

V
CLASS V
ENVIRONMENTAL STUDIES

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

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

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<p>teams? Have you ever been captain of the team? Do boys and girls play together? Have you heard of any Indian team playing in another country? Which is your favourite team sport? Do you know any National level player?</p> <p>Local games/martial arts</p> <p>What are the local games/ martial arts of your area? Do you know someone who is good at them? Have you seen a young acrobat or wrestler practicing? Who taught them? For how long have they learnt the art/game? What are the new games in your area that were not played earlier? What do you do in the evenings for leisure? What if there is no TV? Who decides what programmes to watch?</p> <p>Blow hot blow cold</p> <p>How many times do you breathe in a minute – on sitting still, just after a run? How much can you expand your chest by breathing</p>	<p>importance of team spirit in games, gender stereotyping. Some idea of other countries and national teams. Gender, class stereotyping in play.</p> <p>Local and traditional martial art forms/games. Typical practice routines; teachers/gurus; changing patterns of local games.</p> <p>Changing nature of leisure.</p> <p>Our breathing – estimates of different rates; chest expansion and contraction in the child's body while exhaling and inhaling; My</p>	<p>cricket team; narrative about some national and international players.</p> <p>Description or photographs of traditional martial arts, 'Nat', acrobat, boat race, etc.</p> <p>Story by Zakir Hussain – "<i>Usee se thanda usee se garam</i>" – Zubaan books.</p>	<p>making picture albums ; posters of sports persons</p> <p>Reading, discussion, collecting information and writing about local/ martial games.</p> <p>Observation, , activity of breathing in and out and observing the difference (mirror/glass/on palm); measuring chest; counting</p>

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<p>deeply? Can you make a glass cloudy by blowing on it? How do you blow to make something cold? Do you also blow to keep a fire going?</p> <p><i>Clean work - dirty work?</i></p> <p>Can you list ten different types of work that people do for you. In this list what work is seen as dirty and what is seen as clean? What would happen if there were no one to - clean our streets/our home/clear the garbage?</p> <p>1.3 ANIMALS</p> <p><i>How animals find their food?</i></p> <p>If you leave some food outside your house do some animals take it away? How do they find it? Do these animals also hear/speak/ see/smell/ eat/ sleep?</p> <p><i>What we take from animals?</i></p> <p>What animal products do we use for clothing, shelter, etc.?</p>	<p>breath – hot and humid; tacit understanding of cooling by blowing and helping a fire to burn.</p> <p>Dignity of Labour Dependence of society on such essential services. Choice of work as a societal value.</p> <p>Sense organs; Comparison with humans – activities such as eating sleeping etc.</p> <p>Animal products used by us.</p>	<p>Extract from Gandhi’s autobiography; narrative from another country - sweepers treated with dignity; story of a Valmiki boy discriminated in school because of parents’ occupation.</p> <p>Information about animals’ senses and other functions. Narratives about animals such as ants, bees, dogs, birds, snakes etc giving ideas about their senses.</p> <p>Child’s daily life experience, information about products we obtain from animals.</p>	<p>heart beat and breathing rate , making and using a stethoscope</p> <p>Reading and discussion based on suggested resources.</p> <p>Observation of animals to study their response sound, food, light and other stimuli.</p> <p>Listing and drawing of items made from animal products.</p>

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<p><i>Why is the tiger in danger?</i></p> <p>Why do people kill wild animals? Which are the animals that are poached?</p>	<p>Protection of wild life; selling of animal parts.</p>	<p>Excerpt from 'Man eaters of Kumaon' by Corbet.</p>	<p>Discussion, reading, poster making activity with a message to save wild life.</p>
<p><i>People who depend on animals</i></p> <p>Do you know people who catch/trap/hunt/entertain using animals? Have you seen how snake charmers/gujjars depend on animals?</p> <p>What do you understand by cruelty to animals? Do you think a snake charmer is cruel to the snake?</p> <p>Have you seen scenes of hunting in rock paintings or on ancient seals?</p>	<p>Communities dependent upon animals; hunters restricted to smaller spaces; changing patterns of wild and domestic animals.</p> <p>To be sensitive about cruelty to animals; realize that people who depend on animals for their livelihood are not necessarily cruel to them.</p> <p>Basic idea of pre-historic hunters and the wild animals seen at that time.</p>	<p>Library resources; illustrations of pre-historic hunting scenes (Bhimbetka). Narrative of gujjars' or snake charmers' relationships with animals.</p> <p>Child's observation; an story/narrative about an animal and its caretaker , e.g, mahouth/tonga wala</p> <p>Films/pictures of shooting, skins (tiger) of animals.</p>	<p>Discussion on people whose livelihood depend on animals; drawing; Discussion on people teasing/troubling animals at the zoo/other places.</p>
<p>1.4 PLANTS</p> <p><i>Growing plants</i></p> <p>How does a plant grow from a seed? Can you grow a plant without seeds? How do you grow mangoes/potatoes? Where does the seed come from? Have you seen seeds that fly/stick to your clothes/drift in the water?</p>	<p>Seed germination, root and shoot axis, baby plant, storage of food in the seed; seed dispersal.</p>	<p>Seeds, germinated seeds.</p>	<p>Study germination of some seeds, experiment to determine conditions suitable for germination (air and water).</p>

