

Measure, present and reflect

Lesson at a glance

Open by asking what clue would show the class action helped living things. Groups name one fair re-measure and one controlled condition, then re-survey their action area with the same hoop or string square as the audit. Back indoors, the data-recorder interactive pools before/after tallies into a bar chart; pupils record comparison, evidence claim and next step in the Investigation Journal, peer-critique each other's evidence, and close linking the cycle to the All-Ireland Pollinator Plan.

Learning objectives

- Re-survey or monitor the action area and compare with the original audit
- Present impact evidence and next steps to the class
- Reflect on how Science can help solve biodiversity problems locally and nationally

Before the bell: prep

Have audit journal pages ready per group. Print one double-sided ID sheet (minibeasts / plants) per group. Set outdoor boundaries and a single supervised zone before the bell. Check weather; if outdoors is blocked, run indoor monitoring plans instead.

Materials

Item	Qty	Per	Source	Low-cost substitute
Investigation Journal pages from the biodiversity audit earlier in this project, plus clear space (or the provided results page) for today's after-counts, comparison and next step	1	pupil	classroom	a copy of each group's audit tallies on plain paper plus a blank page for today's after-counts and conclusion
hoop or string quadrat	1	group	school kit	four metre sticks or jump ropes laid as a square
magnifying glass	1	group	school kit	share a class set of two or three magnifiers between groups
minibeast and plant ID sheet	1	group	provided printable	one shared class ID poster on the clipboard rota
clipboard	1	group	classroom	stiff cardboard and a bulldog clip
pencil	1	pupil	classroom	none needed

Safety watch-point

One supervised outdoor zone only, never leave a group at a remote feeder or hedge. Wash hands after soil and minibeasts; return animals; mind nettles and brambles; no tasting plants.

Teaching moves

- **Getting Started:** Keep the open light and hands-only. Take three or four quick clue ideas without judging whether the action worked. Point briefly at the action the class built earlier in this project so everyone knows what is being checked.
- **How will we know if it helped?:** Name evidence of impact, before-and-after comparison and monitoring once with a concrete class example, then model the cycle aloud in about 45 seconds. Each group must name one re-measure and one thing that stays the same. Use a brisk stand-and-show thumbs-up check; spot-check two or three groups only before you leave the room.
- **Re-survey the action area:** All groups work inside one agreed strip you can see and hear. Aim for 12–14 minutes of counting inside the 20-minute step. Circulate asking whether they are matching the audit method. Treat flat or lower numbers as useful evidence, not failure. Wash hands and return animals on the way in.
- **Compare before and after:** Open the data-recorder interactive and enter about four rows as separate before/after bars from real tallies. Read the chart together for four minutes, then give five minutes for journal writing using the three sentence stems on the board: comparison, evidence claim, next step.
- **Try to break their evidence:** Pair groups to swap numbers only: no findings round. Their job is to hunt alternative explanations: weather, time of day, tidying, a different week. Praise aloud any group that weakens its own claim; that is the scientific habit this beat is for.
- **Looking further:** Protect two cold-call prompts even if return ran long: how checking actions matters beyond the school, and one scientist habit to keep. Name the All-Ireland Pollinator Plan as the same survey-act-measure cycle at national scale. Tidy under the talk, not instead of it.

What it should show

Some groups will show a rise in kinds or visits; others stay flat or drop: both are valid. Surprising drops often track season, weather, time of day or an action still settling. A successful outcome is a fair method match, an honest comparison sentence, and a next step tied to the numbers rather than hope.

Misconceptions & interventions

- **If we like our action or worked hard on it, it must have helped.** Point at the chart and restate: impact is judged by the before/after numbers, not by effort. Ask what the bars actually show before any claim of success.
- **Changing hoop size, spot or counting time still counts as a fair re-survey.** Hold up the audit sheet beside today's plan and ask which one thing is allowed to change. Only time passed and the action in place; method stays fixed.
- **Flat or lower numbers mean the project failed.** Say warmly that unexpected results are still data. Fish for real reasons (season, weather, settling time) and fold them into the next-step sentence.



Lesson 8

Differentiation

Emerging	Developing	Proficient
• Stay at the teacher table for the measure-and-control decision; supply the three journal stems already written for them to complete with their own numbers.	• After recording, add one sentence on why a flat result might still be useful and what they would check on a second monitoring visit.	• In the peer critique, name the strongest alternative explanation for their own data and rewrite the evidence claim to match its real strength.

Cross-curricular hook

Tie to Maths Data: before/after bars on the data-recorder become a class comparison of mode and change.

