

Energy in our school: using less, going clean

Lesson at a glance

Open by scanning the classroom for things using energy right now versus waste. Groups predict the school's biggest waste spot and two waste-sign types, then walk a short supervised loop recording use and waste on the Investigation Journal. Pool tallies into a bar chart on the data-recorder interactive. Groups read one Irish renewable card (wind, solar or hydro), then design one practical saving action on a Saving action card tied to the tallest bar, share, and name one class owner for the week.

Learning objectives

- Audit where energy is used and wasted around the school
- Research at least one renewable energy source relevant to Ireland
- Design and present one practical energy-saving action for the class or school

Before the bell: prep

Print one Investigation Journal page per pupil, one Saving action card per group, and research cards A–C (wind, solar, hydro: extras if more than three groups). Agree a tight four-stop route with the caretaker. Clipboards help; journals on books work. One adult helper if corridor protocol needs it.

Materials

Item	Qty	Per	Source	Low-cost substitute
Investigation Journal page	1	pupil	provided printable	plain paper for audit notes (place, energy use, waste, tally) plus a short renewable note
Saving action card	1	group	provided printable	one sticky note or index card per group with the five headings written by the teacher before the lesson: Waste we target / Our one action / Who / When / How we will know it worked
clipboard	1	pupil	classroom	journal resting on a hardback book
renewable energy research cards (wind, solar, hydroelectric)	1	group	provided printable	teacher reads each renewable card aloud from the notes while groups listen and note key words
pencil	1	pupil	classroom	any writing implement



Safety watch-point

One supervised body, walking feet, clear boundaries. Do not open plant or boiler rooms, do not touch electrical fittings, doorway views only for out-of-bounds areas, return quietly.



Teaching moves

- **What are we looking for?:** Board only the use/waste pair and the walk job. Say one line that Irish clean energy and the saving action come after return. Do not open those now. Head off the dark-and-cold fear: saving means energy when and where it is needed.
- **Predict before we walk:** Think-pair-share: one place and why, plus two priority waste-sign types from the board list. Capture two or three predictions on the board without correcting. Hand out journals and pencils so groups jot prediction and priorities before the model stop.
- **Energy walk audit:** Model the classroom stop aloud (wonder-predict-check-observe-think) so pupils see use versus waste. Then one supervised body on the loop: spotters call out, you confirm powered use only, class agrees the row, everyone records before moving. About two minutes per stop; skip blocked rooms for doorway views.
- **Pool our audit on the board:** You drive the data-recorder interactive: Place and Waste signs found, one row per stop visited. If tallies differ, take a show of hands or middle value aloud. Spell out that the tallest bar is today's evidence, not blame. Leave the chart up for the rest of the lesson.
- **Meet Irish clean energy:** Point at the chart: cut waste and clean supply both matter. One card per group, ninety seconds silent read, then one cold-call share per card type at fifteen seconds. Spoken demand-reduction line, then each pupil notes their source plus one other on spare journal lines.
- **Design one saving action:** Put research cards aside so designs stay on measured waste. Seven minutes on the five-line Saving action card only: waste targeted, one action, who, when, how we know. Realistic this week for pupils or staff, not a wind farm.
- **Share our saving actions:** Board the end-goal first: ONE class action + ONE owner. Visible seven-minute timer; gallery, then up to four full shares. Final ninety seconds always stop shares and decide. Write the action and name the owner so something actually runs next week.



What it should show

Audit results vary by building, but expect common waste signs: lights on in empty spaces, heating with a door or window open, idle chargers. A successful Saving action card names waste from the tallest bar, one doable routine, an owner, and a simple check. If every group designs a renewable build instead of a habit change, the research cards stayed out too long: refocus on the chart.



Misconceptions & interventions

- **Pupils think saving energy means sitting in the dark or being cold.** Reframe on the spot: saving is using energy when and where it is needed. Point at a radiator with the window closed as good use, and the same radiator with the window open as waste.
- **Pupils count daylight from a window as school energy use, or treat every powered thing as waste.** At the model stop, separate the list aloud: board and lights are powered use; free daylight is not school energy; waste is only energy nobody needs right now.
- **Groups design a renewable installation instead of a habit change tied to the audit.** Put the research cards aside and point at the tallest bar: the action must cut waste we saw this week, by pupils or staff, not build a new supply.

Differentiation

Emerging	Developing	Proficient
• At stops, tally and copy two or three words from the class call-out rather than full sentences. • Offer board sentence starters on the Saving action card: We will... / The person who does it is... / We will know it worked when...	• Note time of day on journal rows and whether the waste might change after lunch. • Add a clear how-we-know check on the card that a classmate could verify in one week.	• Critique whether the chosen class action truly matches the tallest bar and suggest one fairer check. • Explain in the share why cutting demand and growing Irish renewables are both needed.

Cross-curricular hook

Tie to Maths Data: place names and waste-sign tallies become the bar chart; read the tallest bar as the mode of today's audit.