ACTIVITY SHEET: READING A LOCAL LANDSCAPE

Aim:

To explore a local space and discover how living beings, non-living features, and humans interact in an ecosystem.

You will need:

A safe nearby outdoor space (like the school ground, roadside, park, field edge, pond edge, scrubland, grove, etc.)

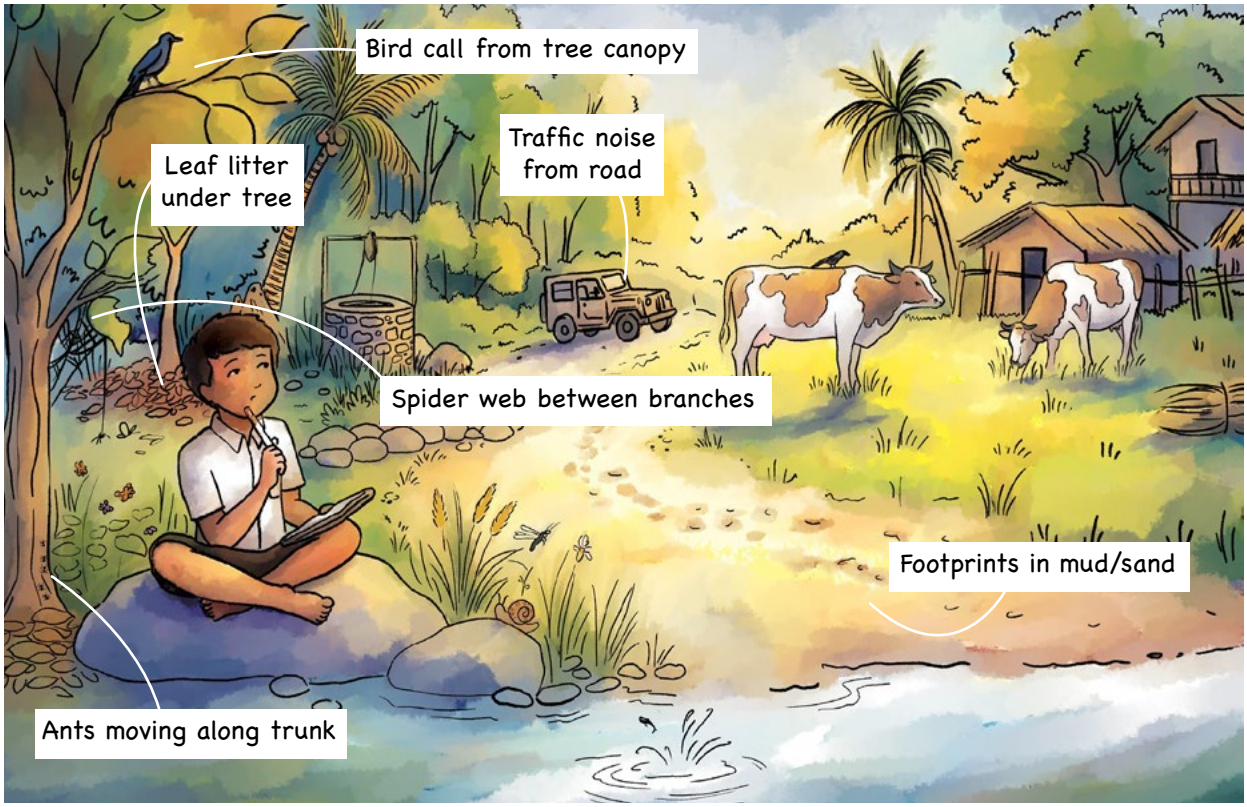
Notebook

Pencil

Magnifying glass

What to do?

1. Visit a nearby outdoor space with your class, in a small group, or with an adult.
2. Walk slowly, looking at the ground, at eye level, and above you. Identify living beings, non-living features, signs of interactions, and evidence of human use.
3. Choose a spot to sit quietly for 5–10 minutes. Pay attention to smells, sounds, and sights. You can close your eyes to help you listen more carefully.



Observe not only plants and animals, but also sounds, smells, interactions, and signs of human use.

