

LEARNING OUTCOMES IN ENVIRONMENTAL STUDIES

PRIMARY STAGE

Introduction

Environmental Studies (EVS) at the primary stage envisages exposing children to the real situations in their surroundings to help them connect, be aware of, appreciate and be sensitised towards the prevailing environmental issues (natural, physical, social and cultural). The NCF-2005 recommends an integrated and thematic approach towards its teaching learning at the entire primary stage where, in classes III to V, it is introduced as a separate curricular area and in I and II, the related concerns are integrated with language and mathematics. Beginning with the child's immediate surroundings (including natural, social, physical and cultural settings) related to self, home, school and family in the early grades and gradually moving on to the wider environment (neighbourhood and community at large), EVS not only helps children to get acquainted with their own environment but it also strengthens their bond with it. Creating learning situations in the context of children is very crucial to learning EVS. Efforts need to be made to avoid giving direct information, definitions and descriptions and instead create situations for children to construct their own knowledge by interacting first hand with their surroundings and with other children, elders and significant others. During this process, they would access various sources of knowledge besides the textbook and explore various learning sites besides the classroom. Real world exposure would lead to opportunities for them to encounter various social issues (such as those of gender bias, marginalisation, challenges of the differently abled (including those of the elderly and the sick) and natural concerns (such as those of protection, preservation, conservation of natural resources). Care may be taken to ensure that besides resource material, the classroom environment and the pedagogical processes are inclusive i.e. they cater to the diversity of learners in terms of their abilities, cognitive development, pace, style, etc. It is important to acknowledge and give primacy to children's experiences to help them connect these with the school knowledge while ensuring their active participation. Hence, the learning situations need to include a variety in approaches, strategies and resources to ensure that each learner (including the differently abled and the disadvantaged learners) gets opportunity to observe, express, discuss, question, critically think, improvise and analyse, i.e.

gets engaged in various processes of learning involving use of multiple senses in individual and group set-ups.

In order to have a comprehensive view of a child's development and map his/her learning progress in EVS, as per its curricular expectations, a set of learning outcomes in EVS for each class have been spelt out. These require using pedagogical processes to create age-appropriate and contextual learning situations and considering learning needs and learning styles of the learners to facilitate teachers/elders to explore their existing ideas and build further on them to enhance their knowledge, skills, values, interests and dispositions. The suggested pedagogical processes given class-wise, in the table below, provide different stakeholders especially teachers some clues for the learning situations. These can help them plan and design learning tasks/activities and also assess children for their learning progress in an inclusive classroom.

Curricular Expectations

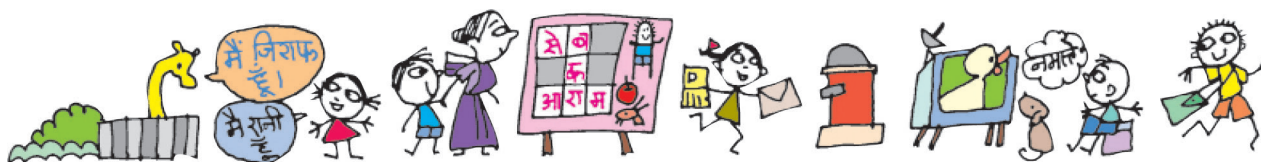
As per the EVS curriculum, children at the Primary Stage are expected to:

- acquire awareness about immediate/wider surroundings through lived experiences on various themes related to daily life, e.g., family, plants, animals, food, water, travel, and shelter etc.
- nurture natural curiosity and creativity for the immediate surroundings.
- develop various processes/skills, e.g., observation, discussion, explanation, experimentation, logical reasoning, through interaction with immediate surroundings.
- develop sensitivity for the natural, physical and human resources in the immediate environment.
- point out and raise issues related to equality, justice and respect for human dignity and rights.



Class III (EVS)

