

living-things

Change a habitat: what happens?

Lesson at a glance

Open by imagining a thick Irish hedgerow cut away and asking which living thing feels the change soonest. Groups predict first and later losers on the displayed food web, then read before-and-after count cards for a typical farm hedgerow removal. The class pools the six card rows into the data-recorder interactive and bar chart, traces knock-on chains from plants along the web, and records prediction, count facts and one knock-on on the PredictObserveRecord Investigation Journal page. Close by agreeing one realistic action for the school patch.

Learning objectives

- Predict which living things will drop when a hedgerow is removed, check the counts, and use the food web to explain a likely knock-on order
- Explain that changing one thing in a habitat can send knock-on effects through the food web
- Agree one practical change the class could make to support living things in its own patch

Before the bell – prep

Before the bell, pin every group food web or the class web so producers and links are visible; if webs were not kept, redraw a simple four- or five-link hedgerow web on the board. Print one full before-and-after count-card set per group. Open the data-recorder interactive on the IWB (or rule a two-column board table as backup).

Materials

Item	Qty	Per	Source	Low-cost substitute
before-and-after count cards (hedge plants, bees, butterflies, small birds, caterpillars and aphids, hedgehog signs)	1	group	classroom	write the six before-and-after pairs on the board for shared reading
food web from earlier in this project (group webs or class web)	1	group	classroom	redraw a simple four- or five-link hedgerow web on the board together before the predict step begins
Investigation Journal page	1	pupil	classroom	plain paper with headings What I predicted, What the numbers showed, What I think now

**Safety watch-point**

Indoor card and discussion lesson; no outdoor hazards in this sitting. If any natural materials from earlier project work are handled again, wash hands afterwards.

Teaching moves

- **Getting Started:** Keep this as curiosity only — three or four hands-up guesses, leave disagreement hanging. Do not hand out cards or open the data-recorder yet. Revoice the key question: if one part of a habitat changes, does only that part feel it?
- **Question and predict:** Point groups at the displayed food web. Enforce the two stems in order: 'I think ____ will feel it first because ____' then 'I think ____ might feel it later because ____.' If anyone says only the plants vanish and the rest are fine, push gently: what ate the plants, and what ate those animals?
- **Read the count cards:** One printed set per group. Circulate with 'What does the card show, not what do you wish it showed?' Look for number talk first (bees 32 to 7) before inference. Hold charting until every group has read the full set.
- **Chart the before and after counts:** Drive the data-recorder in explore mode and enter exactly the six card rows (plants 14→0, bees 32→7, butterflies 18→4, small birds 9→2, caterpillars/aphids 45→12, hedgehog signs 3→0). Bars show After counts — ask which are shortest and who lost everything, then whether the chart alone is enough without the Before column.
- **Trace the knock-on effects:** Start every chain at the hedge plants and follow web arrows. If groups stall, model one chain aloud (plants → flower visitors → plant-feeders → small birds → hedgehog signs) and invite challenge: could birds drop partly because insects dropped? When one group shares, ask the class if they agree with the order.
- **Record on your Investigation Journal page:** Use the PredictObserveRecord page only — mirror the three board headings. Oral rehearsal first: prediction, two count facts, one conclusion that links a change in one living thing to another. Fast finishers add a second chain or a question about the school patch.
- **One change for our patch:** Run the fixed seven-minute sequence: groups agree one realistic idea and who it helps first (~3 min), capture up to three strong ideas (~2 min), then vote or consensus for one class action on the board (~2 min). Keep ideas ordinary Irish-school feasible and prompt who to ask (caretaker, principal).

What it should show

Biggest first loss is the hedge plants (14→0). Flower-visitors and plant-feeders drop sharply next (bees 32→7, butterflies 18→4, caterpillars/aphids 45→12); small birds and hedgehog signs fall as shelter and food edges go. Cards show who dropped and by how much, not a timed sequence — a 'surprising' order is fine if the group can defend it from web links. Success is linked drops explained, not one single victim.

Misconceptions & interventions

- **Only the plants disappear and everything else is fine.** — Point at the food-web arrows out of the hedge plants: what ate the plants, and what ate those animals? Then match one animal card drop to that link.
- **The shortest After bar alone proves that living thing felt the change first.** — Bring them back to the Before column and the web: plants fell to zero because the hedge was removed; animal drops are knock-ons reasoned from links, not from bar height alone.
- **Knock-on means every living thing drops for the same reason at the same time.** — Have them name two different reasons on the web — e.g. bees lose flowers, birds lose nest cover and insect food — so order and cause can differ by link.

Differentiation

Emerging	Developing	Proficient
• Sit at the teacher table with a partly traced chain already started at hedge plants; scribe their prediction stem and one before-and-after fact onto the PredictObserveRecord page after oral rehearsal. • Give a smaller card subset first (plants, bees, small birds) before the full six.	• Prompt a second knock-on chain from the same plant loss, or ask whether birds drop mainly from lost nests or lost insect food. • Have them re-check one prediction against a specific card pair and revise the 'what I think now' sentence.	• Critique whether the After bar chart alone could mislead without the Before column, and say what a surveyor would still need to know. • Stretch the school-patch action: name who it helps first and one possible unwanted knock-on if the change is done badly.

Cross-curricular hook

Tie to Maths Data — read before/after tables and the After bar chart for shortest bars, biggest drops and who fell to zero.