.

Coupled with learning through the scientific process, storytelling allows students to postulate and hypothesize, combining their prior knowledge of story with new learning that is found in empirical study.

These are the kinds of empathic connections that story enables, and it also makes them very personal, since the children must imagine it all for themselves. As children form these connections, they reinforce the information contained in the story and remember it more completely and for a longer time.

Thus the science lesson merges into the social studies lesson adding further context for increased retention. The more children can connect their past experiences with the new information they are studying, the better they will remember it. Storytelling calls forth these memories and forges links between seemingly disparate information.

As the children repertoire of stories grows, they begin to see other connections among them, and soon they have an entire web of stories to bind their facts into a cohesive whole. Once they see how interconnected stories are, they will understand how connected the people who

created them are as well. Just as all teachers hope, these connected may help create excited, inquiring minds that seek to understand the bigger picture to the earth and all her connections.

Finally, the process of science is similar to the process of story listening. The following table demonstrates this comparison:

As children listen to stories and make meaning of them, they are following steps similar to the scientific process of hypothesis testing. In short doing stories is much like doing science.

Process of Science	Process of Understanding a Story
Gather facts	Gather story :Plot, character, etc.,
Develop hypothesis	Develop potential story endings
Test hypothesis against facts	Test story facts against ending and revise
Suggest conclusions	Reach conclusion
Explore meaning	Explore meaning
Develop new questions	Search for new, similar, or contrasting stories

#### 2.4.7 Theatre/Drama

The importance of drama in Early Childhood Education, selection of themes, planning organizing and conducting drama in preschools is discussed at length in paper VI C under the units 2,3 and 4.(please refer)

Lets discuss the importance of drama / theatre in EVS in preschool education.As we have learnt in paper VI C the most important gains for using drama /theatre in education is..

- Expression of feelings in a healthy way
- Developing creative imagination in children
- Giving a chance to children to think and express themselves independently
- Developing social awareness and cooperative consciousness.

Hence at this point theatre/drama plays a very important role. Therefore the importance of this aspect must be considered to enable children to benefit from it.

#### **Let's plan a drama based on a pre-school theme:What do plants need,**

No. of Characters – 5:

Character 1 – Red Rose

Character 2 – Marigold

Character 3 – Lily flower

Character 4 – Butterfly

## Character 5 – Narrator

Narrator: Flowers, Flowers, Flowers, when we have flowers around us we feel very happy isn't? Look there in the garden, there are roses, jasmine, marigold, dahlia, shoe flower, lily and many other flowers. Garden is looking very beautiful with these colourful flowers. Hey, let's listen to the flowers what they are talking.

Red Rose (Confident voice): Look at me, I am beautiful with my red colour. I am the best in the garden.

Lily (Soft Voice): Look at me, I smell so nice and I am very delicate, I am the best in the garden.

Marigold (Proud Voice): Look at me, I have bright colours, I am the best in the garden.

Red rose, Lily and Marigold asks the flying butterfly, "Butterfly, Butterfly please tell us who is the best in the garden?"

Butterfly (Soft voice): oh my friends, you all look very pretty, rose with its red colour, lily with its nice smell and marigold with its bright colour. You all add beauty to the garden. Friends, do you know who is helping you to be the best:

Red rose (Confident voice): Who else, it's me.

Lily (Soft Voice): Who else, it's me.

Marigold (Proud Voice): Who else, it's me.

Butterfly (Soft voice): Smiles and says "friends it's the rain, sunshine and the gardener who is taking care of you".

Red rose (Confident voice): "Oh yes, if there is no rain?"

Lily (Soft Voice): "Oh yes, if there is no sunshine?"

Marigold (Proud Voice): "Oh yes, if there is no care?"

Red rose (Confident voice), Lily (Soft Voice) and Marigold (Proud Voice) (together) : "There will be no beautiful garden."

"Thank you rain"

"Thank you sunshine"

"Thank you gardener."

Narrator: "Children, do you know that for all the plants to grow healthy they need water, sunshine and someone to care". So lets start caring for all the plants around us from now onwards.

## 2.5 Learning of EVS Concepts:

Content: The scope and potential of EVS will greatly diminish if it is regarded just like any other school subject finding its place in the time table. EVS is a synthesis of ideas, values, actions and skills from many disciplines that can be developed through all the subjects. Hence, its contents cut across the boundaries of sciences and social sciences and maths. This will be the essential perspective of EVS content. EVS through its transactional methodologies is designed to help children explore, observe, express and wonder and introduce children to their surroundings. In this sense, EVS is just not a study area for primary children, but is more a training ground for developing environmentally friendly attitudes, values, skills, habits and behaviours. One can describe EVS as a permanent investment in creating a sustainable society.

As discussed earlier study of EVS is integrated and interdisciplinary in nature. Hence focus of EVS should be 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, where possible, to our understanding of environmental issues; and to promote positive environmental actions in order to facilitate the move towards sustainable development. To achieve these goals, EVS concepts should be based on:

- Learning about the environment;
- Learning through the environment;
- Learning for the environment;

Let's discuss, what are the concepts that will be dealt

Learn about the environment- by developing an awareness of the natural, social and cultural environment. It deals with issues/concepts in an integrated manner through various themes and activities related to daily life experiences, **e.g. starting with the child , family, friends, plants, animals , air , water , transport ,houses , people who serve us , extend to school neighbourhood, places in the village, etc.**

Learn through the environment -lays emphasis on using various objects, places, plants and animals in the immediate environment as learning resources .**Man made things, physical environment will be a resource for children to learn through the environment.**

Learn for the environment -emphasizes inculcation of values, attitudes and skills related to protection of the environment. This includes environmental awareness – **growing plants , caring for plants animals , water conservation , pollution , not wasting food / natural resources , caring people , accepting every one with their varied abilities,**

## **2.6 Skills in EVS**

Preschooler children practice basic EVS skills as they explore the world. The processes are the same as adult scientists use; they're just modified for age-appropriate understanding. These skills are not a step-by-step procedure, per se. Instead, they are integrated skills that occur in different combinations and which often come up naturally during the course of regular preschool activities.

Let's examine the basic skills. In each step, you'll learn not only how these skills fit in with the typical preschool classroom experience but also why they're so important to development of young minds.

### 2.6.1 Observing

Preschoolers use their five senses to observe the world and describe what they experience. Help preschoolers notice details throughout the course of the day. Use tools like magnifying glasses, magnets and flashlights to aid in their observation attempts. Encourage children to talk about what they observe. Introduce new words to describe the things they see (texture words, color words and so on). Preschoolers can notice details and begin to ask questions about what they see. All preschoolers are curious, and since science begins with curiosity and wonder, it's a perfect fit for this age group.

### 2.6.2 Classifying

Preschoolers can connect their observations and experiences to previous knowledge. What is this like? Have they felt a similar texture? What do they know or what have they heard about this?

As children classify and group items, they begin to develop broader concepts. They can begin to see that objects belong to different categories or can be classified in different ways (size, shape, color, etc.). They understand different groupings. Classifying is a foundational science skill, but it's also used in math and literacy, so it's important to encourage it from an early age.

### 2.6.3 Questioning

Children want to know every thing and they have many doubts as they explore, interact they express curiosity, ask questions. Thus they learn to frame simple questions.

### 2.6.4 Experimentation (Hands - on activities)

Improvising, making simple things and performing simple experiments.



### 2.6.5 Analysis

Defining situations/ events, identifying/predicting possible causes of any event/situation

### 2.6.6 Communicating

Preschoolers can share observations and thoughts with others. They can talk about what they think. They can listen to others and contribute insights by connecting their ideas to the ideas of others. List ideas on a chart for all kids to see. Review observations over time and adjust as thinking changes.

Use note books to draw or write observations. Notebooks also allow children to record ideas and review them over time. They can label parts of animals or plants. They can draw pictures of what they see and add photographs from online resources to compare. They may want to create a picture or story at the end of a science exploration and display what they have learned. Communicating learning is an important step in science processes and integrates literacy as well.

### 2.6.7 Measuring

Preschoolers can use rulers, tape measures, balance scales and other measurement tools in their observations. They can also use nonstandard measures. Measure by counting; count leaves on a plant or legs on an insect. Measure something over time; note how many days it takes a bean to sprout. Using numbers to represent some observations builds a child's understanding of data and integrates math with science.

### 2.6.8 Predicting

Preschoolers can tell you what they think will happen. Predictions can happen at the beginning of a science activity or exploration. Or preschoolers can predict after they have made a few observations. Part of predicting is thinking about alternatives. Ask "What if..." questions to encourage thinking and predicting in different scenarios. Help kids know that "wrong" predictions are okay. That's part of the scientific process. Predictions may turn out to be true or false (or a combination), but whether they are right or wrong, they will still learn something new and exciting. The outcomes can also lead to more questions, more observations and more predictions. This process helps students to grasp the concept of a hypothesis long before they learn the word.

### 2.6.9 Inferring

Preschoolers can talk about why they think things happened. Using inference skills often leads to more questions and more experimenting. Inferring can use observations, past experiences and knowledge, information from books and other sources, and additional experiments. Inferring is the beginning of making conclusions based on data. Ask students why they think certain outcomes or results occurred. Encourage them to not just guess what the cause was but use what they know to come up with a realistic inference.

## 2.7 Developing values and attitudes:

**Values** help to guide our behavior. **Attitudes** are the response that is a result of our **values**. **Values** decide what we think as for right, wrong, good, or unjust. **Attitudes** are our likes and dislike of things, people, and objects.

People's value systems could be viewed as building blocks of many attitudes and beliefs. Although dynamic like attitudes, values are more deep-rooted and resistant to change

Values are basic and fundamental beliefs that guide or motivate attitudes or actions. Attitudes are the response that is a result of our values. Values decide what we think as for right, wrong, good, or unjust. Attitudes are our likes and dislike of things, people, and objects. Values are more or less permanent in nature. Attitudes are changeable with favourable experiences.

Developing values and attitudes in young children

It is in pre-schools where most striking changes in behaviours are linked to the child's growing sense of his/her own identity and increasing independence. The child delights in the mastering of new skills and enjoys exploring the world outside his/her home. According to Erickson (1950), it is during this time that the child develops autonomy, learns to choose and decides to accept the consequences of choice. It is in these years of life that one's development can be guided towards the highest potential and determines what one will be, (Hurlock, 1978). Hendrick (1980) reckons that one of the most frequent reasons why families send children to pre-school is for them to learn to get along well with others and teachers agree with parents that this is indeed a very important kind of competence to acquire. The focus of the teacher therefore must be geared towards helping the children acquire the ability to function successfully as part of a group, restrain their social impulses, obtain what they want in socially acceptable ways and find satisfaction in helping each other as they help their group as a whole. Child learns here how to get accepted by the group and how to accept others even with diverse cultures and abilities.

Hence Preschool programme provides ample opportunities to develop the right value and attitudes toward the people and the environment.

Let's see how awareness related to different environmental issues can be seeded in young children.

Before that lets examine the importance of Environmental Education in child's life so that she/he can develop the right value and attitude towards it.

Environmental education helps children connect them to the world around them, teaching them about both natural and man-built environments. Education regarding the environment raises awareness of issues impacting the world's environment upon which we all depend, as well as actions that we can take in order to improve and sustain it.

### 2.7.1 Developing awareness of environmental issues:

Children should start their environmental education at Pre School. The fate of the planet will be in their hands, so it is crucial for them to learn how to use resources wisely and do their bit in the battle against climate change from an early age. The results of this difficult test could be a better, more sustainable and inhabitable world.

**Here are a few benefits of providing children with education regarding the environment:**

*It is important for children to be taught respectful habits and how to care for the environment from an early age.(UNESCO)*

#### **a) Raising Environmental awareness among children.**

Early Childhood education is a crucial stage in the development of a person's behaviour, social awareness and selflessness. At school we learn values and behaviours that will stay with us throughout our adulthood and define who we are. That is what makes it so important to spark an interest in caring for and protecting the environment while children are still at school.

The aim of teaching children environmental education is for them to make caring for nature part of their lives, as opposed to just studying it. The idea behind this subject is for young people to develop a firm ecological mindset and use it to overcome today's environmental challenges with a proactive attitude and a strong commitment.

Environmental education also has other positive effects on young people. In 2017, Stanford University studied how this subject affects schoolchildren all the way from infant school to high school. After researching more than a hundred scientific studies published on the subject from 1994 to 2013 by other institutions, they concluded that 83% of schoolchildren improved their ecological behaviour and 98% scored better in other subjects such as maths and science.

#### **b) Future Leaders**

The leaders of tomorrow need to be equipped for the challenges they will face in the future, so children must be adequately prepared for the future that they will inherit. This requires a commitment to providing the children with education regarding the environment to help grow and prepare the next generation of conservation leaders.

#### **c) Imagination and Enthusiasm are heightened**

Education regarding the environment is a hands-on and interacting learning that sparks the imagination and unlocks creativity. When environment education is integrated into the academic curriculum, students are more enthusiastic and engaged in a more explorative learning process, which also raises the students' achievements in other core academic areas.

#### **d) Learning Transcends the Classroom**

Not only does environmental education provide an opportunity for experiential learning outside the classroom, it also enables the students to make connections and apply their learning on to the real world. This helps learners see the relationships between of social, ecological, economic, cultural, and political issues.

#### **e) Critical and Creative Thinking Skills Are Enhanced**

Education about the environment also encourages students to research and investigate why and how things around them happen. It also teaches them how to make their own decisions regarding complex environmental issues. Environmental education also develops and enhances their critical and creative thinking skills, helping the formation of a new generation of informed workers, consumers, and future policy or decision makers.

#### **f) Strengthening of Communities**

Educating the children about the environment promotes a sense of place and connection through engagement and involvement of the community. When the children decide to learn more about their environment and take action to improve it, they reach out to community experts, volunteers, donors, and local facilities to help bring the community together to understand and address important environmental issues around them.

#### **g) Responsible Action Is Taken To Better the Environment**

Education about the environment also helps children to understand how their decisions and actions that affect their environment and gives the knowledge set and skills that are necessary to address complicated environmental issues. It also teaches them ways to take action to keep the environment healthy and sustainable for the future.

### Environmental Education Methods for Children

Environmental education is a process for life and should be included in Early Childhood Education programme. The way it is taught in the classroom should be adapted to the age and maturity of the children and should be not only theoretical but also practical, entertaining and fun.

There are plenty of activities that can be done in the playground or in a nearby park. Children can go outdoors to learn about plants, trees, rivers, birds and insects, but also about environmental problems such as pollution, energy consumption, and recycling, good use of water and a whole host of other important aspects.

- Doing nature activities -Being in close contact with the environment will make school
  - children more aware of important it is to protect it.
- Visiting farms and garden centers - Spending time surrounded by plants and animals
- is a great way to make children feel at one with nature and learn to care for it and respect it.

- Collecting waste-Investing a few hours in clearing waste from classroom and
  - outdoors will help children to realise how harmful it is for the environment.
- Talking about environmental problems - Holding debates to discuss simple ecological matters is an interactive way of inviting school children to think about the causes and come up with potential solutions.
- Separating waste in the classroom - Having different-coloured waste bins in the
  - classroom is extremely useful for teaching children how to recycle.
- Water conservation- Checking the taps in the washrooms, closing tightly and making them to observe even drop by drop how much water goes into the drain, No Wastage of WATER.
- Through short films / animated films awareness can be brought in children about air pollution , water pollution , importance of planting and caring tress , stories of great people who had vision and how their action helped the society
- Children can be made understand how the natural resources like power / fuel can be
  - used intelligently as this cannot be prepared once it is exhausted.
- Awareness on climate change , say no to PLASTIC
- According to UNESCO, there are four reasons to provide children with environmental education:
  - To make them more aware and conscious of environmental problems.
  - To boost their interest in caring for and improving the environment.
  - To enhance their ability to learn about their surroundings.
  - To broaden their ecological knowledge in subjects such as energy, landscapes, air, water, natural resources and wildlife.

Now lets dwell into some of the issues that are related to the environmental concerns which show danger signals for the development of the humanity in the way that should be .

The social environment that prevail caused marginalization and oppression , such as inequality among the individuals and communities , gender discrimination , insensitive to others needs and requirements etc which caused an imbalance in the social structure.

Lets see what does it mean.

### **2.7.1 a)Gender Concern**

As one of the most fundamental aspects of self, gender impacts everybody. All of us can point to a time in our lives when we were burdened by unfair limitations or expectations because of others' beliefs about our gender. Regardless of a student's age, gender impacts a child's experience at school across the grades. As a primary socializing agent, schools have a tremendous opportunity and responsibility to be inclusive of all students, regardless of their Gender identity or expression. School is the place where our children should be exploring

ideas and discovering new skills. It is inexcusable that any child might be prevented from pursuing their passions simply based on others' perceptions of their gender. By sending a message that certain pursuits are off limits simply because of a person's gender, we lose access to an incredible source of human potential.

Role of Schools in reinforcing gender equality .The gender inequities pervading society are carried into the school environment. In order to sensitize the school community, a holistic approach involving various interventions is required. The holistic intervention package can include the following elements:

Undertaking gender sensitization of parents, community leaders and members,

- Training teachers in the skills for making teaching and learning processes responsive
- Empowering girls with skills for self-confidence, assertiveness, speaking out,
- Empowering boys with skills to de-link from gender oppressive attitudes and
- Do a play /drama about gender equity in school
- Organize a walk, race, or athletic event for equity
- Develop posters that promote equity
- Create a videotape on gender equity
- Observe classrooms to detect bias in interactions

### **2.7.1 b) Marginalization and Oppression:**

The definition of marginalization is the process of making a group or class of people less important or relegated to a secondary position. When one class of people is grouped together as second class citizens, this is an example of marginalization.

Marginalisation is not just about poverty and vulnerability. It is, in fact, a process that pushes people to the fringes, periphery or margins, and then excludes them from state or non-state structures and processes, which results in disempowerment, voicelessness and oppression.

**Oppression**-prolonged cruel or unjust treatment or control. "Oppression refers to relations of domination and exploitation - economic, social and psychological - between individuals; between social groups and classes within and beyond societies; and, globally, between entire societies.

**Nature of marginalization:** Marginalization is a multidimensional, multicausal, historical phenomenon. There are no general laws to understand and comprehend the complex nature of marginalization. The analytical tools that can be used in most cases include class, in relation to specific social, cultural, economic and political conditions, as well as ideological systems, social awareness, and human action.

### **2.7.1 c) Values of equality – Inclusion**

The basic premise of inclusive education is that children be treated equally rather than be segregated based on their individual, educational, social, emotional or physical impairments While a learner may have special education needs [SEN], and may need differentiated inputs to be able to learn concepts in a given area, it is critical to identify areas of strength of the

child that can be built upon. Therefore the child must have a space where he/she can exercise these faculties and develop them to optimum level possible.

The defining features of inclusion that can be used to identify high quality early childhood programs and services are **access, participation, and supports**. When envisioning an inclusive environment for children where an individual's needs are catered to, the challenges involve both infrastructure and personnel. However many of these challenges can be managed if there is a clear commitment to the philosophy of inclusion and the right of every child to learn with his/her peers. It is therefore necessary to make all ECCE programmes sensitive and responsive to the special needs of children, including training of, ECCE teachers and caregivers in identification of needs of the children with disabilities, use of age appropriate play and learning materials, making adaptations in the physical environment and counselling of parents.

### **2.7.1 d) Developing sensitivity to others perspective.**

Seeing and understanding the world from someone else's point of view is an important life skill. Let's learn why perspective taking is important and the ways you can help children develop this essential skill. Some times after watching an event , your perspective may be different from others and may be no two other person may have the similar perspective'. Why is it important we understand someone else's point of view?

Because we do not live in isolation and each person has to engage and work with others in order to be successful or get anything done. In order to work effectively with people, it's incredibly important that we are able to engage in perspective taking. We need to understand how someone else sees the world to be able to work together, communicate and show empathy and understanding. It's an expectation as an adult that you will listen to and respect the opinions and experiences of other people. It's a crucial skill for all relationships, friendships and professional relationships. This skill need to be developed in very young age .

#### **How do you support the development of perspective taking**

- **Walk the walk.** Practicing what you preach can be harder than it seems, but practicing perspective taking with your child is good for you and them. It is easier to be fair and just if we take the time to see how a situation looks from someone else's point of view. Young children learn by watching you, so when you show them the value of perspective taking, they will engage in it too.
- **Talk about feelings.** Anger, sadness and loneliness aren't bad words. Talk about all feelings with your child and teach them that all feelings are valid. Try repeating your child's words to you, describing what you see them doing, asking questions and letting them know you are there to talk if they want.
- **Acknowledge and respect feelings.** Children will be better able to understand others' perspectives when they grow up knowing their thoughts, feelings and experiences were understood and respected. Engage with your child and reflect their feelings back to them, let them know you notice them and are there to help them.

- **Show them the other side.** When you see a stranger stop to help someone on the street, talk to your child about what each person might be feeling or thinking. Help them build connections between people's actions and their motivations. It's also important to help children understand how their behaviours affect other people. If your child throws a toy and it hits another child, help your child build that cause-and-effect connection by talking about how their actions impact other people or their environment.
- **Encourage community.** Children learn to value and respect others through the building of community. Encourage your child not only to engage with others, but to work together, collaborate, problem solve and truly value their relationships with others. This mutual respect and sense of kinship will encourage your child to think about other people's points of view.
- **Create a loving and warm environment.** When children are loved, respected and feel safe, they have the capacity and motivation to learn how to understand and respect the perspectives of others.

By teaching your child perspective taking skills, you are giving them all the tools they need to build healthy, happy and successful relationships throughout their lives.

(source Michigan State University Extension has some tips on helping your child learn and practice perspective taking.)

Let's focus on your role as a Teacher in developing values and attitudes in young children. Children looking at YOU as a teacher learn the values and develop attitudes towards the environment. Hence you hold a great responsibility and play a crucial role in every classroom. You are the actor who shapes the success or failure of your children. Your interpretation of the curriculum, interaction with learners, and way you assign duties in the school, are important factors in a child's schooling. Consciously give equal opportunities for every child in all the activities irrespective of their gender. Be sensitive to their diversity – understand they are same and different like ability wise, region or religion wise, language and ethnicity wise, gender wise – understand their needs, capacities, plan the day to day programme on their strengths –then you can build a community /nation with strong and positive values and attitudes towards natural, physical and socio cultural environment.

## **2.8 Integration of Environmental Studies with language and Mathematics**

Educationists and environment specialists have repeatedly pointed out that environmental awareness, its proper understanding, sensitisation towards various environmental issues and concerns and taking appropriate action by all citizens is required. Environmental Education (EE) is seen as a solution for all these. It should neither be restricted to water tight compartments of the subject streams nor be dealt in isolation, as a separate subject but emphasis should be on holistic learning with a multidisciplinary approach. The National Curriculum Framework brought out by the NCERT after that highlighted the need for including environmental concerns at all levels of schooling.



NCF-2005, while supporting the continuation and further strengthening of the integrated approach for Environmental Studies during the primary years, envisages integrating children's intuitive knowledge of the world with the school knowledge.

The Position Paper on 'Teaching of Social Science' states "for Classes I and II, the natural and social environments will be explained as integral part of languages and mathematics.