Observe and record:

a) **Context:** Note the date, day, and time. What is the current season?

b) **Sensory mapping:**

- Can you hear bird calls, insect noises, or wind in the plants? Do you hear any sounds made by people or machines (traffic, construction)? In your notebook, draw an 'X' to represent yourself. Draw symbols or write words to show where sounds are coming from (like a plant icon to the left, a car icon behind you).
- Draw a simple map of the area. Use sketches and words to show living beings, non-living features, and signs of interactions (like a hole in a leaf or a nest in a branch). Feel free to include bark rubbings or leaf prints!
- Do different parts of the space smell different (e.g., near water vs. near a road)? Why might that be?

c) **Field observations:** Use **Table I** as a guide to make sure that you notice as many details as you can.

Features	Observe
Non-living features	• **Physical:** Do you see rocky outcrops, walls, fences, or buildings? • **Micro-climate:** Is it sunny, shady, or cool? How does the air feel? • **Soil:** Is it dry, sandy, or muddy? Is it visible or covered by leaf litter? • **Land:** Is it flat, sloping, or uneven? • **Water:** Are there ponds, puddles, wells, or signs of where rain collects?
Living features	• **Plants:** Trees, shrubs, grasses, or climbers? Which are most common? How many different kinds? Clustered in one part or scattered across? • **Denseness:** If it rained, would the plants catch the water or would it hit the ground directly? • **Animals:** Where are they (on ground, on plants, under rocks, in the air, etc.)? What are they doing (like feeding, resting, hiding, hunting etc.)? What signs (like footprints, scat, chewed leaves, feathers, webs, nests, burrows, holes, etc.) can you spot of their presence? • **Hidden world:** Carefully use a stick to peek under logs or leaf litter. What small beings (like snails, millipedes etc.) are hiding there?
Ecological interactions	• **Direct:** What interactions can you observe between different living beings (like ants carrying a dead moth, a bird feeding on a lizard, etc.)?

Features	Observe
Ecological interactions	• **Indirect:** Can you identify signs of one being depending on another, even if you do not directly observe the interaction (like a spider web on a plant, an old snake skin caught in a rough bark, etc.)? • **Support:** How do the living and non-living features of this place appear to support one another (like a lizard basking on a hot rock, moss growing in the shade of a large tree, etc.)?
Human use	• **Presence:** Do you see people using this place? What are they doing? • **Structures:** Do you see signs of use by people? Look for trails, paths, fences, shrines, water tanks, etc. • **Impact:** Are plants being grown, cut, protected, or collected? Are there signs of grazing cattle? Is the human activity helping or disturbing this space?

Table I: Here are some details to look for. What pointers would you add to the list?