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<p>Forests and forest people</p> <p>Have you seen or heard about a forest? How do people live in forests? How is their life threatened by forests being cut? What kinds of foods do they collect from the plants there? What leaves are used for eating on? Do your parents remember places with trees/forests where there are none today? Why were the trees cut and what is there today?</p>	<p>Tribal life; effects of deforestation; communities dependent on forest products e.g., ‘pattals’, bamboo products, etc.</p>	<p>Information about tribal life, communities dependent on forest produce, effects of deforestation.</p>	<p>Exploring from parents, reading, and discussion.; tracing tree trunks.</p>
<p>Protected trees</p> <p>Have you heard of a park/sanctuary? Who looks after it? Does anybody own it? Have you seen a place where trees are worshiped or protected by the villagers?</p>	<p>Public/private ownership of trees/forests. Sacred groves; people’s movements to protect their forests.</p>	<p>Story of the Chipko movement and the women’s role in protecting trees.</p>	<p>Enactment of chipko andolan; poster – ‘save trees’; survey and identify any ‘green belt’ in your neighbourhood.</p>
<p>Plants that have come from far</p> <p>Does tea come from a plant? Where did people first grow tea and what does the plant look like? Does it grow only in</p>	<p>Plants from different countries.</p>	<p>Song/poem from Chakmak: “<i>Alu, mirchi, chajji, Kaun kaban se aye ji</i>” Story about the Chinar tree coming to Kashmir.</p>	<p>Local knowledge, reading, and discussion, reciting the poem together; making tea.</p>



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<p>some places/climates? What did people drink when there was no tea in India?</p> <p>2. Food <i>When food gets spoilt</i> How does food spoil? How do we know that food is spoilt? Which food spoil sooner than others? What can we do to prevent food from getting spoilt? What do we do to keep it fresh during travel? Why do we need to preserve food? Do you leave food in your plate?</p> <p><i>Who produces the food we eat?</i> Do you know of different kinds of farmers? Do all farmers own their land? How do farmers get the seeds they plant every year? What else besides seeds is required for a crop to grow?</p> <p><i>What did people grow earlier?</i> Did your grandparents or any elderly person eat the</p>	<p>Spoilage and wastage of food. Preservation of food, drying and pickling.</p> <p>On different types of farmers. Hardships faced by subsistence farming, including seasonal migration. Need for irrigation, fertilizers.</p> <p>Changing food habits, changing crops grown in</p>	<p>Sharing family experiences Interaction with a person involved with food production/preservation.</p> <p>Farmers' narratives - Could take one example from Punjab and the other from AP. Story of a child missing school because of his/her family's seasonal migration. Family members. Visit to a farm.</p> <p>Information on food from different places.</p>	<p>Keep some bread, other food for a few days – see how they spoil.</p> <p>Study germination of seeds, experiment to determine conditions suitable for germination; Observations in any farm.</p> <p>Collection of samples or pictures of food from</p>