It is important to emphasize right from the preschool, including Classes I and II at the primary stage to transact the language and mathematics in a value based and action oriented manner, such that the necessary skills are inculcated in children at that level. It is also envisaged to provide concrete experiences, which are essential to integrate children's knowledge of the world into school knowledge.

The integration of mathematics, science, and environmental education permits the students to gain from all three areas simultaneously. Science encompasses the art of questioning, investigating, hypothesizing, and discovering. Mathematics is the language that provides clarity, objectivity, and understanding. Many of the major contemporary issues involve societal issues stemming from advancements in science (Wiebe, Ecklund, & Hillen, 1986). Problem solving, creative mathematics and science thinking, core knowledge, decision making, and environmental training are all available in one time period in a properly conceived and directed activity. Teachers, too, are more interested when using methods and concepts more familiar to them.

For Example 1 – Integration of EVS with Number

### **EVS Skills and Concerns**

Observation and classification of the fruits, vegetables and flowers in different categories

Children will name the fruits which they have eaten or seen.

Draw these on the blackboard. Now they may classify these in two groups:

1. Fruits having one seed.
2. Fruits having many seeds.

Ask children if they can name fruits with no seeds. If possible, you may show one example of each in the class. Further they may draw and colour same fruits.

### **Further innovation**

You may extend this activity to different vegetables having seeds and having no seeds and flowers which grow in a bunch or as single. Care may be taken that only those flowers or vegetables are chosen which exist in the immediate environment of children.

Outcome: Child learns to observe, classify according to the number of seeds a fruit or vegetable has and learns the pre number skills such few, more, and learns to count.

(Source: Skills in Environmental Studies through Language and Maths in Early Grades-NCERT)

For Example 2 – Integration of EVS with Language.

Activity; Picture reading – Picture of a Family.

As teacher encourages children to look into the picture and identify the pictures and talk about it and also talk about their individual families, teacher is providing many opportunities for language development through the concept FAMILY. As children talk they use language to communicate, they read pictures to comprehend what is there in the picture, this is the beginning of developing reading skill in children and also as they listen to teacher and other children they pick up new words thus developing their vocabulary. But to happen all these teacher has plan the programme very consciously incorporating everything in the plan.

### **Summing Up:**

Individuals have preferred learning styles. There is no one method and material for making learning process successful and effective. As a teacher, your understanding of various learning methods for use in different learning situations will enable you to facilitate your class in a varied and interesting manner. A teacher can thus create good learning environment for her children by using appropriately mixed learning methods and techniques based on the concepts being learnt, the learners and the classroom resources. Further, since EVS is a composite area of study; is EVS multi-disciplinary; and that teaching-learning of EVS is as much about attitudes and values as about knowledge and information, it is important that teaching methods used for EVS allow children to work together, to examine multiple viewpoints, to link concepts of the ECE programme to their real lives and to take positive action. In this Unit we discussed some of these methods in detail, and also discussed about diversity, marginalization, gender issues and our role in constructing a world without any differences. We also discussed how EVS is seamlessly integrated with language and maths.

### **Unit End questions;**

- 1) How do children learn the EVS concepts? Explain.
- 2) What are the approaches to learn about the Environment? Explain any 2 approaches with examples, which according to you are the best.
- 3) How can you use the diversity in the classroom for achieving the objectives of EVS as state in NCF 2005.
- 4) What are the different sources through you can enrich content knowledge with respect to EVS.

## **2 Content Enrichment**

### **2.1 Plants around Us**

What are plants, anyway? What do you think of when someone asks what a plant is? A potted house-plant? A garden flower?

You would be right, of course. But plants are much more than this. Basically, plants are living organisms that make their own food using only sunlight, water and air. Plants come in an amazing range of sizes and shapes. Some are microscopic, and others are over 300 feet tall and are among the largest organisms on the planet. They are found in all kinds of habitats, from open oceans to plains and mountains. They grow in land or water. From snowy mountain slopes to dry, hot deserts. They can survive anywhere on the earth. Unlike animals they cannot move from place to place and most are rooted in the ground.

There are various types of plants in our surroundings - tall and short, big and small, while some are just green patches on the soil. Plants are of different shapes and sizes, and have leaves of varying shapes and sizes. Some plants have flowers while others don't. A stem, branch, roots, leaves, flowers and fruits are some of the parts of a plant. Out of these parts, flowers and fruits are the ones that may or may not be present in a plant.

#### Characteristics of Plants

- Plants have many different characteristics. They are of different sizes, and might have tender (soft) or hard stems.
- The branches of some plants grow close to the ground and in other plants they grow higher up on the stem.

#### i) Classification of Plants

##### HERBS, SHRUBS AND TREES

We can classify plants on the basis of the thickness of their stems and the place of origin of their branches, into three broad categories:

Let's take a look at each one of these types in detail.

##### Herbs

- Herbs are plants with green and tender (soft) stems. They are usually short and have very few branches.
- Herbs can be defined as any of the seed bearing plants which do not have a woody stem and die down to the ground after their growing season.
- Many herbs are valued for their medicinal, savoury (spicy/salty) and aromatic properties.
- Examples: Rice, Wheat, Maize, Sunflower, Coriander, Basil etc.

## Shrubs

- Shrubs are plants having branches at the base of their stem. Most of them have a rounded shape formed from many small branches, growing either directly from the ground or from a hard stem.
- Unlike herbs, shrubs have many woody stems above the ground. Their stems are hard but not very thick.
- Example: a rose , lemon ,shoe flower(mandara) , nerium(ganneru).

## Trees

- Imagine standing under the cool shade of a huge tree on a hot, summer day. Or eating fresh ripe mangoes during your summer holidays.
- Trees give us so much, shade ,oxygen, fruits!
- They are extremely tall plants that typically have a single stem (trunk). Their stems have branches in their upper parts, much above the ground.
- Example:Mango , banyan,neem,coconut.

## Creepers and Climbers

### Creepers:

- Creepers are weak plants that cannot stand upright (straight).
- They spread horizontally on the ground, or grow around another plant or up a wall by extending their stems or branches.
- Example: Pumpkins and watermelons

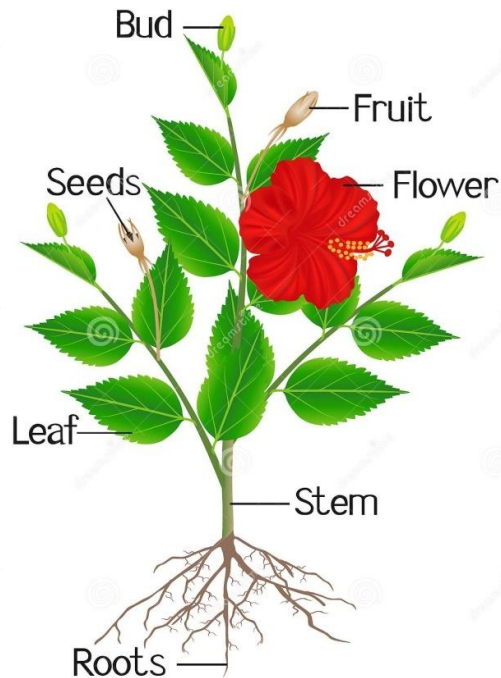
### Climbers:

- Climbers are also weak plants that cannot stand erect without support.
- They can only grow along the ground without support. However, if they get support, they can grow straight up.
- Example: Grapevine, money plant, pea plant.

### ii) Parts of a plant and its functions.

Now let's learn about different parts of a plant and their functions. Plants are an important part of human life and vegetation as well. They are very beneficial to us and give us a lot of things. We are surrounded by plants, but have you ever stopped to notice the parts of a plant? All parts of plants are important and carry out different functions. All of them come together to perform their respective functions for the healthy life of the plant. We will dig deep into the parts of plants and their functions.

A plant is made up of primarily four parts. They are –

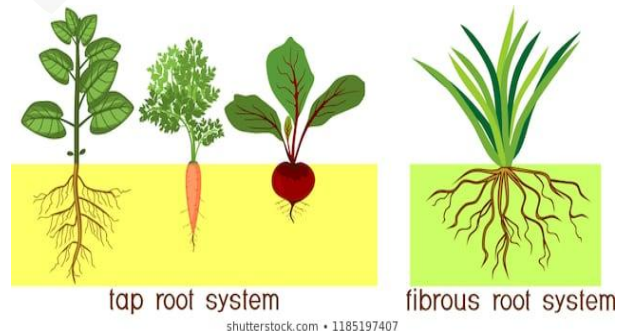


### 1) Roots

- Roots hold the plant in the ground so it does not fall over. Some examples of roots we eat are potatoes, carrots and beets.

#### Types of roots

- A taproot is the main root in a taproot system. It grows vertically downward. This can be seen in carrots.
- Certain plants have a fibrous root system. Such a system does not consist of a single taproot. Instead, the roots grow downward and outward from the stem, branching repeatedly to form a mass of fine roots. These are fibrous roots.



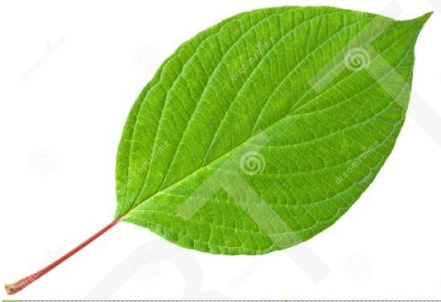
## 2) Stem

- The stem is strong and helps hold the plant up. A stem is the stick-like, central part of a plant that grows above the ground.
- It bears leaves, branches, buds, flowers and fruits.



## 3) Leaf

Leaves collect sunlight and make food for the plant



#### 4) Flower

Flowers are the parts of plants that make seeds and fruits



#### iii) Functions of Parts of Plants

##### 1) Function of Roots

A plant has roots that grow in the ground. They absorb water and minerals from the soil and conduct (lead, drive) them to leaves and other parts of the plant. This underground part plays a very important role in pulling the water and minerals so they can reach the plant. Furthermore, it also expands within the ground so that for better water absorption the water increases.



Roots also play the role of anchors which helps in creating better stability. In addition, the roots also fuse the development of the plant and stock reserve food material. They also store food that binds the soil together.

## 2) Function of Stem

The stem is the part that stays above the ground. A stem usually bears leaves, fruits plus flowers. It also lets water and nutrients flow up to the leaves. Furthermore, the stem is the support system of the plant.

Moreover, it shields the plant and assists in asexual dissemination. The thorns of a stem protect it from animals as well. The growth of a stem takes place upwards allowing leaves to reach the sunlight for photosynthesis.

Have you ever wondered how plants are able to pull water out of the ground? It's not like they have a heart to pump water around or even a digestion system to extract the water from the soil!

In fact, water movement in plants doesn't rely on energetically expensive biological pumps or even magic. It relies on some pretty basic physical principles operating within unique plant structures, and anyone can understand it.

We'll see how water is carried up through this experiment



We can observe this by soaking the stem of a plant in a glass with water. On adding coloured ink to the water, we observe that after a while the stem and leaves of the plant start to turn the colour of the ink, which is proof that the stem carries the water to the different parts of the plant.

Some examples of stems we eat are celery, asparagus, and sugar cane.



### 3) Function of Leaf

It is safe to say that a leaf is one of the most important parts of a plant. It contains chlorophyll which assists the plants in preparation for food. Moreover, the veins of a leaf allow the flowing of nutrients plus water. Leaves come in many different shapes and sizes, but most leaves are flat and green.

A leaf has three basic parts which are petiole, leaf base and lamina.

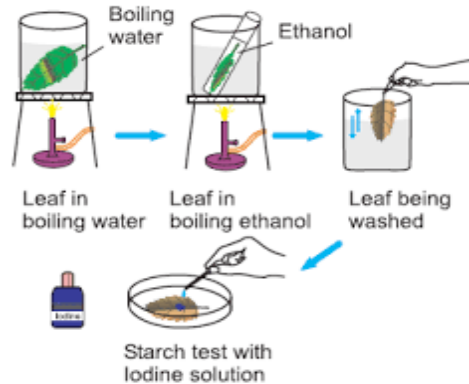
The leaves of plants are majorly responsible for performing two essential functions for the plant's survival and growth. These two functions are called transpiration and photosynthesis

- **Transpiration:** Transpiration is the process through which plants release the excess amount of water in the air. Just like humans need to sweat in order to keep themselves cool, plants need the process of transpiration. This process is carried out by leaves. When the water travels via the stem to the leaves, some of it gets used up to prepare food, while the excess water is converted to water vapour due to the presence of the sun. Transpiration is important for the plants as it helps the plants to cool down. In the absence of transpiration, the temperature of the leaf becomes unregulated which may lead to the eventual death of the plant. Transpiration depends on factors such as light, temperature, humidity and some others.



- We can observe transpiration by enclosing a leafy part of a plant in a closed polythene bag and keeping it in the sun. After a while, we see tiny droplets of water on the inside of polythene bags, which are proof that the leaves have performed transpiration.
- **Photosynthesis:** Photosynthesis is defined as the process that helps leaves prepare food for the plant with the help of carbon dioxide and water. Photosynthesis occurs in the presence of sun and is aided by the presence of a green pigment in leaves called chlorophyll. Plants also release oxygen in the process. The food prepared is stored in

various parts of the plant. In absence of photosynthesis, the plant is unable to utilise the water and minerals to prepare food for its nourishment and gradually dies.



- In order to see if leaves really do perform photosynthesis, we take a leaf and immerse it in a test tube filled with spirit. Placing this test tube in a beaker filled with water, we heat the beaker. After the leaf loses its colour, we wash it and pour iodine solution on it, as can be seen below, which shows the presence of starch thus disproving our doubts.

Moreover, some plants have leaves which also assist in the process of reproduction. Thus, leaves perform a number of functions, which helps the plant grow healthier.

Some examples of leaves we eat are mint and spinach.

#### 4) Function of Flower

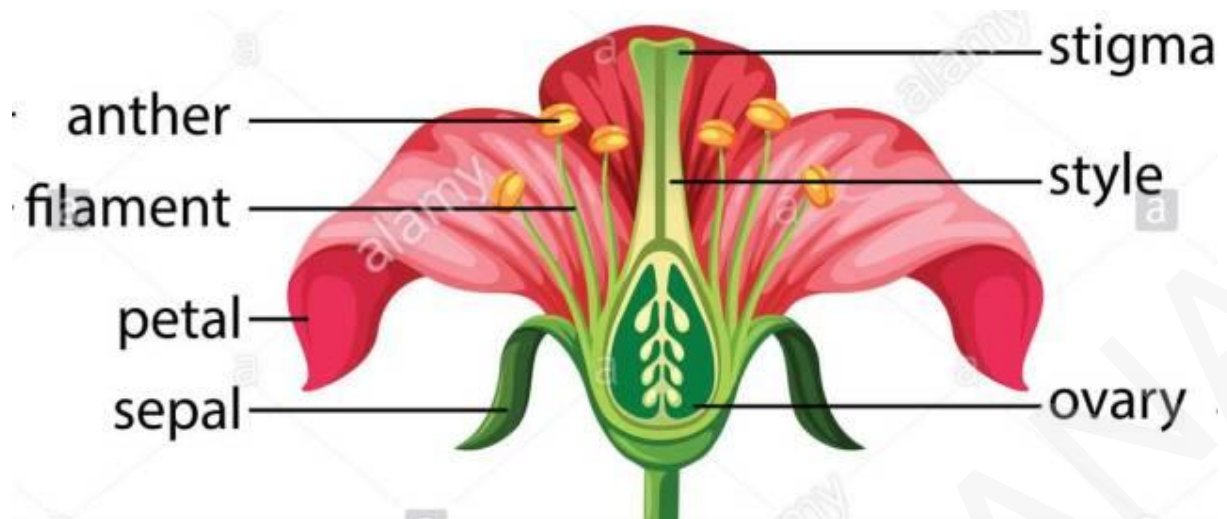
The bright and beautiful part of the plant which you see is the flower. The petals on the flower attract bees and other pollinators. Flowers are colourful so they can attract animals like hummingbirds and bees.

The function of the fruit is to make seeds.

A flower has female as well as male parts as they are important parts of reproductive system of the plant. Both of these work collectively to fertilize the plant so it can produce seeds.

A flower consists of four basic parts, which are petals, sepals, stamens, and pistil. The flower buds are protected by sepals.

#### Parts of a flower



#### iv) \_\_\_\_\_ Kinds \_\_\_\_\_ of \_\_\_\_\_ plants

When you think of a plant, you normally think of something that has leaves, stems, roots, flowers, etc. These are called vascular plants. “Vascular” refers to the system of thin tubes that carry water from the roots to the leaves, and sugars from the leaves to the stems and roots.

Most of the plants we are familiar with are of this type. Flowering plants, shrubs, trees, ferns, vegetables and grasses would fit this category.

Vascular types of plants can even be found in harsh desert conditions. The cactus, smoke tree and ocotillo, just to name a few, have learned to adapt to the extreme cold and hot temperatures, and the lack of moisture; The desert really comes alive with plants after significant rainfalls, when hundreds of wildflowers make the desert floor an exhibition of vivid colours.

In addition to vascular plants, some plants are single-celled organisms that are too small to see individually without a microscope. These are called algae. You can find algae in lakes, rivers, and oceans, where they form easily seen colonies. Sometimes they become so plentiful that they pollute the water they grown in.

Another classification of plant that is common but often overlooked is moss and its relatives. These plants have no vascular tissues (veins), and simply absorb water through their tiny leaves. Without stiff stems, these plants cannot grow very large, and so we find them on the soil, and on logs and other surfaces, sometimes in dense colonies.

#### Germination of seed

Germination is defined as the beginning of growth. The term is most commonly associated with plants, describing the process of a seed sprouting into a seedling.

First let's find out how the seeds are formed:

### Seed Formation

Male reproductive organ of the plants release pollen, which fertilize ovaries. The fertilized ovaries develop into seeds, which can then be distributed to make new plants. As the fertilized ovaries develop, a surplus of carbohydrates and proteins are stored inside the seed. This will serve as food for the plant until it can develop leaves. Next, the fertilized plant ovaries develop the hardened coat we see as the outside of seeds to protect them against harsh environmental conditions. The seeds then can be carried away by wind or animals to create new plants.

### Seed Germination

After the seed has made it to a new location and is covered with dirt, it can begin germination. Germination is the process of seeds developing into new plants. First, environmental conditions must trigger the seed to grow. Usually, this is determined by how deep the seed is planted, water availability, and temperature. When water is plentiful, the seed fills with water in a process called imbibition. The water activates special proteins, called enzymes that begin the process of seed growth. First the seed grows a root to access water underground. Next, the shoots, or growth above ground, begin to appear. The seed sends a shoot towards the surface, where it will grow leaves to harvest energy from the sun. The leaves continue to grow towards the light source in a process called photo morphogenesis.

Now let's dwell into the process of Germination.

When the seed gets all the necessary things like air, water, warmth, space and nutrients from the soil the process of germination starts.

- During the early stages the seeds will get food from the cotyledons.
- The seed coat will break and a new plant will emerge out of the seed.
- When seeds sprout in the soil, the radicle, or embryonic root, will be the first to emerge from the seed coat. When the plant will develop a root system it will absorb water and nutrients from the soil.
- The developing stem, described as the epicotyl, will emerge next and will grow towards the surface of the soil, eventually pushing its way through.
- The shoot system of the plant will develop and now the leaves will start preparing food for the plant therefore the cotyledons will shrink and disappear.

How a plant grows from a seed



All flowering plants are classified as either a monocot (one cotyledon), or a dicot (two cotyledons). In a monocot, one cotyledon, or one seed leaf, will emerge from the germinating seed. In a dicot, two cotyledons, or two seed leaves, will emerge from the germinating seed

- Monocot Examples: Garlic, Corn, Wheat, Rice
- Dicot Examples: Peas, Tomato, Beans

Influencing Factors for germination:

Several factors influence if, and how, seeds germinate. The most important factors are water availability, temperature and sunlight. For a seed to germinate the dormancy period will need to be broken with water and warmth. When a seed is moistened, it will absorb water, breaking the seed coat and initiating the food supply in the cotyledon through the activation of enzymes that produces energy for the seed to sprout.

Water is crucial to seed germination. The seed must go through imbibitions to activate root growth. However, too much water can be a bad thing, as most gardeners know. When a plant is still growing underground, during root formation, it cannot use the sun to make food like most grown plants do. It must rely on the stored food inside the seed, and oxygen from the environment to make energy. If the soil is too soggy, there will not be enough oxygen and the plant will not thrive. Think about a person being kept underwater. We wouldn't last too long!

Temperature is also an important factor. Some seeds germinate when it is cold, such as plants in northern environments. Other seeds only germinate when the weather reaches spring temperatures. Sunlight supports the germination process as it provides warmth to the soil. Although uncommon, some seeds do even need direct contact with sunlight to germinate. Sunlight warms the soil to help initiate germination and once leaves have sprouted, and it is also the primary energy source for plant growth through the process of photosynthesis.

Plants as a Source of Food

- Much of the food we eat comes from plants, trees, crops, bushes, leaves and sometimes even roots. The most obvious examples of the foods we source from plants are fruits and vegetables. All of the fruits and vegetables grow on plants.

Let us take at examples of some foods we get from plants and their different parts

- Fruits: Apples, Oranges, Bananas, Mangoes
- Leaves: Spinach, Coriander,
- Root: Potato, Carrots,
- Seeds: Rice, wheat, maize, nuts (peanuts, almonds). Rice, wheat, maize, millets, barley etc. which are the seeds of the crop plants. After we grow them, they are harvested. The majority of processed food like flour, bread, biscuits etc we consume is sourced from crop plants.
- Now those animals that only eat food obtained from plants are known as herbivores. Some examples are cows, zebras, hippos, giraffes, buffalos etc. Then humans who only rely on foods from plants are vegetarians.

### How plants help us

Importance of plants in our lives.

The importance of plants to humans and just about all other life on Earth is amazing. Life as we know it would not be possible without plants. Why are plants so important?

- Plants supply food to nearly all terrestrial organisms, including humans. We eat either plants or other organisms that eat plants.
- Plants maintain the atmosphere. They produce oxygen and absorb carbon dioxide during photosynthesis. Oxygen is essential for [cellular respiration](#) for all aerobic organisms. It also maintains the ozone layer that helps protect Earth's life from damaging UV radiation. Removal of carbon dioxide from the atmosphere reduces the green house effect and [global](#) warming.
- Plants recycle matter in biogeochemical cycles. For example, through transpiration, plants move enormous amounts of [water](#) from the soil to the atmosphere. Plants such as peas host [bacteria](#) that fix nitrogen. This makes nitrogen available to all plants, which pass it on to consumers.
- Plants provide many products for human use, such as firewood, timber, fibers, medicines, dyes, pesticides, oils, and rubber.
- Plants create habitats for many organisms. A single tree may provide food and shelter to many [species](#) of [insects](#), worms, small mammals, [birds](#), and [reptiles](#).

Plants as a part of our socio-cultural life:

We have already discussed at length how we are depended on Plants and the role of plants in our life. We humans understanding the greatness of plants in our life's journey have given a

respectful place in this world. Culture consists of ideas, beliefs and customs that are shared and accepted by people in a society. Plants feature in many aspects of culture, e.g. language, history, art, religion, medicine, politics and social structure. So let's examine from the present socio-cultural angle.

