

Microhabitats and adaptation

Lesson at a glance

Open with contrast photos of under a log versus a sunny wall and ask whether the same living things would live in both. Teach microhabitat, adaptation and suited using that log-wall anchor, then groups predict what they will find in three school-ground spots. Outside (or at indoor tray/photo stations), they hunt with magnifier and ID sheet and record habitat, creature and one feature on the Investigation Journal page. Close by drafting two evidence-based matches and sorting five creatures on the sorting-tree interactive.

Learning objectives

- Record which living things are found in different school-ground microhabitats
- Match at least two adaptations to the microhabitat they suit
- Explain why a living thing is suited to where it lives using evidence from the hunt

Before the bell – prep

Print one minibeast ID sheet per group the day before. Pre-mark three close microhabitats (log/stone, grass or hedge base, wall). Pack soft brushes, pots and magnifiers by the door. If outdoors is off, set three labelled trays (damp litter, soil/grass, dry stone) or photo packs before the bell.

Materials

Item	Qty	Per	Source	Low-cost substitute
hand magnifiers	1	pupil	school kit	share one magnifier between two, or use careful naked-eye looking
minibeast ID sheets (woodlouse, earthworm, garden spider, snail, ant, centipede, ground beetle, slug)	1	group	provided printable	one shared class ID poster on a clipboard
clipboards	1	group	classroom	stiff cardboard and a bulldog clip
small clear collection pots with lids	2	group	school kit	clean yoghurt pots with lids, air holes added by an adult
soft artists' paintbrushes for gentle handling	1	group	classroom	a dry leaf used as a scoop; fingers only if hands are washed after
Investigation Journal page	1	pupil	classroom	ruled paper with three habitat headings drawn by the pupil
photos or a clear view of a log microhabitat and a wall microhabitat for the hook	1	class	classroom	a quick teacher sketch of log versus wall on the board
three labelled indoor microhabitat trays (log/litter, grass/soil, wall/hard surface) for wet-day route	3	class	classroom	three desk spots with photo cards only (no soil or litter)
laminated minibeast photo evidence packs (log, grass and wall finds)	1	group	classroom	one shared class photo set on the IWB with the same three microhabitat labels

Safety watch-point

Fixed boundary; lift logs from the edge and replace them; soft brush or pot only — never pinch; no stinging insects in pots; wash hands on return; every living thing goes back.

Teaching moves

- **Microhabitats and adaptations:** Keep the board to the log-versus-wall contrast and the three short term lines only. Ask the one check question (damp-and-hidden creature: log or sunny wall?) and steer any “it likes it” answer toward damp/dry, dark/light or shelter.
- **What do we expect to find?:** Agree the three real ground spots your school has. Model once: I wonder / I predict / I will check. Take oral or quick journal “I think...” lines, then give the safety brief clearly before anyone leaves the room.
- **Minibeast hunt across microhabitats:** Hand ID sheets out at the door, not earlier. Budget about five minutes per station. Watch for gentle log lifts, brush/pot handling and habitat-plus-feature notes. Empty finds and signs of life (trails, casts, webs) still count as data.
- **Who lives where, and why?:** Board one find per microhabitat first (habitat | creature | feature), then give groups about four minutes to draft two matches with an evidence phrase each. Prompt woodlouse/slug under log, earthworm in moist soil, snail or spider on wall if groups stall.
- **Tighten your journal page:** Three-minute self-check only: empty stations noted, no “likes it” wording, two matches with condition words. Offer the stem We found ... under the log. It is suited there because ... Circulate; do not restart the full write-up.
- **Sort into habitat groups:** Drive the sorting-tree interactive in explore mode. Invite placements for woodlouse, earthworm, garden spider, snail and ant; ask Are they right? What did we actually find? Accept plausible overlaps and pick the group that best matches class evidence.

What it should show

Expect woodlice, slugs or centipedes under logs/stones; earthworms in moist soil or grass roots; ants or beetles in grass/under stones; snails and often spiders on walls or edges. A group finding “nothing on the wall” still has valid data. Odd wall woodlice usually mean the spot was shaded and damp — check conditions, not just the label.

Misconceptions & interventions

- **Pupils say a creature lives somewhere “because it likes it” rather than naming conditions and features.** — Ask which condition matches — damp or dry, dark or light, hidden or open — and point them back to the ID sheet feature (hard plates, slime, soft body).
- **Pupils think bigger creatures live in bigger places, so size decides the microhabitat.** — Hold up the woodlouse and earthworm finds: both are small, but moisture and shelter decide where each survives, not body size.
- **Pupils treat an empty station as a failed hunt and leave the journal row blank.** — Model writing “none seen on wall” as useful data, then ask what that suggests about dryness, light or shelter there.



Lesson 1

Differentiation

Emerging	Developing	Proficient
• Tick creature name and microhabitat only, then add one feature word from the ID sheet (shell, slime, many legs). • Work the first station beside the teacher with the stem We found ... under the log.	• Add a second creature at one microhabitat and a fuller “why suited” note using damp/dry or dark/light. • Compare one prediction with what was actually found and say what the evidence changed.	• Critique which class match is strongest and name one condition a second hunt should control (time of day, moisture after rain). • Suggest where a listed creature would struggle and what evidence would prove it.

Cross-curricular hook

Link to Geography’s local natural environment — map the three school microhabitats and label damp/dry and light/shade.