Suggested Pedagogical Processes	Learning Outcomes
<p>The learner may be provided opportunities in pairs/groups/ individually and encouraged to —</p> <ul style="list-style-type: none"> observe and explore the immediate surroundings, i.e., home, school and neighbourhood for different objects/plants/ animals/birds for their concrete/ simple observable physical features (diversity, appearance, movement, places of living/ found, habits, needs, behaviour etc.) observe, explore their home/family for the people whom they live with, what works they do, the relations and their physical features and habits and share the experiences in different ways explore the neighbourhood for the means of transport, communication and what works people do observe their home/school kitchen for food items, vessels, stoves, fuels and cooking processes discuss with elders and find out from where we/birds/animals get water, food (plants/ animals, which part of the plant we eat etc.), who works in the kitchen, who eats what, who eats last visit different places in the neighborhood, e.g., market to observe the process of buying/selling, journey of a letter from post office to home, local water bodies etc. ask and frame questions and respond to the peers and elders without any fear or hesitation share their experiences/observations through drawing/ symbols /tracing / gestures/ verbally in a few words /simple sentences in their own language compare objects/entities based on differences/ similarities for observable features and sort them into different categories 	<p>The learner —</p> <ul style="list-style-type: none"> identifies simple observable features (e.g., shape, colour, texture, aroma) of leaves, trunk and bark of plants in immediate surroundings identifies simple features (e.g., movement, at places found/kept, eating habits, sounds) of animals and birds) in the immediate surroundings identifies relationships with and among family members identifies objects, signs (vessels, stoves, transport, means of communication, transport, signboards etc.); places (types of houses/shelters, bus stand, petrol pump etc.) activities (works people do, cooking processes, etc.) at home/school/ neighbourhood describes need of food for people of different age groups; animals and birds, availability of food and water and use of water at home and surroundings describes roles of family members, family influences (traits/ features /habits / practices), need for living together, through oral/ written/other ways groups objects, birds, animals, features, activities according to differences/ similarities using different senses. (e.g., appearance/place of living/ food/ movement/ likes-dislikes/ any other features) using different senses.

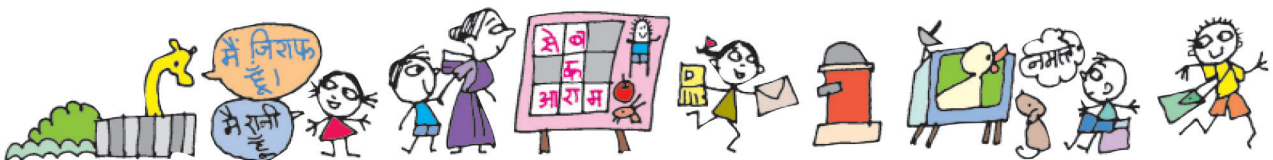


- discuss with the parents/guardians/grandparents/elders in the neighbourhood and compare their lives in past with that of now for the things of daily use such as clothes, vessels, works done by people around, games
- collect and arrange the objects such as, pebbles, beads, fallen leaves, feathers, pictures, etc., of their finds from their surroundings and arrange in an innovative manner, e.g., heaps, pouches and packets
- critically think to guess/estimate and predict about the happenings, situations, events and the possible ways to check, verify, test them., For example, which directions (left/right/front/back) to be followed to reach a nearby object or place; which vessel (of same volume) contains more water; how many spoons of water to fill a mug or a bucket etc.
- perform simple activities and experiments to observe, smell, taste, feel, hear using different senses as per their abilities to identify, classify, differentiate between objects, features, entities etc.
- collect observations and experiences on the experiments and activities and shares that orally /gestures /sketches /tables /writing in simple sentences
- manipulate local and waste material, fallen dry leaves/flowers, clay, fabrics, pebbles, colours to create or improvise drawings, models, designs, collage etc. For example using clay to make pots/vessels, animals, birds, vehicles, furniture from empty matchboxes, cardboard, etc.
- share experiences of their relationships with pets and domestic animals or other birds and animals in surroundings
- participate actively and undertake initiatives of care, share empathy, leadership by working together in groups, e.g., in different indoor/outdoor/local/contemporary activities and games, carry out projects such as taking care of a plant(s), feed birds/animals, things around them.

- differentiates between objects and activities of present and past (at time of the elders). (e.g., clothes /vessels /games played/ work done by people)
- identifies directions, location of objects/ places in simple maps (of home/ classroom/ school) using signs/symbols/verbally
- guesses properties, estimates quantities; of materials/activities in daily life and verifies using symbols/non-standard units (hand spans, spoon/mugs, etc.)
- records observations, experiences, information on objects/activities/places visited in different ways and predicts patterns (e.g., shapes of moon, seasons)
- creates drawings, designs, motifs, models, top, front, side views of objects, simple maps (of classroom, sections of home/ school, etc.) and slogans, poems, etc.
- observes rules in games (local, indoor, outdoor) and other collective tasks
- voices opinion on good/bad touch; stereotypes for tasks/play/food in family w.r.t gender, misuse/wastage of food and water in family and school
- shows sensitivity for plants, animals, the elderly, differently abled and diverse family set ups in surroundings. (For the diversity in appearance, abilities, choices – likes/ dislikes, and access to basic needs such as food, shelter, etc.)