- We have special festivals to thank the plants and trees – as we receive the crop we celebrate the Sankranti festival as harvest festival not only in Telangana but throughout the country.
- To appreciate the nature and the beautiful flowers we celebrate the most colourful festival Bathukamma in Telangana where different kinds of flowers are collected mostly from the forest and arranged in a conical shape and girls and women sing songs moving around the Bathukamma in a rhythmic movement.
- In some families worship Tulsi (basil) plant every day as it is considered as a sacred plant for its medicinal value. Some of the festivals different types of leaves are collected to worship the God and some communities specifically make food with specific vegetables.
- Whenever there is a festival or marriage in the house, the doors are decorated with fresh, green mango leaves and with marigold flower garlands.
- In summer season, verandas are covered with Neem tree branches in some places to get protected from the heat. Leaves of Neem are used as disinfectant and oil is also used for medicinal purposes.
- Marriage mandaps are made with coconut leaves and food is served in banana leaves.
- Flower garlands are used for decoration, as offerings to God and also to honour people. Flowers and plants are also used to decorate temples / special occasions in our schools. This creates a beautiful ambience and makes everyone feel good.
- Pine tree is decorated as Christmas tree and considered as holy tree and during the Christmas celebrations.
- In some religions Date plants are considered as sacred and end fasting by eating dates.
- In some of the religions Bodhi Tree (fig tree) is considered as a sacred tree.
- In some cultures giving betel leaves to others is considered as auspicious and in some eating betel leaves with betel nuts is part of their culture.

Hence the cultural ceremonies and religious rituals are often linked with numerous plants around us.

The role of plants in life and culture of human beings have been recorded by the fellow men in contemporary period since ancient times by way of art forms like paintings, poems and various types of manuscripts as codified forms

How to take care of plants;

Now it is very clear for us that how we humans are dependent on plants and trees .Even plants and tress are also depend on us for care and nurture. If we take care of plants , then plants will take care of our very important needs like food , and shelter.

We should take care of plants because plants help us in many ways, like:

- Plants provide us food and clean the air.
- Plants give us wood, medicines, cotton and many other things.
- Plants maintain carbon-di-oxide - oxygen balance in air.
- Plants help in bringing rains and preventing floods.
- Plants help in maintaining moderate temperature and humidity.

Thus, we should protect the plants in order to keep on enjoying all the benefits.

Then how?

- Planting different kinds of plants in the house, in the school on all special occasions.
- Watering the plants every day.
- Cleaning around the plants.
- Guarding the plant with tree guards so that animals will not eat when plants are young
- Adding the needed nutrients
- Not plucking the leaves and flowers unnecessarily.
- Not allowing any one to cut the trees.

Caring plants around us is very crucial, because they are so important to the way we live, to our economy, and to the animals that depend on them for food and shelter.

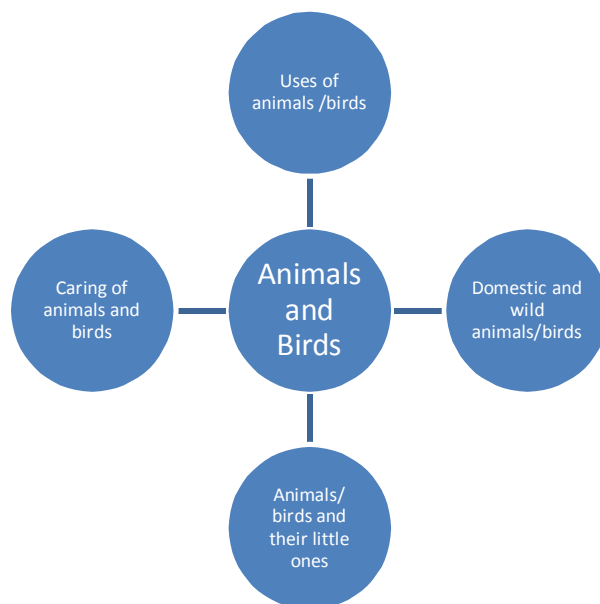
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Animals theme

Theme Identify and name common animals and birds ( L1 and 2)

- Differentiate between domestic and wild animals
- Name young ones of select animals ( In L1 and L2)
- Develop number sense of numbers 1 to 10
- Develop concept of size, speed and shape.
- Express oneself with confidence during circle time and story time.





### CONTENT FRAME WORK:

✚ To know about the different Animals in the surroundings. The teacher introduces familiar animals in the surroundings like cow, buffalo, ox, goat, sheep, dog, cat etc. The teacher explains the characteristics of animals- its Colour, other physical features – legs, paws, ears, nails, and teeth and their food habits.

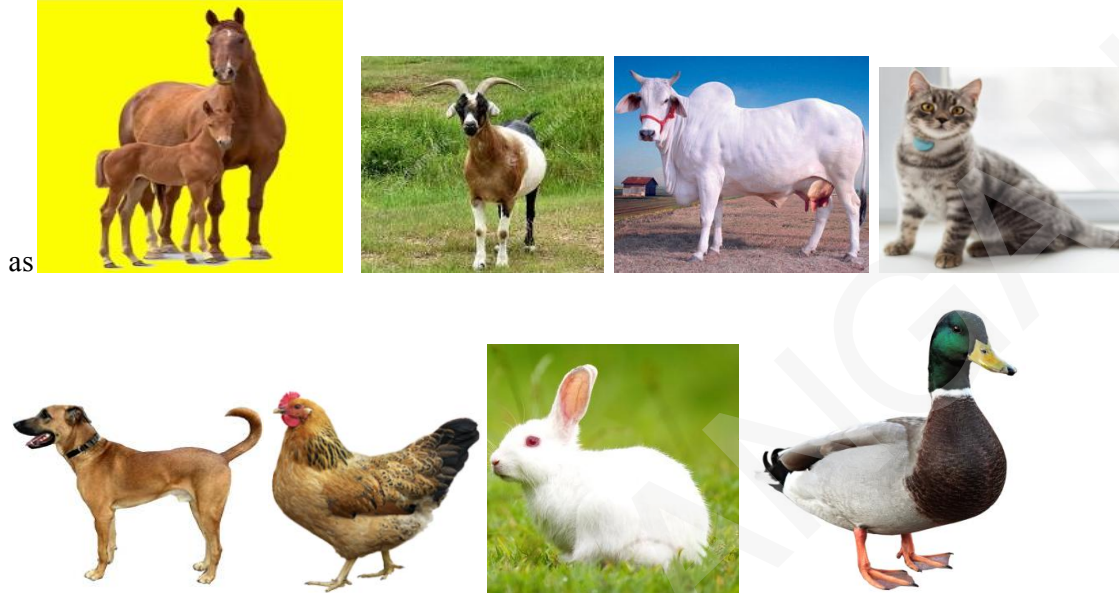
✚ Classification of animals : Classification of animals help us to understand their characteristics as well as their differences with other organisms. In scientific terminology, they are grouped under Animal kingdom. This huge classification includes from micro organisms to pet dog, bird, cat or even insects that are found in the garden.



The teacher explains the why of classification of animals based on the nature of the animals.

✚ –Domestic , wild animals, pet animals, water animals

**Domestic Animals :** Definition of Domestic animals : An animal that has been tamed and kept by humans as a work animal, food source, or pet, especially a member of those species that have become notably different from the ancestors. Domestic animals are again classified



- 1) Pets : ex dogs, cats, guinea pigs etc.
- 2) Farm animals: live stock. Ex: cattle, sheep, pigs ,goats etc.,
- 3) Beasts of burden, pack animals etc(horses, camels, donkeys etc.,)

**WILD ANIMALS :** A wild animal is an animal that is wild .It is not tame and it lives on its own without any help from people. A wild animal finds its own food, shelter, and water and other needs in a specific natural habitat. Habitat can be a field, woods, pond, wetland, park or even your back yard. Wild animals make their home in both the villages, cities and countries. Wild life animals include small critters which you can see in a microscope to a large whale.

Depending on the food they eat, animals are classified into three :

**Herbivores :** Animals that eat only plants are called Herbivores. Ex : cows, goat ,sheep, rabbit, elephant etc.,

**Carnivores:** Animals that eat other animals for food are called Carnivores. Ex : lion, tiger, frog, snake etc.,

**Omnivores :** Animals that eat both plants and other animals as food are called Omnivores. Ex : Dogs, pigs, wolf, Rats etc.,

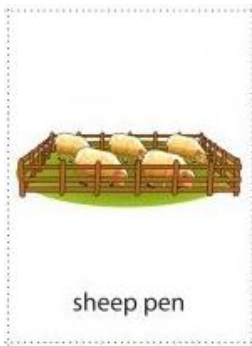
✚ Animal habitations: Just as people have homes, animals too have homes. To Explain to children that there are different types of animal homes.

To discuss what a home provides (safety, shelter from the elements) etc.,

To discuss with children that the type of home an animal chooses can mean the life and death.

Ex : How does a spider web help the spider survive ?

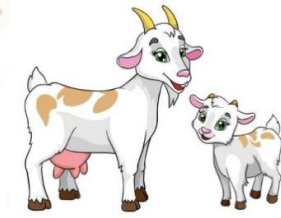
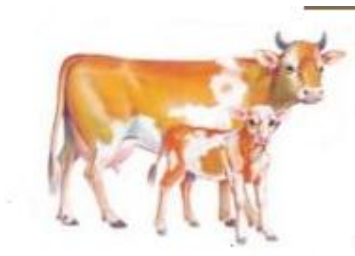
Animals like elephant, Giraffe live under the trees while monkeys, squirrels live on the trees. The stripes that Zebra has helps it to mould into its environment and confuse the predators.

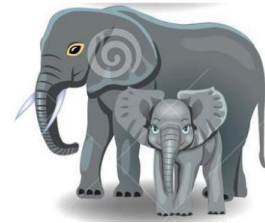


✚ Animals and their Young ones: In the spring and early summer one might see and discover young animals in the wild. They are often cute helpless, and seems friendly. Sometimes it looks like the animals are abandoned or orphaned. But the parent animal is usually around. Adult animals keep their babies in hiding for a short time when they go in search of food .

The mother animal sometimes leave the young ones because of the fear of other animals but comes back to the younger ones once out of danger . children can report to Adults who in turn seek professional help if any younger ones are found orphaned or hurt.

Explain to children that animals have babies that they take care of. Make them understand through pictures that cows have calves, cats have kittens, dogs have puppies, tigers, lions have cubs , monkeys have babies hens have chicks ,etc.,



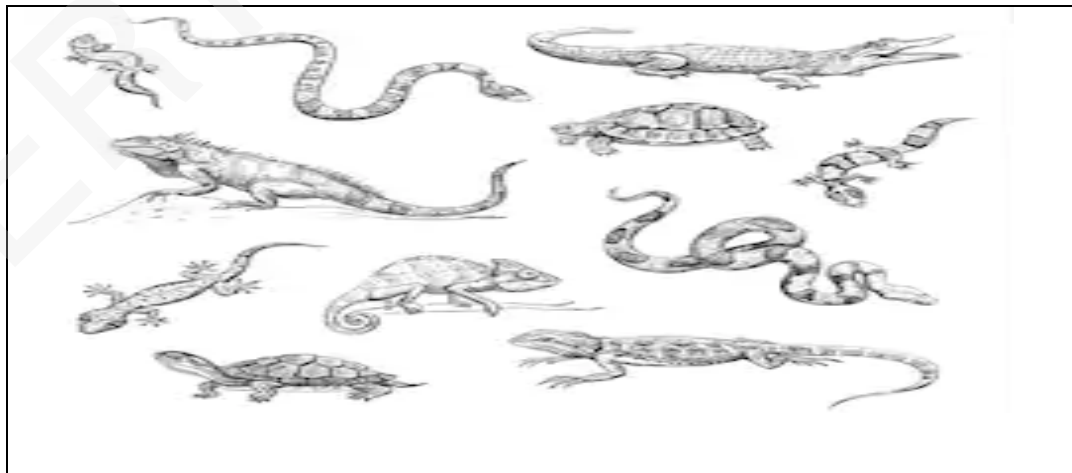


Water animals : Some animals that live in water that have gills, scales and fins on their body are called FISHES. There are a lot of different fish like Blind fish, fish with noses, fish that shoot down passing bugs, fish that crawl onto land and hop about.

Some animals called reptiles are with scaly skin and born on land. Ex : Snakes, lizards, crocodiles, alligators and turtles.

Some Animals called Amphibians are born in water and when they grow they develop lungs and can live on land. Ex : Frog.

Some animals that have more than four jointed legs are Arthropods. Ex : Insects, spiders, butterflies etc.,



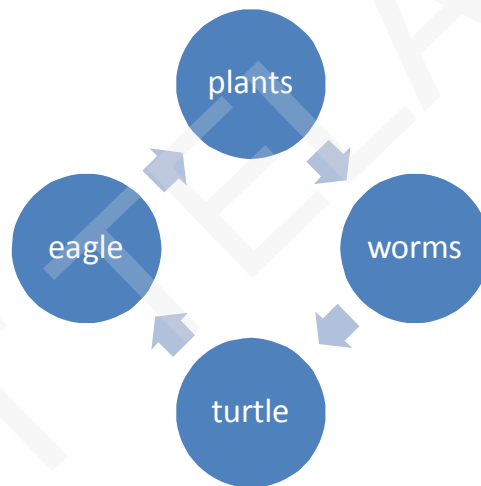
✚ Caring for animals: To explain children that caring involves four main steps to take care of pets: feeding, walking, teaching tricks, and cleaning up after them. The most important factor in taking care of animals is making a commitment to them. They need love, food, veterinary care and training. They need a clean environment and gentle , respectful handling.

They are salient creatures.

✚ Uses of wild animals: Analyze the habitats of animals. To explain that animals use plants as a form of shelter within their environment. Ex., many birds live in nests on trees. They build their nests from twigs and sticks. Plants ,on the other hand, inhabits different parts of the environment. Plants in order to pollinate different parts of the area , depend upon the natural elements such as wind and animals. Some seeds of plants get attached to the fur of animals. When they move from one place to another, the seeds of the plant get deposited in the environment

Food chain : every living things needs energy in order to live. Animals and all living things get energy from food. Plants use sunlight, water and nutrients to get energy. Energy is required by all living things to grow.

A food chain shows how each living thing gets food and how nutrients and energy are passed from creature to creature. Food chain begin with plant- life and end with animal life. Some animals eat plants while some animals eat other animals.



**BIRDS :** Birds are animals that have feathers and that are born out of hard shelled eggs. The bird makes it distinct from other animals because of its wings. Bats and flies have wings but

flies are not birds . It is feathers that make a bird. All birds have feathers . The feathers on the bird's wings and tail overlap, the feathers catch and hold the air. This helps the bird to fly, steer itself and land. Feathers do many jobs for birds. Down feathers keep them warm, wing feathers allow them to flight and tail feathers are used for steering.

The colour of the feathers can be used to hide the bird or to help the bird find his/ her partner.



**Bird nests :** An Indian Robin has lays its eggs in the spaces between the stones that are in a heap.. The nest was made of grass. On top there were soft twigs, roots, wool, hair and cotton wool. This is how the robin makes its nest. What a soft and cozy home for its chicks! The robin is not like the crow. The baby birds sit with its beak wide open. The mouth looks red from inside. In a little while the robin flew to the nest and put something in the chick's open beak – may be a few small insects. In the evening, the robin settled down with its chick.

A crow's nest is made of all kinds of things – even pieces of wire and wood . You know that the Koel sings sweetly. Do you know that this bird does not make its own nest? It lays its eggs in a crow's nest. The crow hatches them along with its own eggs. There is a small tree nearby. It has a nest hanging from its branch. Birds are so wonderfully different. The crow builds its nest high up on a tree.

The dove makes its nest among the thorns of a cactus plant or a *mehendi* hedge. The sparrow can be found in and around our own house. It makes its nest anywhere on top of a cupboard, behind a mirror, on a ledge, roof of the house.

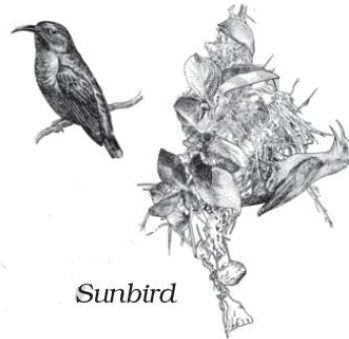
Pigeons also make their nest like this. Often they make nests in old or deserted buildings. The barbet or coppersmith bird can be heard in the summer with its 'tuk, tuk, tuk' call. It makes its nest in a hole, in a tree trunk.

The tailor bird uses its sharp beak to stitch together two leaves on a bush. It lays its eggs in the fold of the leaf that it has made. This is its nest

The sunbird makes a nest that hangs from the branch of a small tree or a bush. The sunbird's nest is made of the hair, grass, thin twigs, dry leaves, cotton wool, bits of tree bark, pieces of

cloth rags and even spider's cobwebs.

When looked through the binoculars, one can see a chick sitting near the small opening in the nest. It was waiting for its mother to bring some food. It just eats and sleep!



Sunbird

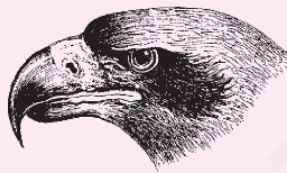


Weaverbird

Do you know about the weaver bird? The male weaver bird make beautifully woven nests. The female looks at all the nests and chooses the one that she likes the best and decides in which to lay her eggs.

Bird beaks : Bird beaks are different just like birds and they help them in cutting, tearing, picking up small grains , depending on the type of food they eat.

### Bird Beaks – According to the Food



To tear and eat meat



To make holes in wood and tree trunks



To suck nectar from flowers



To find insects and worms from mud and shallow water



To break and crush seeds

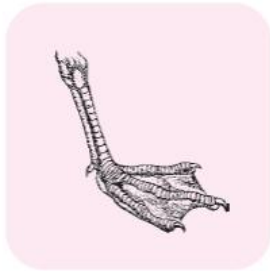


To cut and eat many kinds of food

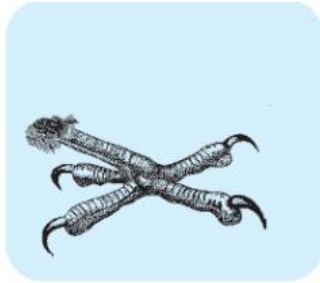
Bird legs : Bird legs are also suitable as per their habitat. Some bird legs are webbed so as to swim in water. Ex : duck while some birds have strong nails which helps in climbing the tree.



Ex : parrot. While some birds have long feet which help them to stand for a long time in water for its prey. Ex : Crane



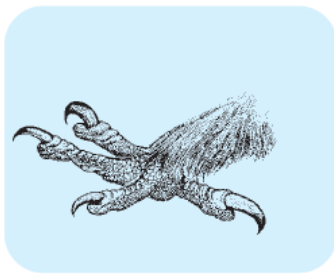
**To swim in water**



**To climb the tree**



**To hold the tree branches**



**To catch the prey (what it hunts)**



**To walk on the land**

Animal sounds/Bird sounds : Birds put a lot of effort into singing, drumming winnowing, and otherwise displaying. They try to impress mates. Songs are often loud, and repetitive so they tend to be noticed more than other birds. We have a variety of English words to describe the sounds of birds.

Animals	Sounds
Calves, pig	Bleats
Cats	Meows, purrs, meow , hiss, yowl
Dogs	Barks
Goat, sheep	Moo, low, bawl, bellow(bull)
CAMEL	Grunts

Elephant	Trumpets
Snakes	Hisses
Fox	Howl
Horse	Neigh
Lion	Roars
BIRDS	
Sing	Koel
Tweet/cheep/ chirp	Sparrows, tail birds, myna
Squirks	Parrot
Shriek	Loud piercing sound, eagle
Hoot	Owl
Caws	Crow
Coo	Cock

**SOCIO- CULTURAL VALUES OF WILD LIFE :** It is important to examine how wild life animals are valued and how they influence the culture and belief systems of the societies specifically rural societies. Wild life fills a myriad role in the belief systems of human societies.

- ❖ Common to many societies is the belief that wild animals have superhuman or godlike powers. Early art, including Palaeolithic cave paintings reveal that the veneration of animals is an ancient form of worship. Early people practised religion in which wild animals featured prominently and this pattern is still continuing in Asia Africa and some parts of America who retained the respect for other forms of life. The association of major Deities or spiritual beings with animals serving as
- ❖ symbols or assistants or incarnations of religious figures is the characteristic of major religion. Ex :The ancient Egyptian pantheon, Mark represented by Lion, etc.,
- ❖ Hinduism provides other pertinent examples of the important role of wild animals in religious practices. All religious ceremonies and auspicious occasions begin with prayer to Elephant God, Ganesh, wild animals are the chariots for many Hindu Gods and goddesses like Durga or Kali rides a tiger, Murugan a peacock, the raptor Garuda with its broad wings brought down the sun down on its wings.

- ❖ Also Kerala state celebrates Festival of Elephants annually where elephants are being decorated and worshipped. Elephants are in fact found in almost all Vishnu related temples.
- ❖ Cows are being considered as Kamadhenu , Kalpatharuvu meaning that it gives wealth in all forms – food, health, materials and money.
- ❖ The beginning of the New Year which is harvest season “Makar Sankranthi ” is celebrated. The third day which is called Kanuma is the festival of cattle particularly cows and ox that are used for farming and ploughing where the cattle are being decorated and fed nicely and taken as rally in villages.
- ❖ Sadar (festival) Sadar is a buffalo carnival celebrated annually by the Yadav community of Hyderabad, Telangana, India as a part of Diwali. It is also known as Dunnapothula panduga and it occurs on the second day after Diwali.

### **FESTIVALS**

Some people say we should celebrate life, not just festivals. Well, in a country like India, life is synonymous with festivals because there are more fiestas than you can count, and each of these mirrors our culture and traditions. Breaking the humdrum of daily routine, these festivals bring with them a wave of excitement and happiness. Interestingly, almost every big and small occasion in India calls for a celebration. Be it the arrival of spring, harvesting of crops or something else, you will never run out of reasons and seasons to celebrate. Experiencing the festive spirit of the country is akin to celebrating life, speckled with an ample dose of colours, music, dance, folk songs, food, and friends, all rolled into a wholesome package offering absolute gratification. Even in Telangana different festivals are celebrated with joy and fervour.

### **Regional festivals and jatharas of Telangana**

The festivals celebrated in this state are marked by colour, veritable customs and legends and have well-defined rituals, steeped in myth and symbolism. There are two things that are very striking about Telangana festivals. One, the exceptional veneration of female deities and participation of women, and two, the universality and secularity of the festivities, which encompass people of all castes and faiths with equal and uniform fervour.

Apart from the major festivals such as Makara Sankranthi, Dasara, Deepavali and Ugadi, the Telugu New Year, there are innumerable festivals and fairs that make the calendar in Telangana a multi-hued tapestry of celebration. Telanganites also celebrate certain regional festivals like Bonalu , Batukamma all over Telangana districts, Yedupayala Jatara in Medak, Sammakka Saralamma in Warangal district.

Also noteworthy is the way the major festivals are customized in the region, adding lore and legend to it, making the occasions as much a local celebration as a festival to most regions of India.