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<p>same food you eat today? Do all of us eat the same kind of food? Why do we eat different kinds of food?</p> <p>When people do not get food</p> <p>Do you know of times when many people do not get enough food to eat? Have you seen where extra grain is stored? How do you know when you are hungry? Do you know of people who get ill because they do not have enough to eat?</p> <p>Our mouth – tastes and even digests food!</p> <p>How do we taste food? What happens in the mouth to the food we eat? Why do we give glucose to patients? What is glucose?</p> <p>Food for plants?</p> <p>What do plants need for food? Do you know of any plants that eat insects? What do animals eat? Do all animals eat the same food? Do animals eat other animals?</p>	<p>some areas. Different food habits in different places/cultures.</p> <p>Hunger, famine (as both a natural and man-made phenomenon); grain being spoilt in storage; nutrition deficiency diseases.</p> <p>Tasting food; chappati/ rice becomes sweeter on chewing; digestion begins in the mouth; glucose is a sugar.</p> <p>Water, manure, air for plants; Insectivorous plants e.g. pitcher plant, Venus fly trap; basic idea of food chain/web.</p>	<p>Print material on different calamities; Narrative of the Bengal famine as a man-made calamity; TV news bulletins etc.</p> <p>Child's experience; some samples of food items; story of someone on a glucose drip.</p> <p>Pictures/visuals of insectivorous plants.</p>	<p>different places/cultures.</p> <p>Collection of pictures related to natural calamities; discussion on affects.</p> <p>Tasting activity, action of saliva on rice/chappati.</p> <p>Observations and discussion on food for plants; making a model of a food chain/web.</p>

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<p>3. Shelter</p> <p><i>Why different houses</i></p> <p>Why do you have different kind of houses in different places? Different houses in the same place?</p> <p><i>A shelter for everyone?</i></p> <p>Does everyone have a shelter to live in? Why do people live together in villages, hamlets, colonies, neighborhoods?</p> <p><i>Ants live in colonies?</i></p> <p>Do you know how bees/ants live together in colonies?</p> <p><i>Times of emergency</i></p> <p>Have you heard of houses being damaged by floods/earthquakes/cyclones/fires/storms/lightening? What would it have felt like? Who are the people who come to help? What can you do to help others before the doctor comes? Where can we look for help at such times? Who runs such institutions?</p>	<p>Variation in shelter: regional difference, difference due to climate and materials available, economic status, etc.</p> <p>Need for living close to others, the idea of neighbourhoods.</p> <p>Need for sharing resources and spaces, division of spaces.</p> <p>Ant or bee colony, social behaviour in insects.</p> <p>Disaster and trauma of losing one's home; community help; Hospitals, police stations, ambulance, shelters, fire station, first aid.</p>	<p>Different houses in different climates and regions.</p> <p>Pictures of villages, colonies etc.</p> <p>A case study of social organisation in bees/ants.</p> <p>Newspaper clippings.</p>	<p>Making models of houses; collection of materials used to make houses in different places.</p> <p>Write and draw the area you live in, find out about people who work for everybody.</p> <p>Observations and drawings of ant colonies, different types of ants.</p> <p>Discussion, finding out about the hospital, police station, fire station, etc.</p>

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<p>4. Water</p> <p><i>Water from where in earlier times?</i></p> <p>From where and how far did your grandparents get water? How far do you have to go for water? What are underground wells/'baolis'? Do you still see them being used? Have you seen a 'piaao'?</p> <p><i>Water flow</i></p> <p>From where do farmers get water to grow crops? Do all crops need the same amount of water? Have you seen water flowing upwards? What are the different ways in which you have seen water being lifted? How is flowing water used to grind grain?</p> <p><i>Plants and animals in water</i></p> <p>What kinds of animals and plants live in water? Are there weeds that are covering your pond/ lake/ river? Can you classify all the animals you see around you to show which ones live in water and which live on land?</p>	<p>Estimates of distance measurement; changes in sources and water availability over time; community service especially for long-distance travellers.</p> <p>Sources for irrigation; different quantities of water for different crops; Different methods of lifting water; the use of a waterwheel.</p> <p>Animals and plant life in water; classification in terms of similarities and differences.</p>	<p>Illustrations, story of a 'baoli'/stepwell</p> <p>Farmer/any local person who works in fields, a plant/crop.</p> <p>Weeds of different kinds; pictures of plants and animals living in different habitats.</p>	<p>Enquiry from grand parents/ other elders; drawing, model making of a step well.</p> <p>Interaction with a farmer, visit to a field, making water wheel., activity with water wheel.</p> <p>Listing and classification; drawing of water body.</p>