- question, discuss, critically think and reflect on their experiences related to situations at home, school, neighbourhood for stereotypes or discrimination, such as, roles of male/female members, access to food, health, going to school, needs of elders and the differently abled etc.
- explore and read pictures, posters, signboards, books, audio-videos, tactile/raised material/newspaper clippings, stories/poems, web resources, documentaries, library and use other resources besides textbook.



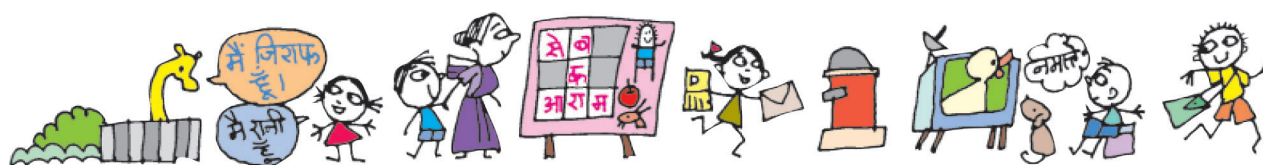
Class IV (EVS)

Suggested Pedagogical Processes	Learning Outcomes
<p>The learners may be provided opportunities in pairs /groups / individually and encouraged to —</p> <ul style="list-style-type: none"> observe and explore the immediate surroundings, i.e., home, school and neighborhood for different objects/flowers/plants/animals/birds for their simple observable physical features (diversity, appearance, movement, places of living, food habits, needs, nesting, group behaviour, etc.) ask questions and discuss with family members/elders as to why some family members stay together and others are away, interact with relatives, friends etc. who stay at far off places, about the houses/ transport and life in their place of residence. visit community/ home kitchen/ <i>mandi</i>/ museum/ wildlife sanctuaries/ farms/ natural sources of water/ bridges/ construction sites/ local industries/ distant relatives, friends/ places famous for making special things such as paintings, carpets, handicrafts, etc. interact with people (vegetable sellers, flower sellers, beekeepers, gardeners, farmers, drivers, health and defense personnel, etc.) and share experiences about their work, their skills and tools used by them discuss with elders, the situations about changes in family with time, roles of different family members, share their experiences and views on stereotypes/ discrimination /unfair treatment to people/ animals/birds/plants in their home/school /neighbourhood ask and frame questions and reflect on experiences without any fear or hesitation share their experiences and observations through drawing/symbols/tracing/ gestures/ verbally and writing in some sentences and para in simple language compare objects and entities based on differences or similarities in the observable features and sorts them into different categories 	<p>The learner —</p> <ul style="list-style-type: none"> identifies simple features (e.g., shape, colour, aroma, where they grow/any other) of flowers, roots and fruits in immediate surroundings. identifies different features (beaks/teeth, claws, ears, hair, nests/shelters, etc.) of birds and animals. identifies relationship with and among family members in extended family. explains the herd/group behaviour in animals (ants, bees, elephants), birds (building nests); changes in family (e.g., due to birth, marriage, transfer, etc.) describes different skilled work (farming, construction, art/craft, etc.); their inheritance (from elders) and training (role of institutions) in daily life explains the process of producing and procuring daily needs (e.g., food, water, clothes) i.e., from source to home. (e.g., crops from field to <i>mandi</i> and home, water from local source and ways of its purification at home/ neighbourhood) differentiates between objects and activities of past and present. (e.g., transport, currency, houses, materials, tools, skills-farming, construction, etc.) groups the animals, birds, plants, objects, waste material for observable features. (e.g., on appearance (ears, hair, beaks, teeth, texture of skin/surface), instincts (domestic/wild, fruit/ vegetable/ pulses/ spices and their shelf life) uses (edibility, medicinal, decoration, any other, reuse), traits (smell-taste, likes, etc.) guesses (properties, conditions of phenomena), estimates spatial quantities (distance, weight, time, duration) in standard/local units (<i>kilo, gaz, pav</i> etc.) and verifies using simple tools/set ups to establish relation between cause and effect. (e.g., evaporation, condensation, dissolution, absorption; for places- near/ far, objects- size and growth; shelf life of flower, fruit, vegetables)