## Bathukamma Festival



The State Government has declared Bathukamma as a state festival, recognizing the uniqueness of the way the female deity, Durga, is worshipped as an embodiment of feminine valour and benevolence.

The festival is celebrated in the Bhadrapada month of the Telugu calendar, which falls between September and October. Concurrent with the Durga Navratri, Bathukamma has floral worship as its centerpiece and has women defining the many rituals that constitute the observance of the festival. Beginning on Mahalaya Amavasya, the festival culminates on the eighth day of Navratri with a ceremony called Saddula Bathukamma. The festival marks the beginning of Sharath Ritu and typically has floral worship by women with different flowers arranged on a plate in seven tiers. The arrangement is called the Bathukamma and signifies the holy *gopuram* of Hindu temples.

The stack, symbolizing the Goddess Durga in the form of Gauri or Bathukamma – a live goddess – is placed in the centre and women, dressed up in their best, move around in circles singing traditional *bathukamma* songs, seeking blessings and prosperity for their families and their villages.

While its historicity is unknown, legend has it that a Chola king took away a large Shivalinga to Tanjore from the erstwhile Vemulavada kingdom in Telangana and Bruhadamma, as Parvati was called here, was left in Telangana. Bathukamma, a derivative of Bruhadamma, is worshipped and consoled for being alone, away from her husband Shiva. The Bathukamma arrangement has a small symbol of Gauri made in turmeric. There is another story that speaks of Bathukamma as a symbol of Sati, whom the women of Telangana, beseech to come back alive. And she does that as Parvathi by the end of the festivities.

Bathukamma festival is a particularly wonderful sight in rural areas where courtyards are cleaned with cow dung and are decorated with *rangolis*. Various kinds of seasonal flowers are used to adorn the Bathukamma. The flowers and stalks, which include marigold, pumpkin and celosia, are said to have medicinal properties. The *bathukammas* are also given food

offerings, *naivedyam*, of various kinds on each day of the festival. Saddula Bathukamma, on the eighth day, is the culmination with five kinds of *saddi* (cooked rice offerings).

Women of each locality unite across various social denominations to bring their own *bathukammas* to the centre of the locality or village and then immerse them along with a lamp in a water body, thus bringing the ceremony to a close.

### **Bonalu**



Another major festival is Bonalu. Interestingly, Bonalu is as much an occasion of devotion as it is an expression of affection for the almighty, especially the Mother Goddess. Durga is worshipped in the form of Mahakali at this time, all over Telangana and especially in the twin cities of Hyderabad and Secunderabad.

The festival falls in the Ashada month, coinciding with the months of July/ August, and is celebrated in a month that is traditionally considered an inauspicious time for happy occasions, when women spend the month away from their husbands. It is a thanksgiving to the deity and has the offering of *bonam*, a rough dialect term for *bhojanam*, meaning a meal. During this festival, women cook rice with milk and jaggery in a new vessel, decorate it with neem leaves and turmeric and vermilion and carry it on their heads to the Mahakali temple. The food, along with *kumkum* and turmeric, a saree and bangles, are offered to the deity.

Like Bathukamma, Bonalu is all-in-all a feminine phenomenon and involves the worship of Kali and her various forms, by women. The local deities include Maisamma, Pochamma, Ellamma, Peddamma, Poleramma, Ankamma, Nookamma etc.

Bonalu is a spectacular affair in the twin cities of Hyderabad and is celebrated over a month, each week in one area of the city – Golconda, Old City, Secunderabad and Balkampet. It is said that Bonalu evolved from a thanksgiving ceremony when the plague broke out in the twin cities, which led to numerous deaths. Mahankali was implored to save the cities from the plague and it is believed that she eradicated the deadly disease.

The procession also has *pothurajus*, men dressed in *dhotis* and wearing ankle bells, dancing to the beat of drums; and priests carrying the *ghattam*, a copper pot decorated with flowers, which is immersed in water at the end. The festival culminates with *rangam*, with a

woman who goes into a trance and prophesizes the future of the city and its people, while standing on a pot, the day after Bonalu.

### **Sammakka Sarakka Jatara**



A classic example of the ancient Indian tradition of celebrating its rebels and warriors, the Sammakka Sarakka Jatara or festival is a tribute to a mother-daughter duo of tribal origin who fought against injustices meted out by the then rulers and sacrificed their lives in the process. The main commemoration is at Medaram in the Tadwai *mandal* of Warangal District and a huge number of people converge at Medaram to celebrate the event. Medaram is part of a tribal agency area near Eturunagaram in the periphery of the Dandakaranya forest.

It is a biennial festival celebrated in the month of February and is considered one of the largest congregations of tribal people anywhere in the world with almost 1,00,00,000 people in attendance. It is also a showpiece for the district administration that ensures that each of the *jataras* passes off without an incident.

Sammakka, a tribal chieftain, was believed to have lived in the 13th century and was a brave woman who played with tigers even as a baby. She ruled over her people. Sarakka was her daughter. The mother and daughter, as well as Sammakka's son Jampanna, are said to have fought against the Kakatiyas, who were ruling the region at that time.

The *jatara* is recognized by the Government of Telangana as an official festival and the administration makes extensive arrangements for devotees arriving from not just within the state but also from as far as Jharkhand, Chattisgarh, Madhya Pradesh and Odisha.

The ritual involves devotees offering *bangaram* (gold) in the form of jaggery in a quantity equal to their own weight. The *jatara* also sees animal sacrifice and food offerings. Devotees also take a holy dip in a tributary of the Godavari, named Jamapanna Vagu, after Sammakka's son who died in the stream while fighting the Kakatiyas.

### **Yedupayala Jathara:**



Every year in the month of Magh (February as per the gregorian calendar), Nagsanpalli, the small region within the Medak district comes alive with the celebrations of the Edupayala Jathara. Devotees throng the temple premises of Vana Durga located at the confluence of the seven streams of the River Manjeera. Over the years, the religious significance of Edupayala (which literally means ‘seven streams’) has helped it to evolve as a popular tourist destination.

There is a strong legend associated with this massive festival the source of which can be traced back to the Mahabharata. It is said that Janamejeya, grandson of the third pandava prince Arjun, in order to save his father Parikshit, from a curse, performed the “sarpa yagam” a ritual which involved sacrificing snakes into the sacrificial fire to end their race. The snakes, in an attempt to save themselves, invoked Ganga, to flush out the sacrificial fire and end the ‘SarpaYagam’. Ganga arrived and divided the River Manjeera into seven little streams that flowed in to touch the feet of Goddess Bhavani or Vana Durga located in the sanctum sanctorum of the temple built at the point where these 7 streams merge.

Edupayala Jathara is a three-day event and involves the participation of a huge milieu of devotees from all over Telangana who come to pay their respects and purge their sins. The festival is also a good occasion for people to seek the blessings of the Goddess. They also ask for the fulfilment of their wishes by sacrificing hens and sheep to placate the goddess.

Commencing on the auspicious occasion of Shivrathri with Bandi Utsavam, the festival concludes after a three day extravaganza of devout followers with the Rathotsavam. Around 32 colourfully decorated bullock carts tour the neighbouring villages as part of the festivities. The administration releases extra water into the Ghanpur project to enable devotees in taking their customary bath which is an essential part of the festivities. The seven streams or rivulets named after seven sages or rishis namely, Vasishtha, Jamadagni, Viswamitra, Goutami, Bharadwaja, Atreya and Kasyapasa, meet behind the Sanctum Sanctorum and acts as the place where the devotees take their holy bath.

The Edupayalaya Jathara is a popular festival which attracts pilgrims not only from Telangana but also from Karnataka and Maharashtra.

### **Nagoba Jaatara**

Nagoba Jatara is a tribal festival held in Keslapur village, Inderavelly Mandal Adilabad district, Telangana, India. It is the second biggest tribal carnival and celebrated by Mesaram clan of Gond tribes for 10 days. Tribal people from Maharashtra, Chhattisgarh, Orissa and Madhya Pradesh belonging to the Mesram clan offer prayers at the festival. Thousands of Tribal people from Maharashtra, Chhattisgarh, Orissa, Karnataka, Jharkhand and Madhya Pradesh belonging to the Mesaram clan offer prayers at the festival Nagoba. It starts in Pushya masam.

The 10-day festival will begin after tribal priests perform abhishekam to Nagoba idol at the temple in Keslapur with water fetched by them from river Godavari in Jannaram mandal, 70 km away from the village.

Nagoba Jatara Celebrations:

Rituals performed at Keslapur Nagoba Jatara begin in the morning, the Mesram elders will place the sacred 'jhari', a 1,400-year-old water container before performing its puja.

The group of Gond and Pradhan elders who had fetched holy water with pots from Hastina Madugu of river Godavari in Jannaram Mandal was given a traditional welcome under the old banyan tree.

Before the start of the pujas, the Gonds continue to 'purify' the temple with Ganga Jal or water from the Godavari drawn at a spot called 'Hastina Madugu' where Nagoba is believed to have quenched his thirst after partaking the 'naivedyam'.

The event also includes a ceremony called 'bheting', which incorporates new brides into the clan. The Raj Gond Adivasis of Adilabad follow an elaborate ritual called Bheting, one of their many realistic ceremonies, through which new daughters in law are formally introduced to the clan. All those who are married into the clan during the last year need to 'meet' clan deities through Bheting so that they become eligible to enter the deity's temple.

The women clad in white saris are the Bheti Koriad or daughters in law to be introduced to goddess Jangubai and belong to the eight clans which have Jangubai as the clan deity.

The naivedyam carried in the bamboo baskets is made of freshly harvested food grains. The bamboo denotes the connection of the Gonds with the jungles while the naivedyam offering is a matter of thanksgiving for the crop harvested.

Adivasi celebrates with music and more than 15 types of dances.

The Gusadi Dance performance by dancers from the Gond tribe is a major special attraction of the event.



Gonds pilgrims and priests will play traditional folk music at the entrance of the Jangubai cave temple located in the hilly forest of Kota-Parandoli gram panchayat in Kerameri Revenue Mandal.

Later Gond women carry on with their daily grind, including grinding grain, with a smile on their face.

The women in the given group coming on pilgrimage to Jangubai caves prepare food at the spot, a small shed having been earmarked for the purpose.

In the night, the Gonds performed the Mahapuja of Nagoba, also known as Persa Pen or great god, which marks the actual beginning of the annual tribal fair.



### Monthly Jataras

The cultural and religious calendar of Telangana does seem to be populated with a number of festivals and fairs. Some of the most important are the Brahmotsavams of various temples across the year, including those at Bhadrachalam Sri Sitaramachandra Swamy temple, the Vemulawada Raja Rajeswara Swami temple (*see p287*), Yadagirigutta Laxmi Narasimha Swamy temple, Dharmapuri in Karimnagar District, Bheemgal in Nizamabad District, Basar Saraswati temple are some of the more noted. Gudem Satyanarayana Swamy temple in Adilabad District is considered a must-visit destination for newly-weds and has many special occasions around the year.

Kondagattu Anjaneya temple has a season of *deekshas*, similar to the Ayyappa *deeksha*, and Edupayala Kanaka Durga in Medak District is another site where Vana Durga is venerated in the best traditions of Kali worship.

*Urs* at various dargahs, including the Bada Pahad in Nizamabad District, are secular festivals that see large numbers of people flocking to the dargahs. The Bada Pahad urs is organized by the Wakf Board and has as many Hindus as Muslims attending the *urs*.

## **Peerla Panduga**

Muharram, also called Peerla Panduga is an important festival in the state of Telangana. Muharram is a festival marked by processions. During this occasion, a relic called Alam is taken out as a procession. Ashurkhana, representing a group of Sufi Shrines, is the area where the procession takes place, Many Muslims and even Hindus take part in this festival by chanting Ya Hussain as they participate eagerly in this procession.

In Dabeerpura area of Hyderabad, Hindus are considered alambardaar, which means standard-bearers at the famous shrine of Bibi Ka Alawa. Hindus throng in thousands to worship the holy relic of Alam since it is believed that a darshan of this Alam gives them solace and peace of mind. On this special day of Muharram, Hindus visit Sufi shrines. Peerla Panduga is actually an occasion of sorrow when the Hindu devotees respect the sentiments of their Islamic brothers and and participate in a solemn procession.

The deities are brought from the forest to a spot for a period of 10-12 days when more than one crore devotees offer prayers and gift 'bangaram', which is pure jaggery to the deities. The entire place reverberates with divine chants and elaborate arrangements are made for this Jathara with thousands of buses arriving with pilgrims.

The Badeshahi Ashurkhana in Hyderabad has a rich 400-year old history and is also home to the maximum crowds during this festival. Thousands of Hindus visit this shrine, especially during the 9th and 10th day of the festival. Several foreign tourists also witness the proceedings of these festivities. The final day involves Alam being carried on top of an elephant as a procession from Bibi ka Alawa towards Masjid-e-Ilahi. The festival is also celebrated in many rural regions of Telangana close to Sufi shrines or Durgahs.

## **Komuravelli Mallanna Jaathara**

Komuravelli Mallikarjuna Swamy Temple popularly known as Komuravelli Mallanna Temple is a Hindu temple located on a hill in Komuravelli village of Siddipet district in Telangana state. It is located near Siddipet on SH-1 Rajiv Rahadari. The primary deity is Mallanna or Mallikarjuna Swamy who is an incarnation of Lord Shiva. The deity is also called as Khandoba by the Maharashtrian people. The temple is located about 85 kilometers from Hyderabad.

Mallanna along with his consorts Golla Kethamma, Goddess Ganga and Medalamma, Goddess Parvati are at the main temple. The Oggu Katha singers sing the tale of Mallanna here. Devotees offer prayers to Mallanna with the help of Oggu Pujaris who draw a rangoli called as Patnam ( A form of offering prayers to Lord ) in front of Lord Mallanna inside temple and also in temple's verandah. Large number of devotees visits the Mallanna temple during Maha Shivaratri when the Pedda Patnam is celebrated and also during the Agni Gundaalu which is celebrated on the sunday falling before the Ugadi. The festive season, called as Jatara begins from Sankranti and lasts till Ugadi. Large number of devotees offers prayers to the deity on all sundays which falls in between Sankranti and Ugadi.

Another temple, Konda Pochamma temple is nearby which is visited by the devotees who visit Mallanna temple.

Komuravelli Mallanna story -There is no written script for the Lord Mallanna story. The story of Mallanna is sung in "Oggu Katha". In this Oggu katha, Swamy Mallanna married goddess Medallamma by facing conditions which are put up by her brothers. Goddess Medallamma is also called as Bramarambika, who is consort of Lord Shiva.

If we examine how the regional festivals of Telangana is being celebrated, it is very clear that irrespective of who is celebrating where it is being celebrated – it is the celebration for entire community , where all people gather together share and enjoy unlike other festivals where it is celebrated in their houses.

Now let's take a look at some of the most popular festivals that are celebrated in Telangana along with other States in the country..

### **Ganesh Chaturdhi**

The twin cities of Hyderabad and Secunderabad have long played host to Ganapati Bappa, dedicating a whole 13 days to the elephant-headed god, in a celebration that is fashioned along the lines of the Ganpati festival in Mumbai. Virtually every street corner has a Ganesh *pandal* in the city, with strings of tiny lights, illuminating every nook and corner.

### **Ramzan**

The end of the holy month of Ramadan is marked by the festival of Eid-ul-Fitar, one of the most important festivals in Telangana, especially the city of Hyderabad. The state's many mosques are filled to capacity on the occasion with men offering special prayers. The diligent fasting observed by Muslims is followed by hearty feasting. It is also a month for perseverance, control, charity and goodwill amongst Muslims and is also shared with people of other communities with equal fervour.

### **Deepavali**

Undoubtedly, Diwali or Deepavali is the most spectacular festival celebrated in the Indian subcontinent. Autumn heralds in this Hindu festival of lights that is celebrated across the length and breadth of the Telangana. The celebrations are marked by people decorating their homes with candles, earthen lamps, and lights, bursting crackers, and exchanging gifts and sweets with friends and family. Since it is celebrated on a new moon night, these sparkling lamps and lights add a magical feel to the whole scenario. A festival that commemorates Lord Rama's return with his wife after 14 years of exile and his triumph over Ravana, Diwali symbolizes the ultimate victory of good over evil.

## **Dussehra.**

Vijayadashami also known as Dussehra or Navaratri is an important Hindu festival celebrated in Telangana. Vijayadashami, a festival that symbolizes the victory of good over evil, is celebrated with traditional fervour, devotion and gaiety across Telangana. The name Vijayadashami is derived from the Sanskrit terms “Vijaya-dashami” which means victory on the day of Dashami. Dashami is tenth lunar day of a Hindu calendar month. This is the time when most of the people living in Hyderabad and urban regions of the state head for their ancestral homes in rural areas and hinterlands. The villages in Telangana come alive with vibrant celebratory hues.

## **Makar Sankranti**

Sankranti is celebrated across the country in different ways and the cultural significance of the festival varies geographically as we move from one state to another, with every state celebrating and welcoming the new season of harvest in their own indigenous manner.

It is one of the major Indian harvest festivals celebrated on 14th of January of every year. It's an important festival of the Hindus and celebrated almost everywhere in the country in myriad cultural forms and different names. Every region celebrates it in innumerable ways, according to the localization, culture and traditions. In Telangana the festival is celebrated for four days -- Bhogi, Makara Sankranti, Kanuma and Mukkanuma. On the day of Makara Sankranti, people sport new clothes and make offerings of traditional food to ancestors. They also make beautiful and ornate drawings and patterns on the ground with chalk or flour, called muggu. In Hyderabad every year kite festival is conducted inviting people to fly kites and enjoy. Kanuma sees farmers' showcasing their cattle as a symbol of prosperity while Mukkanuma sees farmers offering prayers to the elements.

## **Christmas**

Christmas is one of the most popular festivals in Telangana celebrated on 25<sup>th</sup> of December every year. Marking the birth of Jesus Christ, the festival is not just limited to celebrations by Christians in Telangana. People of all faiths celebrate Christmas holidays with great interest and enthusiasm. Streets of Hyderabad and Secunderabad are lit with lanterns, electric lights, annual parties are held almost in every urban area.

**National Festivals** - *National festivals of India bind the people in a thread of unity and brotherhood.*

National festival of a country holds great importance in the heart of its citizen. It is the occasion when people from all walks of life unite together under the blanket of nationalism and celebrate the festival with joy and integrity. It also helps to commemorate the hard work and sacrifices of its citizen to build the nation.

National Festivals in schools receive much enthusiasm and excitement from all the students. The students take part in the celebrations with exceptional zeal and enrich their knowledge

about Mother India. People celebrate national festivals to spread the message of freedom, peace and harmony across the nation.

The entire Telangana celebrates national festivals with pride and enthusiasm.

The people of every community of the State celebrate the national festivals irrespective of their religion or caste. The participation of different groups of people in the national festival's celebration shows the unity of citizens. People forget their identity by religion and remember their identity by the nation to join hands.

Gandhi Jayanti, Independence Day and Republic Day are the three national festivals in the country.

Among all the festivals celebrated in schools, National festival stands apart as their celebration brings unparalleled enthusiasm and excitement in students and teachers. They also help in nurturing the feeling of national integration and patriotism among the young generation.

### **Gandhi Jayanti**

Gandhi Jayanti celebrated on 2nd October is also an important day. Though it is a national holiday, the celebration is not on the same scale as Republic Day and Independence Day. Yet it has caught the imagination of the entire nation as this day carries a strong message of peace and harmony that resonates with every Indian. Mahatma Gandhi, who led by example, Gandhi's values and belief in Satyagraha (truth) and Ahimsa (non-violence) have stood the test of time. On this day, by attending lectures about Gandhi and listening to devotional songs, every Indian strengthens his belief in the actuality of an equal society and a peaceful and uncorrupted world. Mahatma Gandhi's vision was exemplary, vast in scope and deeply powerful in impact for human societies. As such, Gandhi's relevance makes this day very special for everyone.

### **Independence Day**

Every year, August 15 is celebrated as Independence Day to commemorate India's freedom from British rule. This auspicious day is also marked as a birth of the world's biggest democracy, India. Independence Day is one of the three national festivals of India and binds the people of different cultures and religions into a bond of unity and brotherhood. It is a joyous occasion for every Indian as it reminds us of the martyrs of the freedom struggle of India. In New Delhi, the national flag is hoisted by the Prime Minister and by Chief Ministers in their respective states and by other officials at different levels of political hierarchy. India's Prime Minister hoists India's flag and gives a speech at the Red Fort in Old Delhi and highlights focus areas for future, while also reviewing the past achievements. The Chief Ministers of different states also unfurl the national flag in their respective states.

### **Republic Day of India**

On 26th of January every year India celebrates its Republic Day. It is one of the national holidays of India and regarded as the most important day in the Indian history as it was on this day in 1950 the constitution of India came into force and India became a truly sovereign

state. It is celebrated with much enthusiasm throughout the country to commemorate the event.

**The festivals of Telangana stands for the colour , vibrancy , enthusiasm and brother hood**

Learning how to Acquire knowledge :

- 1) Activities like field trips to zoo, garden , park ..
- 2)Literature on Plants Animals and birds- Britannica encyclopaedia
- 3)NCERT text books EVS III to class VIII
- 4) Websites on plants , animals ,Festivals ( Telangana and India tourism site)

## UNIT 3 - Exploring the Environment as a Resource

### **3.0 Introduction**

In the earlier Units of this Course, you have learnt about the nature of EVS and understood the child in the context with the environment and also the content for different EVS concepts you need know in the process of teaching-learning for EVS. Lets recall the definition of 'Environment' .It means 'surroundings'. It includes natural, cultural and even social environment. One of the important aspects of environmental education is to teach through environment. With focus on this aspect of environmental education, let's focus on the need for planning the teaching-learning of EVS for the whole year; this chapter will deal with planning and arranging for locally available resources and material for EVS. For smooth learning of EVS in early year's calls for innovative, child centered teaching-learning processes. Hence designing, developing plans using local teaching-learning resources and material is important for you as EVS teacher. In this Unit we will discuss this aspect in detail on identifying and using local teaching-learning resources and material for EVS

### **3.1 Objective:**

On completion of this unit you will be able to

- understand the significance of resources in learning EVS
- learn to identify and use the natural and socio cultural resources available in the local community in teaching –learning of EVS
- develop teaching-learning material suitable for EVS using appropriate resources
- recognise the role of children, parents, and community members in building a resource base for EVS

### **3.2 What is a learning resource?**

“Resource” in teaching learning situation can be explained as the thing/s which can be used to help children in understanding the topic /concept leading to achieve the objective. In this context the 'Resource' will help you to transact the EVS lesson in a better way.

*For Example: if you want your children to know about different types of plants then 'a garden' or your own 'school garden' can be become as a learning resource*

To make children understand the concept of float/sink, then the water, things that are in the school i.e pebbles/small stones, stick, flowers etc. can be resource material.

Not only the resources such as garden, water, flower, plants, stones, sticks as mentioned in the above learning experiences, sometimes we need to use video and audio , picture books, toys, models which is manmade resource.

To make children understand how a garden is grown, how it is taken care, meeting a Gardner and talking to him will be the best source. In this case the community is resource for learning.

As we appreciate that environment as a resource, let's look into its constituents.