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<p><i>What floats, sinks or mixes?</i></p> <p>Have you ever seen anything floating in water? Can you classify as many things around you to see which float, which sink and which mix with water? Does oil mix with water? What are the similarities and differences in water, oil, milk, cold drink, etc.? How do we measure these?</p>	<p>Basic observations and classification related to floatation and solubility in water; oil and water are liquids that do not mix; basic concepts about liquids; litre as unit of measurement of volume.</p>	<p>Various materials to experiment with, such as, sugar, stone, oil, salt, sand etc. Story of the donkey and the salt/cotton bag.</p>	<p>Hands-on activity to observe solubility in water, floatation; discussion, interpretation.</p>
<p><i>Mosquitoes and malaria</i></p> <p>Is there any stagnant water in your locality? Do you find more mosquitoes in stagnant water? Is there any way to reduce the mosquitoes in water? Have you heard of malaria? In what season do you find more people getting ill with malaria?</p>	<p>Stagnant and flowing water; mosquitoes and malaria.</p>	<p>Health worker or a doctor. Newspaper articles on malaria etc.</p>	<p>Interaction with a community doctor; observation of site of stagnant/flowing water.</p>
<p>5. Travel</p> <p><i>Petrol or diesel</i></p> <p>Do all vehicles need petrol to run on? What other fuels do you know that are used for vehicles? What do trains run on? In the past what did they run</p>	<p>Fuels used in vehicles; Fuel is costly. Non renewable source.</p>	<p>Poems and songs about trains/cars etc.; Enquiry from adults; the story of 'petrol'.</p>	<p>Discussion, finding out different fuels used, comparison of cost of petrol and diesel.</p>

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<p>on? What do tractors use as fuel? For what other purposes are petrol and diesel used?</p> <p>Find out the cost of a litre of petrol/diesel in your area? Do all vehicles run an equal distance on a litre of fuel?</p> <p>Rough and tough</p> <p>Have you seen or been to a mountain? How and why do you think people make such difficult trips? How do you think they train for it?</p> <p>Ride on a spacecraft</p> <p>What all do you see in the sky – at day time? And at night? How many of the things you see in the sky are man-made? Have you heard of people traveling in a space craft?</p> <p>Oldest buildings</p> <p>Is there any well-known monument/historical place in your area that people come to visit? What are the oldest buildings around your area? Have you traveled far to see any historical monuments?</p>	<p>Mountains, expeditions and the spirit of adventure; some idea of training for high altitude; national flag.</p> <p>The sky in the day and night. Basic exposure to the aerial view of the earth and what India looks like from there.</p> <p>Heritage buildings as a source of knowledge about our past; to be able to understand how they were built; materials used come from a variety of places, skills of the crafts person; Some</p>	<p>Excerpt from the autobiography of Bachendri Pal; Flag of India atop mount Everest; flags of some countries</p> <p>Story of Rakesh Sharma/ Kalpana Chawla.</p> <p>Oral narratives from people; pictures.</p>	<p>Act/dance to show climbing on a difficult mountain; Designing a flag for your school; identifying some other flags</p> <p>Observation from a terrace to draw its aerial view. Imagine yourself in a spacecraft giving an interview to the PM about what you see from there!</p> <p>Drawing pictures of the building or the monument in your neighbourhood or memory or imagination.</p>

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<p>Have you heard of those personalities who lived in these monuments or who built these?</p> <p>6. Things we Make and Do</p> <p><i>Growing Food</i></p> <p>How do we grow food? What tools do we use for preparing the field? For cutting and harvesting? For cutting and cooking different vegetables/dishes?</p> <p>How do we water the crops? How do we lift water through a pump or a waterwheel? Can we make a water wheel, sprinkler, etc.?</p>	<p>historical personalities.</p> <p>After basic needs met, exploration leading to improving and overcoming human limitations; greater expression of creativity; overuse of natural resources needs to be checked.</p> <p>Some idea of the story of a grain from the field to our plate – in terms of processes and the tools used. Different things made from the same grain, say, wheat/rice.</p> <p>Simple observations of water lifting in fields or in homes; making of a water wheel, sprinkler, etc.</p>	<p>Narratives; talking to elders, farmers, those involved in growing and cooking food.</p> <p>‘<i>Dum se pump</i>’ by Arvind Gupta.</p>	<p>Observing and talking about processes of growing food; drawing tools used in different processes; finding out about different dishes made from the same grain, say, wheat/rice.</p> <p>Making a simple waterwheel, sprinkler, pump.</p>