- discuss with the parents/guardians/grandparents/elders in the neighbourhood and compare the life style of past and present (clothes, vessels, nature of work, games); inclusion of children with special needs
- collect objects and material from their surroundings such as fallen flowers, roots, spices, seeds, pulses, feathers, newspapers, magazine articles, advertisements, pictures, coins, stamps and arrange them, etc. in an innovative manner
- perform simple activities and experiments to observe/smell/taste/feel/hear using different senses as per their abilities e.g., to test solubility of different substances in water, separate salt and sugar from water, and observe how fast a piece of wet cloth dries up (in sun, in a room, rolled, flattened, with/without fan) blow hot, blow cold
- observe and share experiences of the phenomena, happenings, situations in daily life such as how root, flowers grow, lifting of weight with/without a pulley etc. and use ways to check/verify/test the observations through simple experiments and activities
- read train/ bus tickets and Time Table, currency notes, directions to locate places on the map, signboards
- manipulate local /waste material to create/improvise patterns, drawings, models, motifs, collage, poem/story/slogans using variety of material. For example, using clay to make pots/vessels, animals birds, vehicles, making train, furniture from empty matchboxes, cardboard, waste material etc.
- participate in different cultural/national/environmental festivals/occasions organised in/at home/school/community, e.g., morning or special assembly/ exhibition/ Diwali, Onam, Earth Day, Eid etc. in events of celebrations, dance, drama, theatre, creative writing etc. (e.g., *diya/rangoli*/kite making/ models of buildings/bridges etc. and sharing experiences through stories, poems, slogans, reports about the events narration/creative writing (poem/story) or any other creative tasks

- records her observations /experiences/ information for objects, activities, phenomena, places visited (*mela*, festival, historical place) in different ways and predicts patterns in activities/phenomena.
- identifies signs, location of objects/ places and guides for the directions w.r.t a landmark in school/neighbourhood using maps etc.
- uses the information on signboards, posters, currency (notes/coins), railway ticket/time table.
- creates collage, designs, models, *rangolis*, posters, albums, and simple maps (of school/neighbourhood, flow diagrams, etc.) using local/waste material.
- voices opinion on issues observed/ experienced in, family/ school/ neighbourhood, e.g., on stereotypes (making choices/ decision making/solving problems), discriminatory practices on caste in use of public places, water, MDM/ community eating, child rights (schooling, child abuse, punishment, labour).
- suggests ways for hygiene, reduce, reuse, recycle and takes care of different living beings (plants, animals, and the elderly, differently abled people), resources (food, water, and public property).

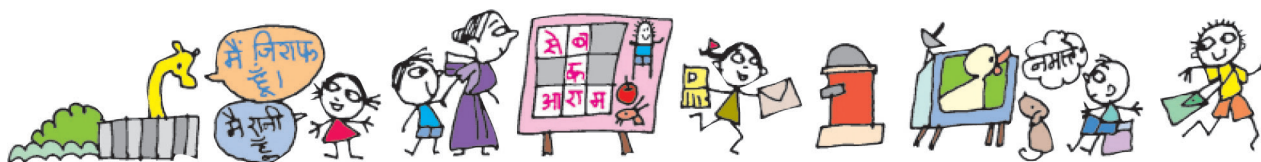


- explore/read books, newspaper clippings, audio, stories,/poems, pictures/videos/ tactile /raised material/web resources/ library and any other resources besides textbooks.
- enquire from parents, teachers, peers and elders at home/community, discuss, critically think and reflect on experiences of children related to situations at home, school, neighbourhood on reuse and reduction of waste, proper use and care of the public property, care of different animals, water pollution and wastage, health, and hygiene
- enquire/care about participation of female members in stereotypical activities for play/work, limited/restricted access of some children/persons/families (differently abled, castes, the aged) to common places/ resources, etc.
- participate actively and undertake initiatives of care, share empathy, leadership by working together in groups e.g., in different indoor/outdoor/local/contemporary activities and games, carry out projects/ role play for taking care of a plant(s), feed birds/animals, things/elderly/differently abled around them.



Class V (EVS)