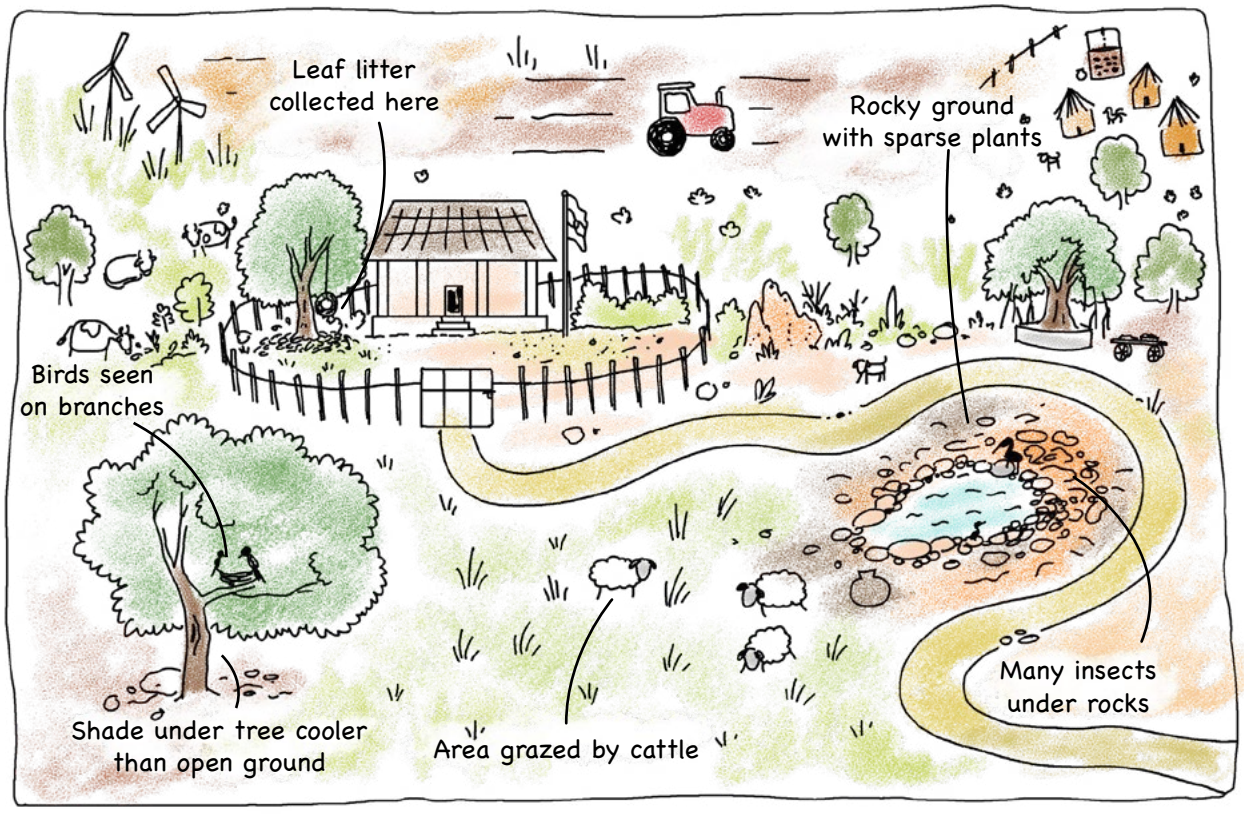
Think about:

- Does this space support many forms of life? Which specific observations suggest this? Think about the variety of plants you saw and 'animal clues' like nests, burrows, tracks, or even chewed leaves and feathers.
- How do the non-living features (like sunlight, soil, and water) influence where different plants and animals are found? For example, did you notice certain plants that only grow in the dampest or sunniest spots? Did you spot animals that appear to depend on others for food, shelter, or support (like an insect on a flower)?
- How might the living beings here affect their own environment (think about the soil, shade, moisture, or temperature)? For example, did you see some plants offer shade or think about how some animals might change the soil? Did you see any signs that this place is changing over time, such as decaying logs, new sprouts, or seasonal shifts? What do you think is causing these changes?
- How do human activities influence this space? Are there signs that people are protecting the area? Or are they disturbing it (like through plastic litter or heavy foot traffic)? In what ways is this local space similar to, or different from, the 'forest' or 'ecosystem' described in your textbook?

Discuss:

Q1. Do spaces that support life always need to look like dense forests or national parks? Based on your visit, should this local spot be considered an ecosystem? Why or why not?

Q2. What can this place teach us about: (a) how living beings depend on one another, and (b) how people's daily actions (like walking a certain path or planting a tree) shape ecosystems?



Example of an ecological map showing how the living and non-living features in a landscape can be recorded.

Q3. Why do people often fail to notice the ecological importance of familiar, everyday landscapes? What happens to the biodiversity of a town if these small spaces are cleared or paved over?

Q4. What is the most surprising thing you learned from 'reading' this landscape that you may not have learnt by reading a textbook? How would you now define an 'ecosystem' using your own words?

Extend:

A. Find one sign of an animal you **did not** actually see. What was the animal doing there, and why did it choose this specific spot instead of the middle of a busy road?

B. If we removed just one feature from this space (for example, the nearby water source or a large shady tree), list three living beings that would be most affected and why.

C. Is it possible for humans to use this space **without** harming the other living beings here? Suggest one way people could improve the 'health' of this local ecosystem.

D. If humans stopped visiting this space for one year, which one living being would benefit the most? Can you also think of one which might actually be harmed?

i wonder... Rediscovering school science

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