### **3.3 Importance of Learning Resources**

Use of learning resources for teaching learning of EVS at this level is critical because:

- Real-life based experience, in physical, biological, social and cultural aspects of life are appropriate at this stage. Use of local resources and material facilitate real-life based learning.
- EVS aims to enhance cognitive ability, capacity and resourcefulness in child, and to make his/her curious about social phenomena – starting with the family and moving on to the wider space. Using learning resources creatively one can achieve this.
- By using local resources, teachers can help students to construct their own knowledge, develop skills and values providing them direct learning experiences.

Besides these educational benefits there are several social advantages too.

- With the help of local resources you can build strong relationship with society and neighbouring communities
- children can connect to the world around them through their studies and vice-versa, which is an important part of learning
- children will become aware of their immediate environment
- children will be sensitised towards the conservation of their immediate environment

In order to gain these advantages, a teacher must have he knowledge and skills to identify, develop, and use local learning resources.

### **3.4 CONSTITUENTS OF ENVIRONMENT;**

Since environment is a combination of physical and biological factors, it contains both living and non-living components. On the basis of this basic structure, environment can be divided into

**Natural/Biological environment** include plants, animals, micro-organisms, and man. Space, landforms, water-bodies, climate, soils, rocks, and minerals. These elements determine the variable character of human habitat, and also its opportunities and limitations.

**Socio-cultural environment** include economic, social and cultural conditions which are largely man-made features. It includes varied aspects of socio-cultural interactions along with its outcomes such as beliefs, attitudes, stereotypes etc.

Now lets examine how we can use these as resource in teaching learning EVS at preschool stage.



### **3.4 .1 Natural Environment as a Resource:**

Natural resources come from living things or organic materials, include plants, animals .Nonliving or inorganic materials include air, sunlight, and water.

Children grow healthier, wiser, and more content when they are more fully connected throughout their childhood to the natural environment in as many educational and recreational settings as possible. These benefits are long-term and significant and contribute to their future well-being and the contributions they will make to the world as adults. Hence getting connected to the natural world through interacting using the elements of natural resources is essential in early childhood.

Lets recollect what Jean Piaget’s theory says. Jean **Piaget** developed his cognitive - developmental **theory** based on the idea that children actively construct knowledge as they explore and manipulate the world around them. So providing ample opportunities for children to interact with the environment through all their senses allows them to gain a better understanding of the world around them. Hence the environment around the child is the best learning resource for children to know about their world.

Natural Environment is said to be a very good learning resource for EVS. It is so because humans are a part of the natural environment and hence learning from the environment comes very naturally to a child. Elements of nature like hills, ponds, grasslands, forests, oceans, etc. excite children and create curiosity among them. Thus as a teacher, if you can find an opportunity of letting your children learn in and from the nature then your task of facilitating learning becomes very easy.

#### **a) Natural resources**

From sticks and leaves to pebbles and rocks, natural resources offer more ‘affordances’ – opportunities to use them in many different ways – than most manufactured toys. Playing with objects like these gives children the chance to be more creative and imaginative, allowing them to explore and understand more about the world they live in. Collect together samples of wood, straw and real red bricks (ask parents if they can donate any of these). Retell the story of the Three Little Pigs and let the children explore these materials and try to build homes for the pigs themselves. Which is the strongest? Why?

Outdoor spaces should include a range of different natural features such as sand, soil, grass, a variety of different plantings and trees. It is not enough for children to look at trees and plants in education and care services, they must be able to actively explore, engage with, and experience different types of natural environments.

This means allowing children to touch and interact with the natural environment in their everyday play. This fact sheet provides some ideas for setting up and using natural environments in an approved education and care service.

## **b) Outdoor and Indoor learning resources for EVS**

Early childhood Education programme requires to have indoor and outdoor spaces that are designed to engage children with quality experiences. Creating natural environments supports children to become environmentally responsible and show respect for the environment

### **Outdoor spaces**

An interesting and dynamic outdoor play space with natural features adds stimulation and creates variety for learning. It allows children to explore and experience the natural environment.

These spaces invite open ended interactions, spontaneity, risk taking, exploration, discovery and connection with nature. They foster an appreciation of the natural environment, develop environmental awareness and provide a platform for ongoing environmental education.

Outdoor spaces should include a range of different natural features such as water, air, sand, soil, grass, a variety of different plantings and trees. It is not enough for children to look at trees and plants in early childhood education programmes, they must be able to actively explore, engage with, and experience different types of natural environments. This means allowing children to touch and interact with the natural environment in their everyday play.

## **c) THE NATURAL RESOURCES FOR LEARNING EVS WHICH ENABLE CHILDREN TO EXPLORE.**

A natural environment in a education and care service is an environment which includes natural resources. These may include:

- gardens where children can grow their own plants
- sandpits for sensory, symbolic and physical play
- digging patches where children can use garden equipment
- a range of planting to encourage a variety of modes of play such as playing with gum nuts, small branches, flowers, stones and bark
- small pits of pebbles, gravel, coarse sand and smooth river rocks for fine motor and imaginative play
- plants for picking and eating
- plants that encourages birds, butterflies and other insects
- trees which provide shade
- worm farms and compost areas for environmental education
- water play areas for sensory play.

**d) The range of natural materials you provide for young children could include:**

- a variety of leaves including simple and compound leaves, leaves with stripes and patterns, leaves of different colours and shades, leaves with interesting textures and scented leaves
- shells of varying shapes, sizes, patterns, textures and colours
- bark and twigs from a variety of trees, cut sections of wood and short lengths of pine showing grain and knots
- fruits and vegetables that are interesting to look at and to handle
- seeds of different sizes, shapes and colors, pods with seeds still in them and cones of different shapes and sizes
- rocks of different colours, shapes, sizes; pebbles and small smooth stones of different colours and shapes; samples of sand in varied colours and graininess

**e) OUTDOOR SPACES AS NATURAL RESOURCE FOR LEARNING EVS IN EARLY CHILDHOOD EDUCATION.**

Current research clearly shows that natural environments and outdoor play are beneficial to children in many ways. Playing outdoors is important for developing capacities for creativity, symbolic play, problem solving and intellectual development. Outdoor play has clear physical benefits for developing children including helping children to acquire gross motor skills, eye-hand coordination and helping to prevent obesity.

Sensory stimulation derived from interacting with natural environments allows children to learn with all of their senses. These senses include seeing, hearing, touching and smelling. It is well known that physical activity is beneficial for children in many ways. Research also shows that children who have trouble concentrating benefit from playing outdoors, as after playing outdoors these children are better able to concentrate on tasks.

Resources in the Natural environments provides opportunities to teach children about caring for the world in which we live. Seeing plants grow and change throughout the year helps children to understand and learn more about nature.

**f) Inspire your little scientists outdoors with these natural resources .....**

A child's innate desire to explore their world requires them to use their senses, test out theories, make mistakes and continue again. Exploring the world in this way enhances their development and doing so outdoors allows children enough space to use their whole bodies, to work on a variety of scales and to make sense of a wide variety of different materials...

**Soil**

Soil is an inexpensive natural play resource and in many settings is readily available. Adding water changes its consistency, making it ideal for mark making. In addition, young children love it, and you can use it for growing too! Create a digging pit so children can explore the

soil while developing their gross motor skills, and provide a table so that they can easily manipulate it to develop their fine motor skills. Give the children some beans and a magnifying glass. What colour are they? Are all seeds the same? How long does it take for a seed to germinate? Set up a display where the children can put different seeds on damp kitchen paper to watch them germinate. Write questions on card and place them with the display. Which seed grows first? Try planting seeds outdoors and observe them in the same way.

### **Sand**

Sand offers multisensory experiences to children as they can immerse their whole bodies when exploring it. It can be sprinkled, patted, moulded, dug and poured; dug up and transported from one place to another; or turned into a landscape for small world play. In fact, the bigger the sandpit, the greater the opportunities. Sand also allows children to experiment alongside others, interacting, collaborating and socializing. Place a portable tray on legs into a large sandpit to give children an opportunity to explore the sand at different levels.

### **Water**

Water has many fascinating properties that children love to explore. Very young children will investigate why things float and sink. Try pushing an inflated balloon down on the surface of the water and you can feel the resistance. What happens to water displaced by objects dropped in it? What happens to water when you freeze it? Collect a variety of resources such as match boxes, tubes, plastic containers, leaves, lids and straws, and set a challenge for the children to design and make a boat. Which ones float or sink? Ask the children why they think this has happened.

### **INDOOR SPACES AS NATURAL RESOURCE FOR LEARNING EVS IN EARLY CHILDHOOD EDUCATION.**

Natural environments do not have to be limited to outdoors. There are many ways in which the natural environment can enhance the children's indoor program. Pot plants and small tubs in which to grow plants are visually appealing in children's rooms.

Parts of branches and small logs with the bark attached can be used in imaginative play in conjunction with other materials. Seed pods, leaves, and small stones can be used in different ways including opportunities for children to explore simple science and maths concepts such as classifying, counting and weighing. Sand and water trays inside also provide additional interesting experiences for children's play.

### 3.4.2 Learning from Socio-cultural Environment

Social and Cultural Environment-This type of environment includes the varied aspects of socio-cultural interactions along with its outcomes such as beliefs, attitudes, stereotypes etc.

The role of culture in early childhood environmental education -Young children are embedded in their family culture. The child's cultural background includes the beliefs and practices related to daily life and child rearing (e.g. eating, sleeping, clothing, guidance and discipline, routines, relationships with others) as well as the family's home language and religious, ethnic, political, and geographic characteristics.

Respect a child's culture when planning a program. The goals and objectives of environmental education are shared by most cultures of the world, although some issues can raise controversy. Since many early environmental education activities involve living things and learning through concrete, firsthand experiences, Exp. Potatoes are not used for prints because they cannot be eaten afterwards. Such respect for food is part of this school's cultural value and reflects the values of the families they serve.

You need to inform all families of the proposed activities and valuable outcomes of their child's environmental education programming and encourage their participation.

Family members can share stories of their own experiences cultivating plants and taking care of animals. Their participation is valuable during outdoor activities and with small groups indoors.

Giving parents suggestions for things to do with their children at home and in their communities enables the whole family to become better observers of nature phenomena..

The festivals ,customs , celebrations , occupations of the people , peoples life styles , food habits , clothes they wear , the language they use to communicate , if you can tap on this - all these will be the best resources for you to use in the teaching learning of EVS to young children.

One of the easiest tasks for any ECCE teacher is to pick up leaves, pebbles, and flower petals from the ground and use them for sorting activities according to colour, shape, or size. Rangoli, kolam, and alpana are floor arts prevalent in different regions of India, and children can be helped to use the materials creatively. Local languages assign different names/ words for common objects. Such knowledge can also foster tolerance through learning about different language registers. Both in rural areas as well as in metropolitan contexts children can gain a great deal by being exposed to local arts and crafts, stories and folk tales, songs and language variations. The inclusion of these elements makes the ECCE setting an extension of the community. Such experiences enhance children's social competence and awareness about the socio-cultural backgrounds of different people. At the same time, children in rural preschools should not be deprived of opportunities to use contemporary materials such as crayons and paints or the chance to learn popular songs.(National ECCE Frame work -2005)

## **The role of Teachers ..**

It is important to think about how the environment is used as resource in early childhood education programmes and the interactions between children and other adults. As teacher you play an important role in teaching and guiding the children within natural environments. You may do this by:

- providing access to a range of natural materials
- finding ways that children can care for and learn from the land
- modeling respect, care and appreciation for the natural environment
- sharing information and providing access to resources about the environment and the impact of human activities on environments

Encourage parents to support children's investigations at home in their daily routine, e.g. using bath-time to explore floating and sinking or discussing the weather when walking to preschool/ece centre.

**Did you know?** It takes children up to 40 minutes to become totally engaged with an activity outdoors? Give them plenty of time to plan their ideas, explore and make discoveries, and be prepared for them to repeat an activity again and again to consolidate their learning.

### **3.5 Learnings from the community:**

**Community Resources can be -**

- Natural
- Human
- Human made

**Natural** – We already discussed in detail how natural environment can be a best resource for learning in young children.

**3.5.1 Human Resource** - Do you know for a teacher each Person who lives in the neighbouring community can be a resource? The belief that 'each person is important' can be very meaningful in this work. Practical work leads to knowledge construction. Thus Day-to-day work experience makes every person an expert. Thus skilled workers like a gardener, an iron smith or even a carpenter can become very useful resource for you. Let us quickly look at how these people from the community can help you in your session:

If you are discussing the theme of 'Things we make and do'. The potter can speak not only about his personal experiences but can also deal with aspects like types of soil in that area; the process of making pottery, etc.

- Now you will be able to list many such names as a resource, like iron smith, goldsmith, gardener. Look at how resourceful can a teacher become by using the expertise of the local community members
- A farmer, can be invited to help children understand better about plants in general and weeds in particular.
- Just as the local health worker is able to help in understanding the human body, as well as health and hygiene related topics, the local revenue official is an expert both on maps and local history.
- A carpenter supports you as teacher in your class on measurements, something he is an expert at. And when he is not available, then you ask the local tailor to help you out.
- Many grandparents are waiting to be able to narrate interesting folktales, to the young children. Such folktales can also be modified into other activities like puppetry, role plays etc.
- You can certainly count on a number of retired professional (teachers, clerks, policemen, defence personnel) who are willing to help you and the school on a voluntary basis.
- Remember a **child** herself is a very important resource. A child has curious nature, she is a keen-observer of her environment, she may not have well defined purpose of observation but she does it continuously. Teacher's role is to support the child in converting these observations into meaningful leanings for a child.
- Do remember that your peer teachers can also be a valuable resource for you.
- Provided below is a sample sheet which will help the children record their interaction with farmers from the neighbouring town.

### 3.5.2 Human made Resources:

When humans use natural things to make something new that provides utility and value to our lives, it is called human-made resources. For instance, when we use metals, wood, cement, sand, and solar energy to make buildings, machinery, vehicles, bridges, roads, etc. they become man-made resources. Likewise, technology is also a man-made resource. Man-made resources are mostly renewable. One can re-build a building or fix a broken machine.

And, because humans have the skills, intelligence, and knowledge, and use technology to transform a natural resource into usable and valuable things, they themselves become a resource. That is what we know as Human Resource.

Now let's discuss how the institutions built by humans can be a resource for learning.

#### **Institutional Resources**

Institutes, especially public service sector ones; can be very effective local learning resources. Each institute has its own unique mandate and vision which eventually contributes to the development/economic goal of the society. A teacher can plan and coordinate visits to

relevant institutes. This also ensures real-life link built into the teaching-learning process. Some such possibilities exist in the form of:

- Public Facilities: Public hospitals, bus stations, post offices, police stations, public libraries, banks, veterinary hospitals, gram panchayat offices, office of the Municipality
- Museums and Historical Sites: Museums of natural history, palaces, parks and gardens, laboratories, cold storage
- Other establishments: Plant nurseries, wind farms, universities, dams, zoos, fire stations
- Commercial and Industrial set ups: Power house units, factories which are not harmful for children, shopping malls, local markets, etc.
- Local 'Mela'(fairs) also provide good opportunities for learning: By visiting mela, students can learn how market works and can realise the local rituals, dressing style, mode of living of different kind of people.

### **Media Resources**

Today a range of educational media are available. The newspaper, relatively cheap and universally available, is an invaluable learning resource. Moreover, the educational potential of electronic media can be exploited for education in a variety of innovative ways. Video, film, television, computers, internet—all these offer the possibility of bringing the world into the classroom. Media provides a set of teaching learning resources, popular and easily available. For EVS, the main advantage of using media is that students learn about current environmental issues. They also get an opportunity to read about and to understand different opinions and viewpoints on an issue.

Media Resources include:

- Local, national and international news papers
- Magazines, especially for EVS include Safari, The National Geographic, Down to Earth, *Vigyan Darshan*, etc
- Television channels like The Discovery, The National Geographic channel ,Planet Earth, Travel and Living
- Radio programmes related to EVS on *Gyan Bharati*, *Vividh Bharati*
- Environment related websites and portals
- Environment related Programmes broadcasted on Doordarshan or other educational channels
- Paintings, exhibitions etc.

Some ideas on how to use media for EVS include:

-You can read scientific or environment related stories from books which has big , colourful self explanatory pictures

-With the use of posters and paintings, you can help children express their ideas and views on relevant environmental concerns.

### **Technology Resource**

Today a number of technologies are available to support the teacher in the process



of teaching-learning. Oxford Advance Learner's Dictionary defines 'Technology as "Scientific knowledge used in practical ways in Industry". The younger generation is good at using technology. Technological gadgets attract children. In the teaching-learning of EVS technology can be used in a creative and meaningful manner. Listed below are some exp..

- mobile
- camera
- computer

### **Resources made out of waste**

You must be using some materials in teaching learning of EVS for creating effective learning situation which are made by human .By using, papers, other disposable items and materials developed by using no cost or low cost materials can become excellent resource for you.. These can be used in different activities to help in concept formation in children's mind. The materials can be stored in a corner of the classroom, school premises and can be used while conducting the related activities.

### **Using locally available materials Creatively**

Generally teachers are made to understand that teaching-learning resources mean charts, ready-made maps, globe, models, etc. Yes these are teaching-learning resources. However, just look around yourself, you will find many such materials and equipment, like a pen, a chair, pebbles, etc. Even waste material like old newspapers, invitation cards, discarded ice-cream cups and sticks, can be a treasure of teaching-learning material for creative teachers. Thus without necessarily having access to much resources like time and money, your innovative and creative abilities can help you use local materials as readily available learning resources. Further, a good teacher will also be able to bring in students' participation in ensuring the use of this treasure house as a learning resource pool!

### **Resource Conservation**

All human-made resources are dependent on the availability of the natural resource/s. We need to understand the value of each natural element and then need to conserve that resource/s. Because we should be able to use them throughout our lifetime and also save them for our future generations.

For example, if we do not start saving water, very soon, human society will start facing severe scarcity of water. Likewise, if we cut down all forests, eventually, there would be no wood left for us to build homes or make fire. It will also increase the level of carbon dioxide. As a result, it will only harm human life. In other words, conservation of resources is necessary for the betterment of human life.

By carefully utilizing each natural resource and allowing it to renew itself within nature, we can help in resource conservation. We must also focus on sustainable development- a way of optimally using and balancing the use of each resource. And, by doing so, we can all contribute to a healthy and resourceful planet.

**Remember:**

- **Remember all the resource material that you choose for conducting EVS activities for development of different concepts in young children should be developmentally and age appropriate.**
- **The material should be handled by children as you are aware that children at this age learn through their senses .**
- **The adults who interact with children need to be sensitive to the child's development , language and culture.**
- **The material shown to children should be colorful , bright , with natural colours and should be culturally relevant.**

### **3.6 Summing up**

In this Unit, you have seen examples and reflected upon those to:

- Understand what educational resources can be developed for EVS teaching, using natural , socio cultural environment as a resource.
- Learn about the major categories of resources that you have around you
- Realise that educational resources can be created using simple things and material around us, like the pebbles, glass, bicycle, etc.

### **3.7 Unit end questions**

1. What do you understand by ‘resources for teaching-learning of EVS’?
2. List of the EVS concepts where the cultural and social environment can be used as are source for teaching and learning. Explain.
3. Why resource conservation is important?

## UNIT 4: Developing Themes

### **4.0 Introduction**

Children's curiosity and fascination for their surroundings in Early years lead them to explore and question their environment so that they can come to a personal understanding about their world. They observe and investigate primarily through their senses. This curiosity can be channelled through interesting themes so as to lead the children on an exciting adventure to many areas of inquiry. A good quality Preschool programme engages young children in a variety of theme based experiences, inspiring them to explore their immediate world. Theme based integrated programmes create activities and experiences around an idea or theme and offer many opportunities where young children learn in enabling environments which are stimulating, emotionally supportive and inclusive. Theme based learning nurtures holistic development in every child and empowers them to use their capacities to become successful learners. Learning through themes helps young children connect with their immediate world and also connect classroom learning to their lives at home and in the community. Care should be taken while choosing the themes as it should be meaningful, relevant to children's knowledge, culture and development.

### **4.1 Objectives:**

At the end of this unit you will be learning to :

- 1 the relevance of theme based instruction of EVS in preschool
- 2 develop theme based instructional plan for EVS concepts.

### **4.2 Criteria for selection of themes and its relevance:**

Identifying Themes - while choosing a theme or an individual unit of inquiry organised around a central idea, the following are proposed as useful criteria. Each unit/theme or topic may consider the following elements:

- **Engaging:** Should be of interest to the children, and involving them actively in their own learning.
- **Relevant:** Age and developmentally appropriate, should be linked to the children's prior knowledge and experience, and current circumstances, and therefore placing learning in a context connected to the lives of the children. Preschool themes are often based on the learners' culture, environment or shared experiences. For example, all children come from families, it may be wise to create a theme about families so you can discuss different kinds of families – family members, their roles, the work they do, their relationships, etc.
- **Challenging:** Should extend the prior knowledge and experience of the children to increase their competencies and understanding.

- **Significant:** Should contribute to an understanding of the transdisciplinary nature of the theme or topic, and therefore to an understanding of commonality of human experiences.

You have already learnt that children in early years learn best through play, active exploration of their environment, and thoughtfully planned activities. This means that you should design learning environments and experiences in their themes that:

- are interesting, meaningful, and stimulating;
- support child-initiated play and exploration (books, blocks, puzzles, manipulative materials, sand, dress-up clothes, etc.);
- nurture the natural curiosity and enthusiasm of childhood;
- provide time for child-initiated learning;
- promote children's knowledge and skills

Hence the Theme-based approach is commonly used by the educators across the world. It attempts to tie in various skills and knowledge to be acquired children, into a coherent whole, organized around a specific theme, such as myself, plants, animals, fruits, vegetables, etc. A deliberate focus on a given topic enables even very young children to be more efficient in acquiring skills and processes required to gather and process information in later life. When we take a particular theme, and help children to actively and visibly build knowledge on that theme, we enable children to acquire skills to make learning more efficient in the future. To plan the content following a thematic approach, each theme could be spread over about 1-2 months, with sub-themes that cover a smaller period, such as a week or two weeks, so that the information surrounding a large unit is organized in a way that makes sense to the children. For example, if the chosen theme is plants, it could be spread over duration of 1 month with various sub-themes such as parts of plants, types of plants, uses of Plants, taking care of plants, etc., each covered in detail over a one-week period.

Teaching with themes is the best way to engage children in the learning process, knowing that you are helping them to make connections about the world around them.

### **4.3 Concept Mapping**

While brainstorming ideas for theme plans the children need to be involved in the process and encouraged to talk about their interests. When children are involved in planning, it helps you to take into account the varied learning styles of young children and their individual differences. Their previous experiences are also taken into account. This provides better learning experiences for all children

Concept mapping is a very different but complementary technique that is concerned with the organisation of ideas and relationships between concepts. (The term 'concept' is used to mean any word or phrase that has a scientific meaning.) The concepts are linked with an arrow and words explain the link. The direction of the arrow shows the way the sentence should be read..

