energy-forces

Where do sounds come from?

Lesson at a glance

Open with eyes closed so the class hears everyday classroom sounds and wonders where each one comes from. Teach sound source with a real object, then briefly drive the string interactive so pupils link the wobble to the source. Pairs take a clipboard on a two-stop sound hunt (indoors plus yard edge or doorway), jot sound and source only, then back in class record two or three finds in the Investigation Journal and run a two-pass N/P then L/Q sort before a short share.

Learning objectives

- Locate and name sources of sound in the indoor and outdoor environment
- Sort sounds as natural or made by people, and loud or quiet

Before the bell — prep

Walk the hunt route that morning and mark two stops plus outdoor boundaries; check weather so a porch, open window or doorway can replace the yard. Pair clipboards with plain jot pages or Investigation Journal sheets underneath before anyone leaves seats. Have the string interactive ready on the IWB (sound off if the room must stay quiet).

Materials

Item	Qty	Per	Source	Low-cost substitute
clipboard	1	group	classroom	a stiff hardcover book or piece of card to lean on
Investigation Journal page	1	pupil	provided printable	a plain page for sound, source, and N/P (natural or made by people), with optional loud/quiet
pencil	1	pupil	classroom	none needed
plain jot page for the clipboard (optional if journal page is taken on the hunt)	1	group	classroom	back of scrap paper

Safety watch-point

Stay together on set boundaries; walk, do not run; notice traffic noise near gates without standing in the road. Wipe muddy footwear before re-entering; wash hands if outdoors.

Lesson 20

Teaching moves

- **Getting Started:** Sit the class still for about ten seconds with eyes closed or heads on desks. Take three quick calls of what they heard. Keep this as curiosity only — do not start the hunt yet. If the room is dead quiet, crack a window or leave the door ajar so outdoor sounds drift in.
- **What is a sound source?:** Teach in three short pieces with a pause after each. Point at your own voice, then a real object (clock, chair scrape). Ask: is a corridor beep the wall, or a phone? Give one natural and one people-made example, then one loud and one quiet label. Keep distance out of loud/quiet. Head off 'the sound is in the air' by revoicing: the ear hears it; the source started it.
- **A string that sings:** Drive the string scene on the IWB. Pluck or slide so the class sees the wobble. Ask: whole board or wobbling string? String or the air? Link back: source is the wobbling string. Do not open a pitch task. If time is tight later, skip this and protect the hunt.
- **Sound hunt:** Pair and hand out clipboards before you move to the door. Model once aloud: wonder, predict the clock, listen, name the source. At each stop: 20–30 seconds quiet listen, whisper sound and source, jot those two only. Fold the class between stops with oral N/P finds. Two rich stops beat a rushed third.
- **Record the sound and its source:** Partner talk first, then two or three best finds on the Investigation Journal: the sound and what made it. No N/P or L/Q ticks yet. Go round and push vague noise-only notes — 'a rumble' needs 'what made it?' Quality over a long list.
- **Sort the sounds:** Same journal list, two passes. Pass 1: finger on each row, tick N or P; call a few oral placements with a source reason. Pass 2: same rows, tick L or Q. Accept reasoned mixed cases (wind on a metal gate). Share one natural and one made-by-people find.
- **What did we notice?:** Take four to six shares. Revoice with source, natural, made by people, loud, quiet. Draw out that quieter natural sounds are easy to miss when people-made sounds are loud, and send a talk-only notice-one-new-source challenge for the way home.

What it should show

Pupils name concrete sources (clock tick, chair scrape, footsteps, bird, wind, distant traffic, school bell) not just 'a noise'. Most lists mix indoor people-made finds with at least one outdoor-environment source. Natural ticks cluster on birds, wind, rain; people-made on bells, voices, cars. A surprising L on a soft outdoor sound often means they judged distance, not strength — revoice loud as strong, quiet as soft.

Misconceptions & interventions

- **Pupils say the sound 'is in the air' or 'comes from the ear'.** — Point at the real object that started it (clock, voice, string). Revoice: the ear hears it, but the source is the thing that made the sound.
- **On the hunt they write only the noise — 'a bang', 'a rumble' — with no source.** — Ask 'what made it? how do you know?' and model one full line: sound + source (e.g. rumble → lorry behind the wall) before they jot the next find.
- **They treat loud as 'near' and quiet as 'far'.** — Hold up the school-bell vs clock-tick pair from the teaching step: loud means strong, quiet means soft. Distance is a different idea — keep it out of the L/Q pass.

Differentiation

Emerging	Developing	Proficient
• Less confident pairs point and name the source only while the partner writes the journal line. • Accept one clear indoor source plus one outdoor-environment source rather than a full list.	• Prompt a source reason on each N/P tick: 'the robin is natural because a bird made it'. • Ask why a quiet natural sound was easy to miss beside a loud people-made one.	• Optional quick N/P or L/Q code on the clipboard if it does not slow the hunt. • Challenge mixed cases (person whistling; wind on a metal gate) and ask for a reasoned choice tied to the source.

Cross-curricular hook

Link to Geography's local environment — name school-yard and doorway sources as features of the place they move through every day.