Suggested Pedagogical Processes	Learning Outcomes
<p>The learners may be provided opportunities in pairs/groups/individually and encouraged to —</p> <ul style="list-style-type: none"> observe and explore the animals for the unique and unusual sense of sight, smell, hear, sleep, and their response to light, heat, sound etc. explore the sources of water in their neighbourhood, and how fruit, vegetables, grains, water, reach their home and kind of processes/techniques employed to convert grain to flour and flour to <i>Roti</i>, purification of water etc. share experiences and discuss about the information collected or places visited with peers, teachers and elders prepare guide routes to reach from one place to another collect information from pictures / elders/ books/ newspapers/ magazines/web resources / museums etc. about animals which have very sharp sense of hearing, smell and vision, different landforms such as plain area, hilly area, deserts, etc. and the varieties of flora-fauna, lives of people in such places discuss with teachers and elders and use pictures, paintings, visit museums and collect information related to the lives for food, shelter, availability of water, means of livelihood, practices, customs, techniques, of different regions and different time periods visit petrol pumps, nature centers, science parks, water treatment plant, bank, health centre, wildlife sanctuaries, cooperative, monument, museum and if possible, far off places with different landforms, lifestyles and livelihoods, etc. to observe and interact with people living there and share experiences in different ways 	<p>The learner —</p> <ul style="list-style-type: none"> explains the super senses and unusual features (sight, smell, hear, sleep, sound, etc.) of animals and their responses to light, sound, food etc. explains the use of technology and the process of accessing basic needs (food, water etc.) in our daily life. (e.g., farm produce to kitchen; grains to <i>Roti</i>, preservation techniques, storage and tracking of water source) describes the interdependence among animals, plants and humans. (e.g., communities earning livelihood from animals, dispersal of seeds etc.) explains the role and functions of different institutions in daily life. (Bank, Panchayat, cooperatives, police station, etc.) establishes linkages among terrain, climate, resources (food, water, shelter, livelihood) and cultural life. (e.g., life in distant/difficult areas like hot/cold deserts) groups objects, materials, activities for features and properties such as- shape, taste, colour, texture, sound, traits etc. traces the changes in practices, customs, techniques of past and present through coins, paintings, monuments, museum etc. and interacting with elders. (e.g., cultivation, conservation, festivals, clothes, transport, materials or tools, occupations, buildings and houses, practices activities like cooking, eating, working) guesses (properties, conditions of phenomena), estimates spatial quantities (distance, area, volume, weight etc.) and time in simple standard units and verifies using simple tools/set ups. (e.g., floating/ sinking/ mixing/evaporation /germination /spoilage /breathing /taste)



- observe and share experiences for different phenomena such as how water evaporates, condenses, and dissolves different substances under different conditions, and how food gets spoilt, how seeds germinate and the direction in which roots, shoot grow and conduct simple experiments and activities to find out the same
- conduct activities and simple experiments to check the properties/ features of different objects/ seeds/ water/waste materials, etc.
- observe, explore surroundings and critically think how seeds reach from one place to another, how the plants and trees grow at places where no one plants them e.g., forests, who waters them and who owns them
- visit the night shelters, people living in camps, old age homes, in surroundings and interact with old and/or differently abled and who change their means of earning to find out where do people belong to and why they left their places, where their ancestors had been living for ages, migration of people and debate on various such issues in the surroundings
- enquire from parents, teachers, peers and elders at home/community to critically think and discuss to reflect on experiences of children related to situations at home, school, neighbourhood
- discuss freely with peers, teachers and elders about the biases, prejudices, and stereotypes by providing counter examples to one another
- visit departments/ bodies in the surroundings e.g., Bank, Jal Board, and Hospital and Disaster management body and interact with related people and interpret different documents related to them
- records observations and experiences; information in an organised manner (e.g., in tables/ sketches/ bar graphs/ pie charts) and predicts patterns in activities/ phenomena (e.g., floating, sinking, mixing, evaporation, germination, spoilage) to establish relation between cause and effect.
- identifies signs, directions, location of different objects/landmarks of a locality / place visited in maps and predicts directions in context of positions at different places for a location
- creates posters, designs, models , set ups, local dishes, sketches, maps (of neighbourhood/ different places visited) using a variety of local/waste material and writes poems/ slogans/travelogue etc.
- voices opinions on issues observed/ experienced and relates practices / happenings to larger issues of society. (e.g., discrimination for access/ownership of resources, migration/ displacement / exclusion, child rights)
- suggests ways for hygiene, health, managing waste, disaster/emergency situations and protecting/saving resources (land, fuels, forests, etc.) and shows sensitivity for the disadvantaged/deprived.



- watch videos on different types of landforms and the variety of life forms found in such places, different institutions which cater to the need of societies, behaviour of animals, water scarcity, etc. followed by meaningful discussions and debates on occupations that derive from the peculiar geographical characteristics of different regions
- perform simple activities, record the observations in the form of table/ sketch/ bar graph/ pie chart/ oral/ written form, etc. interpret and present their findings
- discuss issues of living beings (plants and animals) as rightful inhabitants of earth, animal rights and ethical treatment to animals
- share experiences of people who work selflessly for common good and what motivates them
- participate actively and undertake initiatives of care, share empathy, leadership by working together in groups e.g., in different indoor/outdoor/local/contemporary activities, games, dance, fine art, carry out projects/role play for taking care of a plant(s), feed birds/animals, things/elderly/differently abled around them
- conduct mock drills for emergency and disaster preparedness.

Note: For addressing the inclusive aspect in EVS please refer to the Guidelines given for Children With Special Needs under Science and Social Science sections.