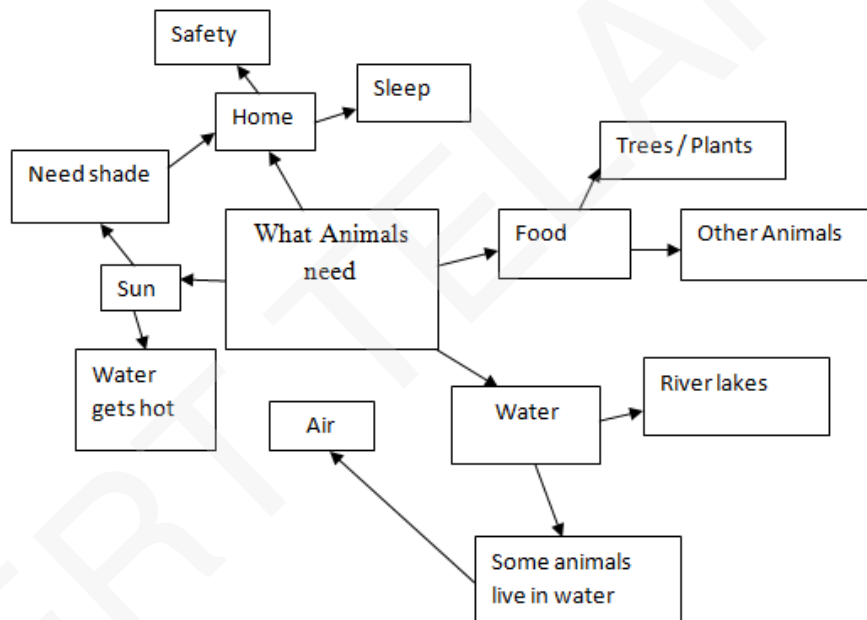
Now let's select a topic that you are all familiar with, ie What Animals Need. The aim is for you to understand the technique and the nature of concept maps rather than produce a concept map that covers an entire topic.

Example: Mrs. Shanti is teacher of 6 year old group. She shows a picture of different animals and asks children to tell what comes to their mind. She asks questions to prompt their thinking

- What are these?
- What do they need?
- Do they need a home like?
- Why do they need a home?
- Do they need food to eat?
- What food they eat?

As children answer she puts the pictures around the concept on the floor. Then she asks the children to choose two pictures that are connected to one another. As children answer she notices that children are linking in different ways as per their previous knowledge.

EXP: CONCEPT MAPPING – “WHAT ANIMALS NEED”



CONCEPT MAPPING HELPS TO

PROMOTE LEARNING

This can be used to promote learning through discussion . It is a purposeful activity where there is no single correct answer. When it is done with young children use picture only and not writing of words.

In the above example children learnt that animals also have similar needs like us and they also depend on other forms of life like plants and other inanimate things. They learn the different words , they also classify animals as per habitation. With this they get a picture in their mind and this learning is holistic children need not learn anything by rote.

### **Assess children's level of understanding**

Concept mapping is a powerful assessment tool that you can use to reveal your students' understanding and how they see how concepts are linked. There is no one correct way of creating a concept map and there is no one correct map for any given topic or set of concept. In this way, a concept map is unique to the individual or group that creates it.

When you have carried out his activity, note your answers to the following questions:

- How did your children respond to the concept mapping activity?
- If you did the activity again, what would you do differently to improve it?
- Did some children find it more difficult to understand than others?
- How did you help the children that found it difficult?

### **4.4 Planning for a Theme Based Approach**

Before beginning to plan a theme, it is important to know that young children develop in several areas or domains simultaneously. Also, we must always remember that these domains of development are interdependent and interrelated to each other. Each of these domains is equally important to all children. It has been said that when a child's self-esteem is positive and she/ he feels good about herself, it influences her/his intellect. Research studies on neuroscience also suggest that social and emotional development and intellectual or cognitive development of young children go hand in hand.

The theme based learning experiences which integrate all the five domains ensure that skills and concepts are learnt in meaningful contexts. An effective theme plan draws upon the progression of concepts, skills, knowledge and attitudes in each area of development. For example, once the children have begun to differentiate flowering plant and non flowering plants , what concept or understanding should be planned for next?

For each theme, three types of learning experiences should be developed, namely

- teacher-structured activities,
- child-initiated activities and
- opportunities for free play.

1) The first step in planning for a theme based ECCE programme is to identify the theme/topic for each month. Some of the suggested themes/topics are:

- Identity and relationships: Myself, my family and community
- Maintaining well-being: Food, body, health, hygiene and cleanliness, safety
- Nature: Plants, animals, birds, fruits and vegetables
- Physical environment: Air, water, earth, universe and seasons
- Social environment: My country, festivals and celebrations, neighbourhood, transport.

#### **4.4.1 Brainstorm for Ideas**

(a) While brainstorming ideas for theme plans the children need to be involved in the process and encouraged to talk about their interests. When children are involved in planning, it helps teachers take into account the varied learning styles of young children and their individual differences. Their previous experiences are also taken into account. This provides better learning experiences for all children.

(b) You need to collaborate and map the theme together. This helps in creating a holistic plan, encompassing a wide variety of activities addressing progression in learning across age groups.

A sample is given below: Water- Uses

- Brain storm ideas:
- Ask children what they did since morning till they go to sleep?
- Collect all the answers and come to one common think is use of water.
- Then ask them for what purpose the water is used? Encourage children to say it.
- Then ask them for what activities they did not needed ant water .List
- Then ask for the need of water in our lives. What happens if there is no water .
- Discuss on conservation of water.
- Ask for which activity more water is needed and for which activity less water is needed.

Now based on the above discussions make a web on uses of water connecting all the developmental areas.

#### **4.4.2 Choose Activities and Organise Learning Experiences**

Entry Point: An entry point into the theme acts as the trigger or hook which engages the children and gets them interested in exploring, questioning and discovering the different areas of learning. An interesting story, movie, rhyme or poem, song, skit, game connected to the

theme can all act as entry points. They weave the theme together, helping it unfold and develop.

**Learning Experiences/Activities:** A good learning activity is

- Based on a concrete experience, which enables children to manipulate and explore material or experience something first hand
- Linked to the learning objectives in focus
- Meaningful and relevant to the child's life and immediate surroundings
- Age appropriate
- Engaging and connects to the child's interests and environment
- Conducive to the application of knowledge and skills
- Timed, keeping in mind the focus and attention levels of young children.

### **Developing Activities and Experiences**

Firstly you need to be thorough with the developmental characteristics of children between the ages 3 to 8 year old before planning activities and experiences for young children. This will help you to understand children and design age and developmentally appropriate activities.

- Plan for every child.
- Develop/Identify age and developmentally appropriate activities catering to all domains of development.
- Prepare age and developmentally appropriate material for ALL children.
- Plan for visits and visitors for each theme.
- Plan for circle time activities which will help children share their experiences and learning.
- Plan for each activity area i.e. doll's area, manipulative area, language and literacy area, blocks area, dramatic play area etc.
- Plan activities for each domain
- Collect rhymes and stories related to the theme
- Look for and gather relevant resources
- Plan warming up or introductory activity to begin the theme
- Plan individual, small group and large group activities
- If group of teachers are working, divide responsibilities
- Talk to the community for help/assistance
- Determine how to assess the theme, each child's progress and the activities.
- Plan interesting activities for winding up the theme and summing up learning

#### **4.4.3 Some Strategies to Keep in Mind while Planning**

- **Circle Time (Whole Group Activity)** Morning circle time is meant especially to encourage children to express verbally and share their ideas and feelings. This is the time where one can do some introductory or warming up activity to launch the theme followed by finger play/poems and rhymes. Then have a 'discussion' on the theme. Ideas for discussion are given under each theme. Morning circle time is where one can also talk about the weather, calendar etc.



- **Small Group Activities** Many times it is not feasible to give the same activity/material to all the children at the same time. Plan for small group experiences that can maintain individual and active involvement of the children in a learning experience. Activities organised in a small group are very helpful when the range of skill levels among the children requires special adaptations. Small group activities are very good for handling individual differences in children and also for children who have short attention span. Small group activities also offer each child maximum number of turns and thus ensure that each and every child gets involved and remains in the learning experience.

- **Guided Activities:** This is the time when the teacher provides guidance at all steps. The learning objectives and instructions are specifically explained to children, can conduct specific activities to help children develop concepts with the help of appropriate teaching learning materials e.g. flash cards to help them learn to classify, sort and grade things, teach about one on one correspondence. This is the time when you can plan some art and craft activities or drawing and colouring.

- **Outdoor Play:** Children need to do some outdoor activities involving large body movements and vigorous activities to develop muscle strength and coordination. Children are naturally drawn to active outdoor play. They need to use their muscles by indulging in jumping, running, rolling, crawling, swinging. Outdoor activities help to invigorate them by giving them fresh air, exercise through energetic and invigorating activities and thus helps in wholesome physical development. Activities with balls – passing, catching, throwing, or relay races with two teams can be organized.

- **Stories and Rhymes:** Stories and Rhymes are very important for young children as it helps them in language development in a holistic manner. They help them to learn new words. Rhymes have rhythm and repetition – both are enjoyed very much by children. They learn to play with words – and thus develop a love for language. Stories can either be read aloud from books or told orally with the help of props such as puppets, pictures, cut outs, etc. Through these they develop a love for books. They learn more about the world, about other people and their lives. They also help them to learn about different kinds of feelings and teach them to manage their own feelings – and therefore play an important role in their emotional development.

- **Spontaneous Activity/Free Play:** It is important for children to have some time to work on their own, if there is a provision for this in the classroom by creating an activity corner (further suggestions on creating and organizing an activity corner are provided later in this manual). This is most helpful in multi grade situations, where the teacher can focus on guided activity for one particular age group while the other/s can indulge in free play.

#### **4.4.4 Materials for Theme Based Learning**

- Plan for ‘teaching learning material’ for each theme. Prepare Teaching Learning Material for each domain, for different age groups and for all children.

- Reach out to the community for help. E.g., collect waste fabric pieces from the tailor for colour/pattern matching activity; collect waste pieces of wood from the carpenter for preparing writing template and shape puzzles; and so on.
- The teaching learning material needs to be age and developmentally appropriate.
- One needs to remember that each child has individual abilities and learning needs.
- Have variety of materials for each theme as this will help to readily adapt to individual as well as group learning needs.
- Teaching Learning Material needs to be appropriately matched and challenging to Children's individual skill levels. Teaching Learning Material needs to be versatile and safe for children.
- Activity or interest areas should have such learning materials that promote children's learning even when a teacher is not available to guide.

#### **4.4.5. Duration of the Theme and Activity**

The duration of the theme varies according to the age, need, interests, the resources available and the objectives of the theme. The tentative duration of each activity need to be planned in advance. One needs to be flexible as the attention span of children is very short. Young children cannot sit still for one activity for more than 10/15 minutes. Some teachers plan for weekly themes whereas some plan for fifteen days and some plan a theme for a month. If the theme is broad, related sub-themes for each theme can be thought of for example, one can talk about 'jungle animals' for a week, the next week it is 'pet animals' and then the following week it is 'water animals' and so on. Always plan for child-initiated or free-choice activities as freedom and play are fundamental to young children's learning. If one finds that children are involved and enjoying some activity in a small group, instead of asking them to wind up, allow them to continue the activity/experience.

As a good teacher you should, end each experience/activity while the children are still enthusiastic and actively involved.

#### **4.4.6. Creating a Lesson Plan**

Organise the theme and the related learning experiences in a simple lesson plan or flow chart to see how it will unfold in a sequential flow. The plan will also ensure that the theme-related activities for all developmental domains are covered over a course of a week.

A sample lesson plan is given in this resource book. This is provided as guidelines and is not to be followed rigidly. Adapt it to suit your specific requirements and the context.

#### **Implementing the Theme some things to remember!**

- Be flexible while implementing the theme. Be alert to "learning moments" – an interesting question, a shared experience, a prop, idea Theme Based Early Childhood Care and Education Programme 20 or opportunity which helps further the theme, even if it is not in the way you planned it.

- Adjust the activities and experiences related to the theme as the need arises.
- Allow children to talk about their ideas.
- Organise the teaching-learning material.
- Set the classroom environment and display board.
- Plan the stimuli in the activity areas.
- be spontaneous in your planning.
- Give attention to every child.

#### **4.4.7 How will you know that the theme based programme promotes holistic learning?**

##### **Continuously Observing and Assessing your Children**

Evaluation of a theme based ECCE programme becomes easier because the teacher can observe her children's depth of understanding, ability to express, their creativity and ability to share and work together in meaningful contexts and through multiple ways.

- Observe children as they engage in the different learning experiences throughout the theme.
- Ensure you are clear about the learning/development indicators you are observing. In this handbook, the indicators are identified for each theme and learning activity.
- Prepare assessment checklists for every theme and every domain.
- Focus your observation on small groups of children at a time, in order to ensure deep and authentic observation. Multiple learning experiences addressing the different domains of development will ensure that you observe all the children equally.
- Write anecdotes for what has been observed. Remember to be objective in your observation. Ensure that personal opinion and assumptions do not bias the observations, for the authenticity of the observation will be lost.
- If you are observing and assessing your children regularly, then it will help you to focus on children's strengths, on what children can do, and what more is required.
- Continuous assessment helps you to adapt and modify your teaching strategies, teaching learning material, activity area and so on and this re-planning ensures that learning needs and gaps are identified and addressed timely.

#### **4.4.8 Concluding the theme**

Reflection - Evaluate the theme:

- Review all the children's work.
- What are the challenges and concerns?
- What kinds of activities and games were very helpful in making children understand the theme?

- What changes and modifications you will be doing in your next theme? Share information with fellow teachers, discuss and modify accordingly.

#### **4.5 Considerations for Inclusive Teaching in a Theme-Based ECCE Programme**

Promote inclusion in your classroom and make it actually happen in the pre-school/primary school. A comprehensive and inclusive theme based ECCE programme requires lots of thought, imagination, planning and team work. In an ECCE centre/ classroom, children represent a range of age and ability levels. They all have different learning styles and needs. An effective theme based programme covers all developmental domains and includes a wide range of age appropriate activities to spark the interest of children. We need to remember that children learn best in an emotionally supportive and stimulating environment that fosters self-esteem and confidence. Make the necessary strategies and environmental adaptations (wherever required) to meet the needs of children with special needs. The inclusion of ALL children whether they are differently abled or not, is the core principle of effective teaching in the ECCE Programme.

#### **Some ways in which this inclusion can happen is:**

- Respect every child and show interest in them. Give importance to the uniqueness of each child.
- Acknowledge every child in the ECE centre/school. Listen to each child carefully.
- Try to learn about each child.
- Encourage all children to participate in activities where each child meets children of her/his age with different abilities.
- Encourage each child's learning.
- Check whether any child needs additional time for an activity and support to understand the topic.
- Adapt activities to accommodate all children's learning. Such as making modifications in your daily schedules/programme, learning material adaptations, simplification of an activity and use of any special material/equipment etc.
- Encourage all children to interact with materials.
- Provide opportunities and help each child to make friends.
- Consider each child's interest while giving small group activities.
- Before putting the theme plan in action in the classroom, meet the child's previous teacher, her/his parents, caregivers and discuss your goals.
- Show appreciation for every child's efforts. Observe and respond to children's needs.
- Encourage all children to interact with each other.
- Remember that each child's learning style and pace is different. So be patient and sensitive to each child's learning style. Teachers need to understand children with different abilities and their learning styles and accordingly modify the activities.
- Design a wide range of flexible strategies to meet the needs of children with disabilities and also to address each child's strengths and interests.
- Ensure theme plans guidelines are met.
- Implement activities for a wide range of abilities and learning styles.

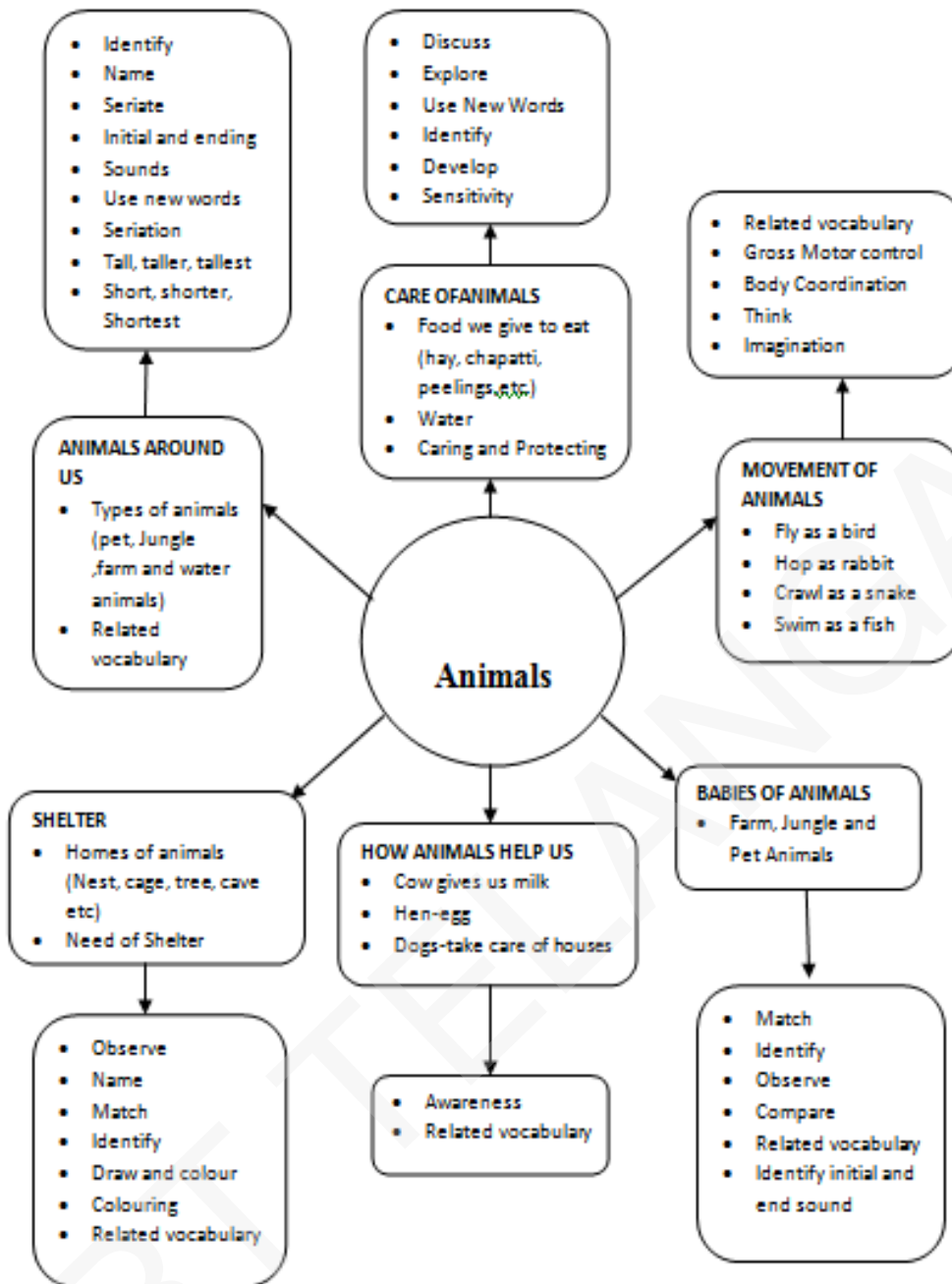
- Provide a flexible classroom plan to help make the learning experiences a success.
- Provide both teacher-initiated and child-initiated activities.
- Link children's early educational experiences so as to connect previous learning with new learning. Monitor each child's progress.
- Include both large group and small group activities.
- Keep all the materials in boxes with labels/pictures so that children can have easy access to classroom material.
- Use familiar words to get the children's attention.
- Encourage all the children to join the circle time activities and always offer another choice to such children who find it hard to work with the groups.
- Communicate to parents through a monthly letter and inform them about the theme of each month.
- Involve parents in the implementation of the theme based activities. Final Checklist before Commencing a Theme Look again at the classroom and ask yourself:
- Have I arranged the activity areas? Are all displays at the eye level of children?
- Is all my Teaching Learning Material ready for this theme?
- How will I connect with all of my children who come to my class? Have I planned for individual differences?
- How am I going to introduce the theme? Have I planned for an interesting Entry Point to my theme?
- How am I going to close or wind up my theme?
- How will I observe and assess my children?
- How will I know about my theme's success? Have I made time for self reflection and discussion of my success and challenges with other members of the school?

If all is in place you are set to launch into the exciting world of themes with your children!

### **Example 1**

#### **THEME- ANIMAL (in detail)**

Reference :Theme Based Early Childhood Care And Education Programme -A Resource Book - NCERT



## Learning Objectives

Children will:

1. Animals have various kinds of physical characteristics, habitat, body parts and food.
2. Animals are found all over the world.
3. There are farm animals, wild animals, zoo animals, domestic animals and birds.
4. Animals move in different ways.

5. We can see wild animals in a zoo.
6. Children understand how animals help humans.

Materials needed:

- |                                   |                        |
|-----------------------------------|------------------------|
| 1. Brown paper/green paper        | 13. Soap               |
| 2. Leaves                         | 14. Sponge             |
| 3. Ice-cream sticks               | 15. Towel              |
| 4. Match box sticks               | 16. Plastic toy animal |
| 5. Nylon string                   | 17. Crayons            |
| 6. Cut-out of animals             | 18. Water colours      |
| 7. Cut-outs of story cards        | 19. Masks of animals   |
| 8. Puppets of animals             | 20. Bird feathers      |
| 9. Pictures of animals            | 21. Animal puzzles     |
| 10. Tub                           | 22. Dominoe cards      |
| 11. Sand                          | 23. Flash cards        |
| 12. Tambourine ( <i>daphali</i> ) |                        |

### **I Language and Literacy activities**

#### **Discussion on the Theme (Circle Time)**

If possible, slides of animals may be used during the discussion about them. Do not talk about more than 5 to 6 animals at a time with young group of children.

#### **Conversation/Discussion Ideas (Morning circle time)**

Before beginning to talk on animals, ask the children what they know about animals, who has a pet; who has visited a zoo etc.

Start conversation on the following... *Take notes on white/black board in front of the children. Let them see that what they are talking, you are writing those things.*

- Animals have different kinds of physical characteristics.
- Animals move in a variety of ways.
- Animals live in various places or environments and in various kinds of homes (trees, jungle, zoo, desert, on the land, underneath the ground, near garbage, in water).
- Animals eat a variety of food.
- Animals grow and change.
- Animals make different sounds (these sounds may have a particular purpose).
- Many animals are useful to humans.
- Animals protect themselves in various ways.

Common animals that children have seen in their immediate environment.

- ◆ Jungle animals
- ◆ Pet animals (before the pet arrives in the classroom discuss about safe ways to watch and care for it)
- ◆ Zoo animals
- ◆ Farm animals
- ◆ Birds
- ◆ Water animals

### **Discussion of a particular animal by children**

(Provide a variety of picture books and information books on animals in the language area. Encourage children to look at the books, turn pages, ask questions etc.)

### **Listening and Speaking Skill**

#### **Picture talk/Show and tell**

Display pictures of zoo animals. Say, “I went to the zoo and saw a “\_\_\_\_\_”. Let the child select a picture and talk about that animal. Similarly, give toy animals to children or ask parents to send any small toy animal along with their child, one week before the theme has started duly labeled with the child’s name. Encourage children to talk about their toy animal turn-wise. After the theme is over, return the toys to the children.

