

Why biodiversity matters: research and food webs

Lesson at a glance

Hand back each group's biodiversity audit and open on which spots felt richest. Teach biodiversity, pollinator and food web in short board lines, then groups research Cards B and C plus one chosen card, linking each fact to their audit. Pupils sketch a school-grounds food web on plain paper and capture four evidence notes on the Investigation Journal page. Close by pooling action ideas under flowers/food, shelter and less disturbance for the next project step.

Learning objectives

- Explain why biodiversity matters using evidence from the audit and research
- Describe one Irish biodiversity problem and how it links to Biology
- Sketch a food web of the school grounds to show interdependence

Before the bell: prep

Print one full set of research cards A-E per group before the lesson. Have each group's audit sheets ready to hand back, plus a one-minute class fallback list of living things and spots on the board. Plain paper for food-web sketches; Investigation Journal pages out.

Materials

Item	Qty	Per	Source	Low-cost substitute
biodiversity audit sheets from earlier in this project	1	group	classroom	a class list on the board of living things and spots recorded in Part 1
research cards (Why biodiversity matters; Pollinators in Ireland; All-Ireland Pollinator Plan; Biology and ecosystems; From facts to action)	1	group	provided printable	one class set used as rotating stations for Cards B, C and a choice card
Investigation Journal page	1	pupil	classroom	plain paper with the four must-record prompts said aloud from the board
plain paper for food-web sketch	1	pupil	classroom	sketch directly on the Investigation Journal page if space allows
pencils and coloured pencils	1	pupil	classroom	pencil only
sticky notes or scrap paper for research notes	5	group	classroom	one shared rough page per group

Safety watch-point

Indoor research lesson; no outdoor or tool hazards. Standard classroom care only. If any pollen-heavy samples from Part 1 are still on audit sheets, pupils with hay fever should avoid handling plant debris and wash hands after tidying.

Teaching moves

- **Getting Started:** Hand back audit sheets. Two quick hands-up questions only: where did we find the most kinds, and where almost none. If an audit is missing, pair that group or point them at the board fallback list and leave it visible all lesson.
- **Why our audit matters:** Think-pair-share for one minute using their own audit as evidence. Draw out richer spots versus bare ground and that everyday worms, spiders and bees count. Capture three strong pupil phrases on the board to reuse in research.
- **Biodiversity, pollinators and food webs:** Teach the three terms one at a time with the short pupil lines; mark Biology as a light field name only. Leave the final on-screen line as a whisper or think-aloud. Do not cold-call for a correct answer before the cards.
- **Research the issue:** Model Card C live for two minutes: one fact, one audit link, one action idea. Every group then does full three-note sets on B and C, then a lighter starred line plus audit link on one of A, D or E. Circulate with 'point to the audit line that matches that fact'.
- **Food web of our grounds:** Model one tiny Irish grounds web on the board (sun → grass/ dandelion → caterpillar or snail → robin), saying the arrow points to the eater. Stop modelling after two minutes so every child finishes several linked steps on plain paper from their audit species.
- **Record what we found out:** Name the four must-records aloud: own-words fact, audit link, pollinator or food-web sentence, action idea. Keep the plain-paper web with the journal; do not redraw a board layout. Offer stems only if writers stall.
- **Share key facts for our action:** Invite three or four groups only for a 30-second fact-link-action share. Then gather whole-class action phrases under the board headings flowers/food, shelter and less disturbance so quiet groups still contribute one word.

What it should show

Groups should link pollinator decline or All-Ireland Pollinator Plan actions to thin flower or rich-hedgerow findings on their audit. Food webs start at sun or plants, arrows point to the eater, and include at least three linked steps. A surprising web with arrows the wrong way is usually the hunt-direction mix-up: re-voice energy flow into the eater.

Misconceptions & interventions

- **Biodiversity only means rare or exotic animals, so worms, spiders, daisies and bees do not count.** Point back at their audit sheets and the everyday species listed. Affirm that variety of common living things is what made some spots feel richest.
- **Food-web arrows show who hunts toward the prey.** Trace the model web on the board and say the arrow points to the eater because that is where the energy goes. Have them flip any reversed arrows on their sketch.
- **Research notes can be copied sentences with no link to what we found outside.** Prompt while circulating: point to the line on your audit or the class list that matches that fact, and name whether the action helps a rich or poor spot.

**Differentiation**

Emerging	Developing	Proficient
• Offer a highlighter and the stems 'One fact is... It links to our audit because... It suggests we could...' for Cards B and C; pair with the board fallback list if their audit is thin. • Accept a three-step food web using marked common grounds species (robin, snail, ant) with a question mark on guesses.	• On leftover minutes, rank starred facts and justify which one should drive the class action. • Add a spoken 'If the flowers disappeared, then...' sentence beside their web.	• On the choice card, star the line that best fits a poor spot from their audit and argue why that action should lead the shortlist. • Extend the web with a separate decomposer path (leaf litter → woodlouse → robin) without mixing living-leaf feeding.

Cross-curricular hook

Links to Geography local environment and SESE care for place: Irish pollinator decline and the All-Ireland Pollinator Plan as real island-wide evidence.

