

Lesson 1 · living-things

Microhabitats and Adaptation

Lesson at a glance

Open with a curiosity question — woodlouse in the open sun or the damp dark under a log? Pupils predict in the Investigation Journal, learn three terms (microhabitat, adaptation, suited to its habitat), then go outside as field ecologists to survey three spots — under a log, long grass, a wall — naming minibeasts with a printed ID sheet and magnifier and recording where, what and why on the Observation Sheet. Back inside, a yes/no sorting interactive groups creatures by legs, then a display-only science-talk pools the damp-vs-dry pattern.

Learning objectives

- Survey several microhabitats and record which minibeasts live in each
- Explain how a creature's features suit it to its habitat

Before the bell – prep

Walk the grounds beforehand and pick three real spots — a liftable log or stone (damp/dark), long grass, a wall or fence (warm/dry) — and fix the visiting order. Print the minibeast ID sheet, one per group. Ready a clipboard, magnifier and collection pot per group. Check the log/wall spots for nettles and brambles first.

Materials

Item	Qty	Per	Source	Low-cost substitute
hand magnifier	1	pupil	school kit	share one magnifier per pair, or a clear plastic pot with a domed lid that magnifies
minibeast ID sheet	1	group	classroom	display the ID sheet on the IWB and have groups note names on their Observation Sheet
clipboard	1	group	classroom	a piece of stiff card with a bulldog clip
clear collection pot	2	group	school kit	a clean clear yoghurt pot or jam jar

Safety watch-point

Mind nettles, brambles and stinging plants at the outdoor spots; do not handle anything that stings. Wash hands on return, and lay logs and stones back gently to protect the homes.



Teaching moves

- **Question and Predict:** Run think-pair-share for the predictions, display-only. Push for the reason, not just the name: "Why would a slug be under the log and not on the sunny wall?" Steer answers toward damp/dry, dark/light, cool/warm before pupils jot predictions in the Journal.
- **What We Are Looking For:** Read only the three terms across the board, pointing to the Example cells. Keep the eight creatures off the screen — that detail lives on the printed ID sheet each group reads at the first stop, so you're not overloading the board.
- **Minibeast Hunt Across Microhabitats:** Set boundaries and point out the three exact spots and order before anyone moves. Walk the groups and watch they record where as well as what. Challenge on the spot: "Why is the slug here and not on the wall?" Allow about 21 minutes across the three stops; if short, keep just the log and the wall to preserve the damp-vs-dry contrast. Lay logs back as you go.
- **Sort the Minibeasts We Found:** Drive the sorting interactive on the IWB in explore mode. The class answers "Does it have legs?" then "How many legs?". When the woodlouse won't fit the 6/8 boxes, stop and use it — having more than eight short legs and its own "many legs" group is exactly the kind of noticing good scientists do.
- **Make Sense: Why Lives Where:** Build the class picture on the board by show of hands, then run the why talk: "Why does the slug suit the damp log and not the dry wall?" Name the difference between an observation (we saw three slugs under the log) and an inference (so slugs like damp places).

What it should show

Expect soft, moist creatures — woodlice, worms, slugs — in the damp dark under the log; ladybirds, ants and snails in the grass; spiders on the warm dry wall. The pattern should match soft-moist bodies to damp shade and dry-loving bodies to the wall. A group finding slugs on a sun-baked wall has usually surveyed a shaded, damp section of it — check the actual conditions where they looked, not just the structure.

Misconceptions & interventions

- **Pupils think creatures end up in a spot by chance — "it just happened to be there."** — During the make-sense talk, point to the repeated pattern on the board: the same kinds turn up in the same kinds of spot. Reframe — each creature's body suits a particular place, so we find it there again and again.
- **Pupils treat "we saw three slugs under the log" and "slugs like damp places" as the same statement.** — Separate them aloud: the first is what we saw (observation), the second is what we worked out from it (inference). Have a pupil give you one of each.

Differentiation

Emerging	Developing	Proficient
<ul style="list-style-type: none"> • Pair with a stronger reader for the ID sheet, and ask only for where and what on the Observation Sheet, leaving the why as a spoken answer to you at the spot. 	<ul style="list-style-type: none"> • Prompt a why note for each creature found, linking one body feature to the conditions ("soft body, damp shade"). 	<ul style="list-style-type: none"> • Pose the new-creature challenge early: a flat body with pincers — which microhabitat, and why? Have them justify it from adaptation before the summary.

Cross-curricular hook

Link to Geography — surveying a local site to learn which creatures live where is how we protect Irish wildlife and habitats.