Older children should be provided with old magazines, old story books, discarded workbooks Where they can find animal pictures and then cut for preparation of learning material. (This will also serve for fine motor development activity where children will use blunt scissors).

**Classification activities at the verbal level also help develop critical listening.**

Odd one out : say tiger , cat , apple , rat ask children to identify what is different.

Animal riddles

Animal sounds

Story reading sessions

Puppet plays

All the above activities related to animals helps in language development in children.

### **Reading and Writing Readiness**

Make “**Animal Scrapbooks**”: Let children collect as many pictures as possible for each animal. Help them paste these in the scrapbook. Older children collect information about animals along with pictures of animals. For older children, encourage them to write something about each animal.



## **II. Visits and Visitors**

1. Plan visits for places where animals are found or call people from the community, parent who can bring animals/pets to the ECCE Center. You can plan a visit to a 'farm', pet store etc. You may also call a story-teller to tell/create a puppet play on animals; a parent can bring a pet; you can plan a visit where they can see fishes in an aquarium

## **III. Social and Emotional development**

Help children learn that we all should take care of animals and not hurt them (through activities and discussions).

## **IV. Dramatic Play**

Set up a small zoo somewhere in the preschool or in the classroom for all the children to visit. Keep all the soft toys, toy animals and arrange accordingly. Also, keep baby toy animals.

## **V. Art Experiences and activities.**

1. Involve children in making animals mobiles e.g., 'pet mobile' for the week when you are talking about pet animals that you can hang from the ceiling.
2. Tearing and pasting coloured/newspaper pieces onto a picture of an animal.
3. Finger painting in a picture of animal such as cat, fish etc.
4. Rolling animals made from toilet paper roll.

## **VI. Cognitive experiences and activities.**

1. Place few toy animals in the block area. You may also keep some grass, leaves, twigs, shoes, box etc, in the block area. Encourage children to build a zoo with blocks and other materials.
2. Provide two to four pieces of animals puzzles for children. (Cut pictures of animals from old magazines/ newspaper and paste them on the pieces of mount board. Cut them into two/three/four/five pieces and give it to the children according to their ability).
3. Paste pictures of some animal in different sizes on the thick board for e.g., elephant in different sizes on five cards. 'Seriating Cards' are ready for ordering activity. Ask the children to look closely at the pictures. Demonstrate the activity and then ask the children to arrange the 'elephant cards' from biggest to smallest and vice-versa.
4. Have cut-outs of puppies and let children sit and count the puppies. Sing a altered version of the rhyme "Mary had a little lamb". Sing – "Reetu had five little puppies, little puppies; little puppies, Reetu had five little puppies, let's count them as they run one, two, three, four and five."  
  
Play a touch and count game in which children pretend to count Reetu's puppies as they sing the rhyme. Substitute the number in the rhyme and continue the song.
5. Have five pictures of animals and arrange them in a row. Also have pictures of baby animal and ask them to match and keep the baby animal under each animal.

## 6. Categorisation games

- Let children sort animal picture cards into categories such as pets, jungle, water, birds, insects and animals that live underground. Collect pictures of many kinds of animals and paste them on the square pieces of cardboard. Let children sort these cards into categories—animals that fly or that do not fly; animals that provide food for us; and so on.
  - Divide children into small groups. Distribute these cards among each group. Call out a characteristic of any animal and let the children raise and show their card (or cards) of animals that have particular characteristic. For example, call out: “Hold up and show your animal (or animals) if it eats grass” or “Hold up your animal (or animals) if it lives in water”.
  - Place a variety of animal pictures on the floor/table. Let children classify these according to their habitat, e.g., farm animals, pet animals, simple animals etc.
7. Make children aware of how animals are useful to us. Make self-corrective picture puzzles of animals and their uses. Let the children match the two sets of cards, for example, the picture of a bull is to be matched with a bullock cart, that of a cow with milk, and so on.
  8. **Odd-one out or visual discrimination:** Paste pictures of three animals and one bird on a cardboard strip e.g., elephant, monkey, tiger and hen. Then ask children to identify each animal and ask which is the odd-one-out and why? Make many such visual discrimination strips.
  9. **What comes next?:** “Monkey, rabbit, rabbit, monkey, rabbit, rabbit ” Ask what comes next? (children say, “monkey”).
  10. **What did I repeat?:** “Cow, cat, cow, dog...” What did I repeat? (children say “cow”).
  11. **What is missing? :** Place four to six pictures of animals on the floor/ table. Show the pictures to the children. Then ask them to close their eyes. Remove one picture. Then ask the children which is the animal picture missing.
  12. **Sequential story on animals:** Print the story and depict it on five cards. Let children place the story in the correct order and say the story.
  13. **Animal Dominoes:** Paste pictures of animals on the cardboard. Each dominoe card has two animal and bird pictures. Let children play this in a small group. This is a matching activity where you distribute one dominoe card to each child and keep one dominoe card in the centre. Let each child (turn-wise) match her/his animal to the dominoes kept in the centre of the circle.
  14. **Animal Homes (Sorting):** Sort out flash cards of different animals along with their habitat. You can also use flannel board for this. Divide the flannel board into land, water, sky and let the children tell which picture goes where.
  15. **Animal number match:** Make self-corrective puzzles (1-10) with sets of animal designed to link with numerals.
  16. **Sea-shells Counting:** Collect small sea-shells as materials for counting, classifying and numeral game

## **VII. Music and movement experiences**

Five little monkeys jumping on the bed..

*“Five little monkeys jumping on the bed,*

*One fell off and bumped his head.*

*Mama called the doctor and the doctor said,*

*“NO MORE MONKEYS JUMPING ON THE BED!”*

*Continue 4, 3, 2, and then*

*One little monkey jumping on the bed.*

*She fell off and bumped her head.*

*Mama called the doctor and the doctor said,*

*“There are NO MORE MONKEYS JUMPING ON THE BED”*

*(Adapted traditional variation: Children jump like monkeys and using fingers 5,4,3,2,1)*

## **Movement Experiences and Activities (Gross Motor Development)**

*Substitute other actions for those children who have motor development delays and children who are physically challenged.*

1. Show the animal movement pictures with words and describe what the animal is doing. Move your fingers underneath the words. Invite older children to read the simple text written under the animal picture and ask, “Can you do like this?” “Let’s do it”. Then encourage children to perform the same action. If required, demonstrate some of the movements.
2. You can collect many games and activities related to animal theme

## **VIII. Story Telling time**

Collect theme related story books. Create on your own.

## **IX. Concluding theme**

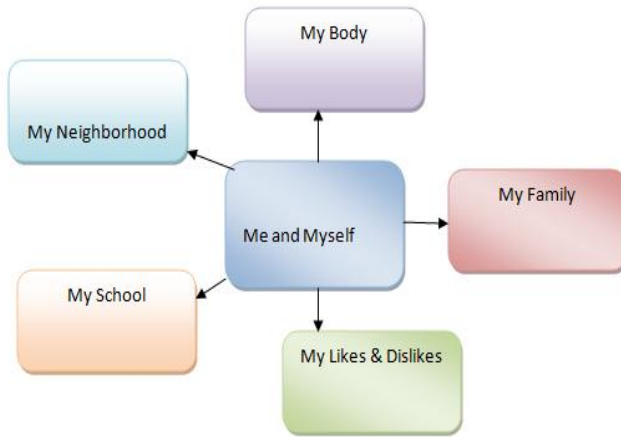
Encourage children to tell you about-

- What they have learned about animals and birds?
- Let’s name some jungle animals.
- Which is your favourite animal/bird?
- Let’s name some water animals.
- How do animals help us

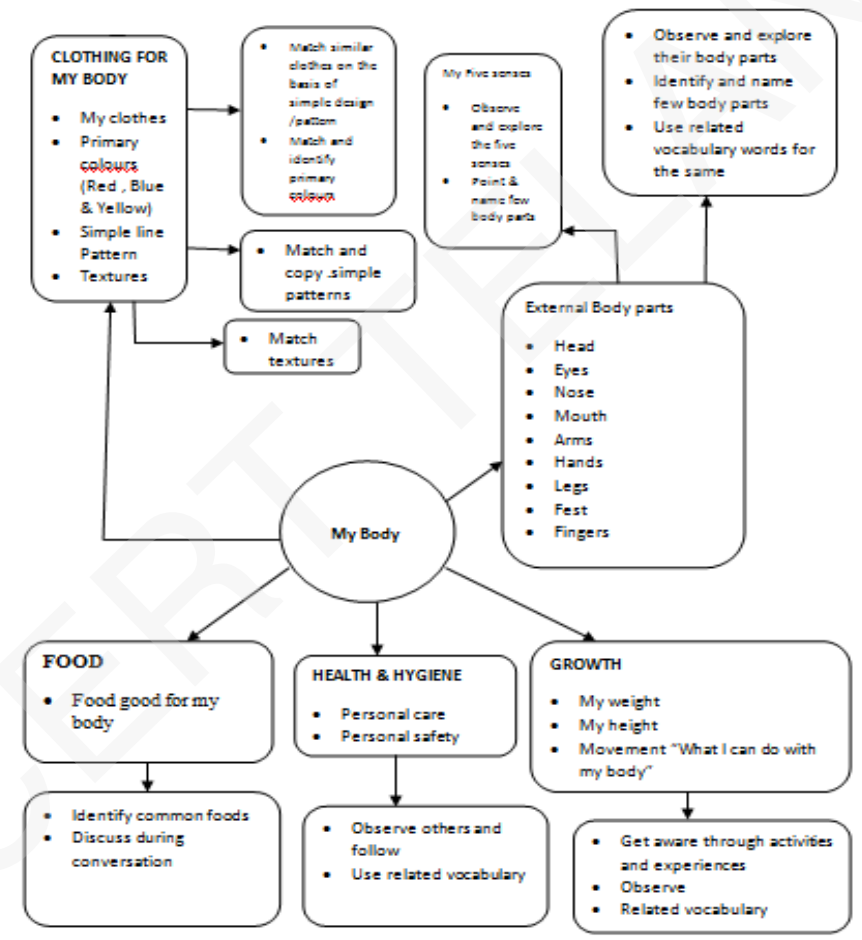
**Example 2 :**

**Theme “Myself”**

Reference :Theme Based Early Childhood Care And Education Programme -A Resource Book - NCERT



**Theme –My Body**



The main theme is Me and Myself. From this the sub theme myself will be dealt as shown the web. Me and Myself theme needs to be taken preferably in the beginning of the preschool academic year as the activities related to it help young children to adjust better in the preschool and they are also able to relate to and work effectively with others in the ECCE centre. Before being able to relate to others, a child must first be able to relate positively to oneself. Children need to be provided with lots of concrete experiences for developing positive feelings about themselves

When children come for the first time to ECCE centres, they need to feel valued, loved, respected and cared for. Children need an environment and activities where they feel positive about themselves and their learning. Once they are able to talk about themselves confidently, share their likes and dislikes then you can move to the sub theme My Body as a positive attitude about their body, need to take care, health hygiene, the things what they can do by themselves helps children to move forward confidently.

As discussed in the earlier theme here also plan the activities in all the developmental areas focussing on the development of skills, values, attitudes in young children y integrating the developmental areas through properly planned activities like

- Conversation
- Art and craft experiences
- Music and Movement
- Indoor and Outdoor activities/games
- Role play
- Birthday celebrations.
- Drama and creative expression
- Riddles / think and tell, oddman out, find similarities and differences
- Story listening, telling, reading and watching video
- Exploring the environment through Sensorial experiences

#### **4.6 Assessing Children through Themes**

A good teacher knows how to observe and assess her children through the different learning experiences she has planned and be fully aware of what is being learned by each of her children. On the basis of observations and assessment the teacher can modify the learning experiences to address the individual learner's need. For example, while children are playing a game where they hop like a kangaroo, jump like a frog, swim like a fish and they lose interest, the teacher can make the children sit down in a circle and tell them a story using the same animals. In this way along with the physical development, the socio-emotional and language development is also taking place simultaneously.

## **Summing Up**

By the end of this unit you must have understood that Themes are to be selected based on children's culture , environment and their experiences. And also the themes should be interesting to children and they should be involved in planning the web.

The theme based approach helps children learn best through play , active exploration of the environment and thoroughly planned activities.

Thematic approach is the best way to engage all children in learning process, interact with the environment and make connections about the world around them.

The activities that are weaved around the themes provides opportunities for all round development in children and also learn various skills related to subjects which are seamlessly merged into the theme .Hence leading to a holistic development in children.

Example 2

## **Unit End Questions**

**1 Explain the relevance of teaching learning experience through Themes EVS at Preschool stage.**

**2 Choose any theme which is appropriate to preschool children and make a web.**

## Unit 5 Assessment

### **5.0 Introduction**

Assessment is defined as gathering information in order to make informed instructional decisions, is an integral part of most early childhood programme. Early childhood teachers should ask as they plan assessment. 'Why is this' assessment being done? What purpose does it have? Whenever we undertake any activity we always have in our mind the objectives of doing it. At the end of the activity we often try to find out if the activity has served the purpose or not?, That is, we try to assess and make value judgement of the activity. In other words, we try to assess our actions. Similarly, when you plan any teaching- learning activity you have some objectives in your mind on the learning that would take in children. You need to know to what extent your children have achieved these objectives, it will be useless .to plan further learning experiences.

For young children, thinking about the purpose is central. The ongoing assessment can provide invaluable information to parents and educators about how children learn and develop. Developmentally appropriate assessment systems can provide valuable information to highlight what children know and are able to do. However inappropriate assessment methods will risk in misunderstanding the child's learning such risks are better avoided and unacceptable.

### **5.1 Objectives:**

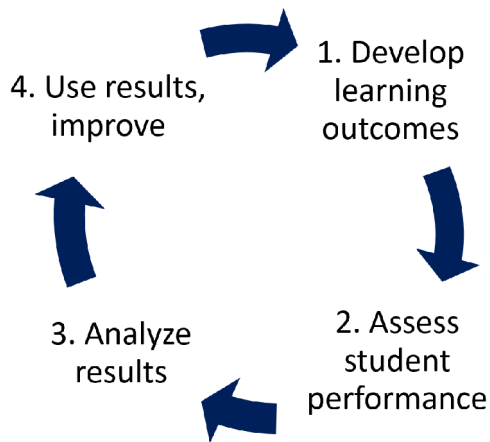
**On completion of this unit, you will be able to**

- state the purpose of assessing learning in the context of EVS.
- explain the importance of different approaches and techniques of assessment in EVS
- appreciate the need and different ways of documenting the assessment for child's learning.

### **5.2 Purpose of assessment:**

#### **5.2.1 Assessment as an integral part of learning**

The collection of information through classroom assessment helps teachers to understand how far the attitudes, skills, knowledge and thinking are fostered , nurtured and accelerated or stifled. Based on the information teachers will plan programme with needed adjustments to accelare child's learning. The purpose of this analysis is used to evaluate the importance of assessment as an integral part of learning.



The purpose of assessment in early childhood education is to understand the strengths of the children and set goals for instruction... and also identify the strengths and weakness within a programme and information on how well the programme meets the goals and needs of the children. Assessment is to support learning and development of children. Assessment process should be planned basing on the goals and objectives of our curriculum as it the integral part of learning.

Assessment is a process of gathering information about a child, reviewing the information, and then using the information to plan educational activities that are at a level the child can understand and is able to learn from. Assessment is a critical part of Preschool programme It is a process of collecting /gathering information about children in order to make decisions about their progress.

There are three important steps to be followed in the assessment process:

- collecting facts/information
- analyzing and evaluating the collected facts,
- using them to plan to meet each child' needs and development

Assessing individual at different levels /in groups, through group activities cannot be done in isolation and should be contextual.

Assessment in early childhood is a complex and multidimensional nature as the ECCE programme does not focus on compartmentalized teaching and learning rather a holistic one. Hence it is recommended by the ECE professionals that programs should incorporate coherent *systems* of assessment organized to address the following purposes:

- **Screening** - To identify potential problems in development; ensure development is on target.
- **Instructional** - To inform, support, and monitor learning.
- **Diagnostic** - To diagnose strengths and areas of need to support development, instruction, and/or behaviour. To diagnose the severity and nature of special needs, and establish program eligibility.

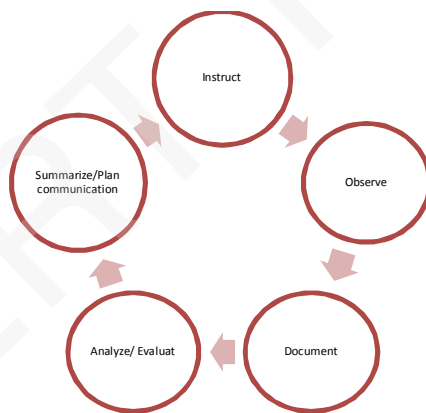


- **Program Evaluation/Accountability** - To evaluate programs and provide accountability data on program outcomes for the purpose of program improvement.

### How do you implement assessment into your program?

The process of choosing the right assessment tools varies for each early childhood program. Below are some general guidelines for implementing assessment into your program.

- **Assessment aligns with instructional goals and approaches.** Different types of assessments have different purposes. It is important to first determine what should be measured; then find the assessment program that best assesses those goals.
- **Assessor knows the child.** The adult conducting the assessment should have a pre-existing relationship with the child. Ideally the assessor is the educator.
- **Assessment is “authentic.”** Assessment should take place in a child’s normal setting. The assessment should reflect everyday relationships and experiences. It should be conducted in familiar contexts and settings (such as the classroom).
- **Observations are ongoing and diverse.** For a comprehensive assessment, observations should be made at a variety of children’s activities and be ongoing in order to fully see the progress of a child.
- **Assessment is a cycle.** Although specific methods for assessment tools vary, the process is cyclical. The cycle allows educators to make changes to their curriculum to better serve children in their program. The cycle is as follows:
  - Instruct.
  - Observe. Observe children in various situations.
  - Document, Reflect. Record while observing or as soon as possible.
  - Analyze, Evaluate. Study the data with assessment tools. The assessment comes from the combination of documentation and evaluation.
  - Summarize, Plan, and Communicate. This informs a child’s specific needs and future curriculum.
  - Instruct. (The cycle repeats.)



### Planning for Assessment

As we discussed, since assessment is the integral part of learning process, you have to plan the assessment procedures in conjunction to the objectives and classroom instruction. You need to have clear understanding of the following...

- Why to assess?
- What to assess?
- How the assessment is useful for you and for children?
- With whom the assessment information is to be shared and why?
- What assessment activities will allow children to demonstrate their learning?

Young children learn by doing and demonstrate knowledge, skills through activities. The daily activities, routines, interactions with peer, adults and the environment give the most valuable information for assessment. Hence to the extent possible the assessment methods should be allowed to observe children in action as they engage spontaneously in class room and outside the class room activities and also interacting with people in familiar settings.

**Remember: The learning experiences that are planned in preschool classroom are based on developmental educational objectives. It should be remembered that the assessment planned should be in conjunction with the objectives only.** For example, when a you observes your children watering plants in the school, joyfully and regularly, and care for the environment without you instructing to do always helps you to assess their learning with reference to specific objective/s of EVS associated with 'attitude and values'.

### 5.2.2 Significance of assessment.

You may think that as preschool children are not loaded with subject information why any assessment should be carried out. The assessment is important in preschool as it provides teachers, parents, and families with important information about a child's development and growth. Assessment can provide a record of growth in all developmental areas: cognitive, physical/motor, language, social-emotional, and approaches to learning as the preschool instruction revolves round the activities for holistic development in children.

### Assessment and young children

Appropriate, valid reliable assessment is the important component of ECE programmes. To assess children's progress, strengths and holistic development the assessment methods should be age and developmentally appropriate, culturally and linguistically sensitive and should be based on the classroom daily activities supported by the teacher, programme, families and community planned to achieve specific goals.

### 5.2.3 Cumulative assessment:

On different occasions, different types of incidences are noted by the teacher. Such observations, on each child, get accumulated in the teacher's diary. At the end of the year, different notings for every child make a cumulative anecdotal record for that child. And also studying the child portfolio and all the other works done during the year which is accumulated helps in understanding the child's learning and development.

#### **5.2.4 Feedback on assessment:**

Assessment should provide feedback to students on their progress towards the achievement of learning outcomes. Good quality, comprehensive, timely feedback is a very important factor in driving student learning. Feedback will enable students to realize where they have done well and indicate what they could improve on, as well as justifying the grade or mark of summative assessments. It is important that feedback is timely. If feedback is given too soon, it may disrupt the students reflective process. However, it is far more common that feedback is provided too late when it is no longer relevant to the student. Feedback should not be held off for too long, as the student is unlikely to benefit from it once the task is complete and they have moved on to a new one. The benefits of successful feedback set in the context of learning outcomes are many. For example, successful feedback & in assessment will build confidence in the students, motivate students to improve their learning provide students with performance improvement information, correct errors, and identify strengths and weakness

However, the effectiveness of any assessment process cannot be realised unless the assessment results are used meaningfully to improve the classroom teaching learning process, identify gaps in learning and also work with different learners' weaknesses and strengths and to take cue for further plan and execute teaching-learning of EVS. Hence feedback on assessments is very important from the angle of children and teacher. The assessment feedback helps to support and guide children in overcoming gaps in their learning, plan for alternative activities for identified gaps in learning and conduct activities for further strengthening of learning.

#### **Feedback should include:**

- Observable and measurable competencies with regard to the objectives of EVS.
- The ways of helping the child's progress further- Qualitative feedback is a description of how the child fares. A remark 'good' or 'very good' or 'needs help' is a qualitative remark, but still it does not tell much about the child's specific level of ability. Instead if you describe the progress with the real situations it helps the child, parents to understand the strengths and the support needed.

Feedback from teachers (and parents) concerning their achievement and the reasons they have done well or poorly is very valuable for children. These beliefs influence, in turn, children's self-confidence, persistence, intrinsic motivation to succeed, and other characteristics that may be described as learning skills. Consequently, on your feedback on the performance and support for their self-confidence in learning situations is an important predictor of children's academic success (Hamre, 2014).

#### **5.3 Approaches to Assessment:**

The use of assessment in education shares many of the aims and challenges that teachers generally have; to encourages yet not give a false impression of strengths and weakness; to critically review specific areas but maintain a holistic perspective; to support learning, but not

spoon-feed it or detract from the learner's autonomy. This is a tall order. Here we feature three inspirational practices of learner assessment which are responding to these challenges.

The use of assessment in education shares many of the aims and challenges that teachers generally have;

- to encourage yet not give a false impression of strengths and weakness;
- to critically review specific areas but maintain a holistic perspective;
- to support learning, but not spoon-feed it or detract from the learner's autonomy.

So let's look into very important aspects of learner assessment.

1. The context that informs assessment decisions for early learners is unique. It is not enough to assess earlier content using approaches used in older grades. Special attention must be paid to developmental appropriateness and rapid development across domains.
2. Early Childhood Assessment must be purpose- drive. Different tools are appropriate for different purposes. Negative outcomes result when tools are used for purposes for which they were not designed.
3. Assessment must be aligned to curriculum and instruction. Material assessed must represent the valued outcomes on which instruction is focused.
4. Assessment must be beneficial to children. Assessments of young children must serve to optimize learning.
5. A wide range of domains needs to be assessed in early childhood. This includes math and literacy. As well as non-academic domains.
6. Multiple methods should be used to create a comprehensive picture of strengths and needs. (e.g tests. Observation, interviews, portfolios, projects, developmental history)
7. School readiness assessments can be informative, but should not be used to prevent children from receiving educational programming.
8. Early childhood assessment in the early grades is a critical component of evidence based early intervention. It can help identify needs and prevent learning difficulties.
9. Authenticity is an important feature to consider for early childhood assessments. Authentic assessment includes tasks or observations that occur in the context of regular play or activities, in settings typical to the child. Each assessment method, whether an observational tool or a test, may incorporate features of authenticity (such as the use of feedback).

**5.3.1 Comprehensive Assessment**—In the early years the scope of information and the type of data collected are based on the child's social, emotional, cognitive, and physical development. A child's success in making a house or bridge with building blocks in preschool is tied to the child's creativity; motor development. A 5 year old child success in working in a cooperative learning group is dependent on both social and cognitive skills. Hence you need information about the child's strengths and weaknesses in all areas of

development to prepare instruction strategies. So assessing any one area of development do not suffice the purpose.

**5.3.2 Process based assessment--** is concerned with the actual task performance rather than the output or product of an activity. - It does not emphasize on the output or product of the activity.

Process oriented performance based assessment evaluates the actual task performance. It does not emphasize on the output or product of the activity. This assessment aims to know what processes a person undergoes when given a task. Exp: When a child is participating in a outdoor game, as teacher you have to assess the following...

- Level of participation in the game
- Listening and following the instructions carefully
- Waiting to take turns
- Enjoying the game with full involvement

As teacher you need to look for these actions rather than the end product ie winning or loosing the game,

An example of learning competencies for process based assessment is given below:

**Task:** Recite a action song- “Five little monkeys”

**Objectives:** The activity aims to enable the children to recite a poem Five little monkeys with actions

**Specifically:**

1. Recite the poem from memory .
2. Use appropriate hand and body gestures , facial expressions in delivering song;
3. Maintain eye contact with the audience while reciting the poem;
4. Create the ambience of the poem through appropriate rising and falling intonation;
5. Pronounce the words clearly and with proper diction.
6. Joy while doing the activity

Note : The specific objectives identified constitute the learning competencies.

**Descriptors**

- It spells out what is expected of children at each level of performance for each criterion.
- It tells children more precisely what performance looks like at each level and how their work may be distinguished from the work of others from each criterion

**5.3.3 Assessing the content, skills and attitude:**

The assessment of learning is an important and inevitable part of any educational activity, whether it is done informally or formally. Content-based assessment aims at determining to

what extent the learner has mastered the teaching content. Assessment is therefore content-based.

The emphasis is laid on the assessment of facts and skills as provided in the curriculum, including the academic exercises where for example the work sheets / oral tests at the end of the year examinations which focus on retention of knowledge. So it is not just the content knowledge of the children represent the total development in children, it is always essential to assess the skills and attitudes which is connected with the content.

Recollect the objectives of EVS –The NCF 2005 and National ECE frame work and try to understand how to assess the extent of achievement of those goals.

#### **5.3.4 Assessing individual child:**

The evidence collected in early childhood assessments should highlight what child knows. You need to understand that child's "misconceptions" about natural phenomena which are not necessarily unproductive, it represents their earlier experiences; they may reflect need for keen observations and efforts to make sense of the world. So for this assessment it requires an attitude of listening, of asking questions in an open way, and of attending to unanticipated answers. When you collect information about child's interests and prior experiences as a step in planning instruction, this attitude of yours will help. Therefore you need to connect with and every child in the class to understand their conceptual knowledge, skills and attitudes so that it can be recorded scientifically.

#### **5.4 Techniques of Assessment:**

You may recall from the above discussion that the process of assessment involves -collecting facts/information, analyzing and evaluating the collected facts and using them to plan to meet each child' needs and development. But how do we get the authentic information. We can make rational decisions if we have necessary information or data. Various tools and techniques are used for collecting information. In order to select the most appropriate tool and/or technique which is appropriate for the preschool setting, it is necessary to acquaint ourselves with various types of tools and techniques.

Selection of tools and techniques is critical to the whole assessment process. It does not matter how carefully you have planned classroom instruction if inadequate and inappropriate technique to assess children/programme, you will be getting incorrect data. Hence the selection of an appropriate tool for assessment purpose is essential, though we may be familiar with the wide variety of tools that exist. It is now we have to think on what type of assessment technique will be appropriate in Preschool classroom. We are aware that a developmentally appropriate preschool curriculum is activity based and does not focus much on writing. The challenge for you is to know the correct technique to assess. We all know that the EVS at this level focuses on developing environmental concepts through cognitive skills& concepts which are foundation for higher order thinking/reasoning

#### 5.4.1 Observation and documentation

Observation is a process of watching a child at play without interfering and recording is the process of documenting the observed behavior or activity performed. The main purpose of observing and assessing children is to provide information about each child's total development, their progress and changes that occurred over a period of time. It is to understand 'What do they know?' 'What are they able to do?' 'What are their feelings, interests, and attitudes?' 'How is their physical health?' and 'What would encourage her /his involvement?' This information helps in drawing valid conclusions about child development, children's progress, choice of interesting and appropriate toys and play materials and arrangement of the learning environment. You can also use this in assessing children's skills in applying understanding of a concept or value in EVS in different situations. Besides information and knowledge, helps in determining childrens' attitudes and values.

Observation techniques can be effectively used to observe classroom interactions. For example,

- Work habits and attitudes towards environment
- Ability to work independently as well as collaboratively
- Problem solving abilities
- Response to diversity in the classroom
- Development of ideas and understanding

In the preschool settings as the philosophy and pedagogy is child centred and activity based it is appropriate to assess children through observation, it can be non structured and structured.

**Informal and continuous** evaluation is the process of developing a nearly accurate depiction of what a child knows and how she/he goes about during the process of learning. Teachers of young children need to be very care full while assessing their progress. The best way of assessing children's work is through observations. Systematic documentation of such observations helps the teachers and parents to develop an understanding of the child's individual strengths, interests and the way of learning. Continuous recording also helps the teachers to inform different stakeholders about the progress of children. It also facilitates in maintaining the quality of the ECE programme.

**Structured observation:** In this observation takes place under structured conditions, with the knowledge of the child being observed. The observation situation may also be in a simulated and observed. This technique allows you to observe particular specific behaviours. For example, teacher instructing one child to sing and do action song .Here the teacher focus will be on the child only and looking for minute details also ( child's facial expressions / voice modulation/

A checklist to be used during the observation process is valuable to have accurate records of the behaviour expressed.

## **Role of Observation in Assessing Children**

Assessing is considered to be the most effective method to know about the progress of young children.

Sometimes while playing in small groups or in activity centres, such as in language area, children make special comments or manipulate learning material in math's area. The way they give answers to problem solving questions are occurrences worthy of remembering. To work effectively with the young children, we need to know them well through careful observation of their actions. Teachers need to observe how the child is developing in her/his own way. For example, if a teacher is familiar with all 20 children of her class, she should be able to relate the child by the specific descriptions provided about her behavior, without actually seeing the child.

Points to be decided before observing for reporting:

- Whether to observe the whole group or a small group or individual child?
- What points of behavior to be observed? – (How the child initiates, interacts with peers and also during dramatic play, doll's corner. Etc.,)
- Where to observe – in learning areas, on the playground, etc.
- How long to observe
- How to document the observations.

Keep a page for each child to document your observations. You can use tape recorder, checklists and notebooks etc., to record. Sharing of the observation data with parents, principals and other teachers will provide good feedback for making changes in the classroom methodologies and programme plans.

Observations can be used by the teachers for different purposes, for example, on

- Individual child – to focus on one or more specific area(s) of development e.g. self-help skills.
- Groups of children – to focus on one or more skill(s) e.g., abilities to communicate, share and take turns.
- The whole group – to assess whether all children have mastered one skill, e.g. balancing while walking on a drawn line.
- An area of the room – to assess whether the area is appropriately used and what activities occur there.

### **Observation checklist**

You can develop Observation schedule for assessing EVS concepts and skills in your children by considering following points.

- a. Child's participation in the activities.
- b. Working in teams in activities
- c. Independent work
- d. observation and exploration of the environment
- e. connecting with the environmental issues
- f. problem solving



- g. organizing information
- h. communicating and representing
- h. Passion for learning
- i. Applying knowledge in different settings
- j. Recommendations/follow up/feedback

When conducting observations, teachers must take particular care to avoid allowing any preconceptions or biases. While conducting systematic observations teachers should be using their understanding of child development as a filter to identify expected behavior as well as pick up critical points that indicate a child might be struggling with learning. Systematic observations should:

- Occur multiple times over a period of time (e.g. every day for a week)
- Collect information from multiple sources (e.g. teachers, parents), and
- Collect information from multiple contexts (e.g. classroom, playground, home)

### **What to Observe while Assessing Young Children**

- Watch for mood and temperament. Is the child easygoing or tense? Does she cry frequently? Is she able to express her feelings verbally? Does she easily get frustrated?
- How does a child interact with other children? Does the child share materials? Does the child initiate play or wait to be invited?
- Does she spend time in activity areas? Does she move on her own from one activity area to another or does she require your help?
- What kind of roles she takes within the group such as leader, talker, follower, and listener, etc.
- How do children respond to daily routines?
- How and what materials are used?
- Watch for the quality of use such as – Is the crayon securely held?
- The imaginative use, for example, “Does the child invent new ways to use blocks?”
- How many pieces can the child join in puzzles?
- Does the child show interest in books and other print material? Does the child notice similarities and differences?
- Does the teacher feel their language development is slow, normal or advanced? Give reasons for the assessment. Observe the same children, a month later. How has each child’s language development changed since the last time?
- How extensive is the child’s vocabulary?
- Watch the child outside at playground
- Is she/he easily frustrated?
- Document small changes in behavior.
- Particular learning experiences of children.

(Don’t forget to collect the samples of behavior) Source : Every Child Matters – NCERT

### 5.4.2 Anecdotal Notes

Anecdotal Records provides a brief and factual description of a situation, incident or behavior. It is one of the methods of teacher’s observation about children’s behavior. These anecdotal notes provide lot of information for end of the day staff discussion. They also provide continuous and comprehensive information about a child in the acquisition of various skills. At the same time it helps in detecting the areas in which a child may need additional help. The anecdotal records should have the child’s name, birth date and date of observation at the top. The observer’s name or initials should also be included. Drawing conclusions from anecdotes may help teachers to judge whether the child is ready to learn the next stage of activities. While writing the anecdotes the following guidelines should be followed:

- Each anecdotal record must include the name of the activity and observer, where it happened (indoor or outdoor), number of children involved, type of development observed, date and time.
- Notes and descriptions should be specific and factual (what actually happened, children’s actions, reactions).
- A format or system must be designed to record the description of events. For example, if the teacher observes the child in language area she may record child’s progress in language development.
- Anecdotes should be specific and purposeful, focusing on selected behavior outcomes.

#### Sample of Anecdotal Record

Record exactly what you observe under observations and your interpretation of the incident and strategy for the particular child in future under ‘Interpretation’.

Child _____	Date
_____	
Age _____	Time
_____	
Observer _____	Location
_____	
Sample I	Interpretations
Incident/Observations	
Sample I The teacher was asking problem-solving questions. The teacher asked, “What will happen if all lthe trees are cut?” Aporva	<ul style="list-style-type: none"> <li>• Aporva seems to like to participate in group discussions.</li> <li>• He likes to answer questions even if they are not correct.</li> <li>• Teacher to observe and note the</li> </ul>

said, “Madam, then what will happen to birds, where will the birds make their nests?”	creative potential of the child. Source : Every Child Matters – NCERT
Sample I After conducting the activity – Float and sink-teacher asks children “what did you notice”  Anita a 4 year old said”teacher we should not put things in the water and make it dirty	It show that the child’s concern for clean water  Teacher has to note the strong value that is engraved in the child’s mind.

So in a nutshell anecdotal assessment is briefly written notes based on observations of children - how and where children spend time, their social relationships, their use of language, modes of interaction, information about health and nutrition habits.

### 5.4.3 Building Portfolios

The portfolio is a record of the child's process of learning: what the child has learned and how he/she has gone about learning; how he/she thinks, questions, analyzes, synthesizes, produces, creates; and how he/she interacts--intellectually, emotionally and socially--with others. The portfolio is a purposeful collection of child's work that exhibits to the him/her, or others, his/her efforts or achievement in one or more areas. According to Meisels and Steele (1991), portfolios enable children to participate in assessing their own work; keep track of individual children's progress; and provide a basis for evaluating the quality of individual children's overall performance. Wide use of portfolios can stimulate a shift in classroom practices and education policies toward schooling that more fully meets the range of children's developmental needs.

The collection in the portfolio for EVS includes such as:

- Drawings and sketches of family members
- Leaves, and cloth pieces of different textures and flowers
- Worksheets, answer-sheets of class work, report of a visit to a factory
- Chits expressing their feelings for friends
- Greeting cards prepared for school guests
- Cards received from friends
- Craft work of origami and clay.

Teacher should take care of the following points for portfolios

- All kind of work by the child should be included, and not only the best work.
- Along observational checklist, the actual work carried out by the child should be put in.
- Store it carefully and present neatly to the parents when required.
- The material in a portfolio should be organized by chronological order and category.

Once the portfolio is organized, the teacher can evaluate the child's achievements. Appropriate evaluation always compares the child's current work to her earlier work. Portfolios are not meant to be used for comparing children to each other. They are used

to document individual children's progress over time. The teacher's conclusions about a child's achievement, abilities, strengths, weaknesses, and needs should be based on the full range of that child's development, as documented by the data in the portfolio, and on the teacher's knowledge of curriculum and stages of development.

Hence a portfolio is a flexible and adaptable collection over time of various concrete work samples showing many dimensions of the child's learning. This type of assessment also focuses on the child's

strengths and demonstrations of knowledge and skills. Samples of Children's work in art, painting, craft work, collage making etc. also become a part of the portfolio.

### **5.5 Sources of information for assessment:**

Learning in early childhood is rapid, episodic, and marked by enormous variability. Even the most carefully designed assessment instrument cannot, by itself, capture the complexity of a child's understanding. Instead, evaluation of learning should be based on multiple forms of evidence from many sources. In active science programs, children make choices, voice opinions, and perform various investigations. In such settings, children might demonstrate their interests, understandings, and emerging skills through their conversations; their questions; their actions; and the work they produce, such as constructions, drawings, or writings. It is this sort of evidence that teachers can rely upon when evaluating whether an activity is meaningful and whether children are learning. The children's ongoing behaviors and their work are the stuff of teachers' everyday observations, records, and evaluations. In the case of science education, the richer the instructional environment, the broader the potential range of evidence for assessing learning (Bredenkamp and Rosegrant 1995)

#### **5.5.1 Evidence Collected Over Time**

Since young children's thinking reflects both developmental and experiential factors, teachers need to have a good sense of the appropriate instructional pace, allowing time for exploration and accommodation of new ideas. Children need time to revisit the concept with different activities to strengthen their understanding and also considering children with multiple intelligence in the classroom. Children need opportunities to ask the same question over and over again, perhaps in new or slightly different ways. Important ideas develop gradually over days, months, and years—and are seldom the result of a single lesson or demonstration. Moreover, the development of thought is not neatly sequential, but rather marked by explorations. Understanding this pattern of learning, indicators need to be collected on a regularly scheduled basis. Whatever the data collection method, the goal is to obtain records that reflect the child's developmental progress (Bredenkamp and Rosegrant 1995).

#### **Examples of Authentic Assessment Strategies**

Using more than one source of information when assessing a child's progress provides a more comprehensive picture of how well he or she is functioning in all developmental areas.

When assessment occurs regularly and over time, there can be more depth and breadth to the information obtained, which provides a more complete picture of a child's progress.

**The following are the few ways of collecting information from all dimensions for a authentic and developmental assessment in young children.**

- Childs work (projects)
- Observation of individual children or groups of children
- Interviews with children or parents
- Concept mapping of individual groups or children
- Journals kept by students or teachers
- Performance Assessment tasks
- Open-ended questions or problems
- Drawings
- Photos
- Artwork
- Portfolios
- Narrative Descriptions
- Audio recordings
- Video recordings of children's activities
- Work samples from any content area showing growth and progress over time
- Work samples with rubric for analysis

Photographs and video clips: Videos and audio help teachers to assess the child's progress and program progress and boost the motivation and confidence of children. Teachers can accordingly design and modify suitable classroom practices by viewing and listening to the recordings subject to privacy considerations

These are collected from each individual child and include drawings, painting, cutting, writing etc. Accompanying work samples, you can add comments from the child, a description of what happened or what the child and said and link these to areas of development.

#### **5.5.2 A caution:**

Assessment is very important and there many approaches to do it .But in the case of early childhood education, most of the research recommend assessing young children by observation only. This fact has been reiterated by the Government of India. In fact, the Ministry of Women and Child Development published a document titled 'Quality Standard for Early Childhood Care and Education (ECCE)' in 2014. Here are 4 points highlighted in this document on assessment methods:

- Caregivers are sensitive to and are able to understand factors that may be affecting children's progress/ performance
- Teachers/ caregivers observe children's learning and development and keep a record of how progress is made towards the goals
- Use information from observations to provide specific intervention for individual children, when required
- Use different tools and strategies that are continuous, ongoing and in the language understood by children

Assessment, if done right, is a valuable aid in discovering and nurturing a child's potential. It is not a measure of a child's progress against some external yardstick. In that context, the importance of assessment cannot be overstated.

### Summing Up

We discussed in detail how assessment is crucial to the learning process, particularly during preschool and primary years because these are the foundation years that have an impact on the child's future. If there is no assessment then there is no understanding of the expected performance. This leads to a failure in course correction, leaving the child without skills and knowledge. But the approached and techniques should be authentic and scenically developed.

Example: Observation checklist

Aspects of Developments		Important points of developments	I term	II term	III term
Language	1	Listens with increasing attention and responds with relevant questions/ comments/actions.			
	2	Speaks clearly & confidently complete sentences about different concepts.			
	3	Develops awareness and more vocabulary related to body.			
	4	Develops a small story based on pictures using grammatical structures and in sequence.			
	5	Uses language to imagine during Role Play.			
	6	Can retell a simple Story / Events / Rhymes.			
	7	Represents idea through drawings / pictures.			
	8	Reads their written name.			
School Readiness	1	Is aware that print is read from left to right.			
	2	Links sounds to letters.			
	3	Distinguishes similar looking letters.			

	4	Enjoys pretend writing			
	5	Joins dots of letters/numbers.			
	6	Makes one to one correspondence.			
	7	Can sequence concepts upto three levels.			
		(a)Greater to Smaller			
		(b)Heavier to Lighter			
		(c)Far to near			
		(d)Soft to hard			
	8	Counts upto 10 and Match.			
	9	Able to do oral Additions & Subtractions upto 5.			
Socio, Personal & Emotiona 1	1	Takes and gives, shares toys during play.			
	2	Demonstrates self help skills.			
	3	Talks freely about family & other people.			
	4	Expresses needs and feelings.			
	5	Sensitive to needs & feelings to others.			
	6	Understands what is right, wrong & why.			
	7	Over comes shyness and interacts more playfully			
	8	Identifies Emotions.			
Physical	1	Moves safely with confidence around, forward and backward.			
	2	Walks on toes.			
	3	Tears as per the shape			
	4	Has pencil grip( draws/join the dots).			
	5	Handles tools/objects, construct safely with basic control.			
	6	Runs fast about 5metres .			
	7	Draws vertical, horizontal, curved lines.			
	8	Scribbles in anti-clock wise direction.			
	9	Throws / kicks the ball in a mentioned direction, catches.			
Cognitive	1	Ask questions about why & how things happen.			
	2	Gives at least 2 responses on how to solve a problem.			
	3	Understands the concepts:			
		(a) Sink / Float			
		(b) Dissolve / Undissolve			

	4	Use tools for investigations in the environment.			
	5	Observe & examine natural events / processes.			
	6	Can sequence story upto 5 levels.			
	7	Understands about Present, Past and Future.(yesterday, today tomorrow)			
	8	Sorts, matches, classifies on the basis of difference.			
Approach es towards learning	1	Shows interest in new experiences with other children.			
	2	Asks high level questions.			
	3	Initiates an activity and puts it into practice.			
	4	Makes decisions regarding their own self.			
	5	Focuses on a task with increased attention (30 minutes) and can ignore interruptions.			
	6	Tries a difficult task several times (for 10-15 minutes).			
	7	Begins to experiment with objects in unusual ways.			
	8	Chooses the music he/she likes.			

Performance index: \* - Not yet; \*\* - Needs support \*\*\* - Does independently

**Source: WDCW Govt.Telangana – Preschool Programme**

A systematic assessment procedure which is authentic and scientific follows the steps as shown below ( Reference:The National ECCE Curriculum Framework developed by Ministry of WCD(MWCD) 2014)



### ONGOING OBSERVATION, QUESTIONING AND LISTENING TO CHILDREN

All children are observed often and regularly, with the ECCE teacher/Caregiver focusing on the whole class to focusing on one child or activity, and from non-participant observing from without to participant observing where listening and interacting with the child is required.

### SYSTEMATIC PROCEDURES

Anecdotal records are briefly written notes based on observations of children. These records need to be systematically compiled and organized. Create anecdotal records and make interpretation of how and where children spend time, their social relationship their use of language, models of interaction. Information about health and nutrition habits may be recorded too.

### SYSTEMATIC SAMPLING OF CHILDREN'S ACTIVITIES

Choose selected samples of children's art work, scribbling and writing to conveying their ideas. Photographs of their work, video/audio recordings, dictated stories, records of group participation work etc.

### DOCUMENTATION PROCEDURES

Developmental progress checklists, Portfolios, Summary reports.

#### DEVELOPMENTAL PROGRESS CHECKLIST

Comprises lists of information, date, attributes or elements, criteria that guides ECCE teachers and caregivers to observe children. Specific developmental screening checklists used for identification of developmental delay or impairments for preventive measures and referrals

#### PORTFOLIO

Collections of children's work that are designed to demonstrate successes, growth, higher order thinking, creativity and reflection

Portfolio maintained for each child to be kept at the ECCE centre includes

- Cover page with name and detail in the centre
- Child's personal details along with a photograph
- Information sheet and feedback from parents discussing children's interests and strengths.
- Medical health form.
- Children's artwork, drawing and writing samples.
- Photographs of models made by a child
- Photographs of children at play.
- Noting of interesting discussions held with the child.
- Ongoing development progress checklist form.
- Copies of summary progress reports given to parents
- 

#### SUMMARY REPORT

Outlines children's progress through narrative reports by ECCE teachers/caregivers.

Developmental progress Card with narratives to share with parents and later to be shared with Primary school.

**Unit end questions:**

- 1) Assessment is an integral part of learning. Justify with examples.
- 2) List out the authentic source of information for assessment in early childhood education.

\*\*\*\*

SCERT TELANGANA