

# Muffling sound: keep it quiet

## Lesson at a glance

Start a ticking timer bare on the desk and ask how to quieten it without switching it off. Pupils predict on the Investigation Journal which wrapping muffles most — sock, bubble wrap, paper or nothing — then the class runs a whole-class fair listen at one front table with a shoebox. Helpers wrap the timer; everyone votes louder / same / quieter from one agreed spot while you mark a board chart. Close by linking soft, thick materials to school quiet-spots like hall curtains and carpet.

## Learning objectives

- Predict which wrapping will muffle a sound most and say why
- Observe and record which materials make a sound quieter

## Before the bell – prep

Gather one ticking timer or gentle buzzer, a shoebox, and one of each wrapping: sock, bubble wrap, paper (scarf optional). Check the timer is audible across the room but not sharp. Print one Investigation Journal page each. Clear a front table and sketch the results chart on the board before the bell.

## Materials

| Item                                          | Qty | Per   | Source             | Low-cost substitute                                            |
|-----------------------------------------------|-----|-------|--------------------|----------------------------------------------------------------|
| small loud ticking timer or battery buzzer    | 1   | class | school kit         | wind-up kitchen timer or a phone alarm at a gentle volume      |
| shoebox                                       | 1   | class | classroom          | any small cardboard box with a lid or flap                     |
| sock (clean)                                  | 1   | class | brought from home  | a folded soft cloth or small towel                             |
| bubble wrap square                            | 1   | class | classroom          | a crumpled plastic bag or packing foam scrap                   |
| sheet of paper                                | 1   | class | classroom          | a page from a scrap paper tray                                 |
| scarf or soft cloth (optional extra wrapping) | 1   | class | classroom          | a folded jumper sleeve or tea towel                            |
| Investigation Journal page                    | 1   | pupil | provided printable | plain paper with headings I predict / I observe / what I found |



### Safety watch-point

Never hold the timer or buzzer beside anyone's ear; keep the volume class-friendly for the whole room.



### Teaching moves

- **Getting Started:** Start the bare timer so the whole class can hear it. Ask how we could make it quieter without turning it off; take three or four quick partner ideas only. Do not name a best material yet — leave the apparatus and listening rules for the next steps.
- **Which wrapping will help?:** Introduce muffle with the timer still ticking. Hold up sock, bubble wrap and paper at the front — do not pass the single set around the room. Hand out Investigation Journal pages now; pupils record a prediction and whisper why to a partner, then take a quick show of hands so the split is visible.
- **Try the wrappings:** Agree one listening spot and the thumbs vote (up = louder, flat = same, down = quieter). Model nothing then paper live: listen, vote, mark the board chart. Helpers place bubble wrap then sock in the same box and order. Revoice muffle, quieter and same spot; if the sock is not quieter, check it is fully wrapped and the spot has not crept closer.
- **Record what we heard:** Keep the board chart and word bank visible. Pupils leave their first guess untouched and write or draw louder / same / quieter for each wrapping. Circulate with prompts like 'What did your ears tell you about the sock?'; accept faces, L/M/Q marks or words.
- **What did we notice?:** On the carpet, lock in the quietest wrapping from the chart first, then draw out that soft, thick materials soak up some of the wobble. Link to hall curtains, reading-corner carpet, PE mats and coats on hooks. Revoice a strong sentence: 'The soft sock muffled the sound.'



### What it should show

Expect the sock (or scarf) to sound quietest, paper almost the same as nothing, and bubble wrap in between. A group that hears little change with the sock usually has the timer only partly wrapped or has edged closer to the box — re-wrap fully and re-listen from the agreed spot.



### Misconceptions & interventions

- **Any cover makes the sound disappear completely.** — Point at the board chart: paper often stayed almost the same as nothing. Ask them to name which wrapping actually changed the tick and which barely did.
- **The box made it quiet, not the wrapping.** — Remind them the box stayed the same every try; only the wrapping changed. Trace nothing → paper → sock on the chart so the pattern is clear.
- **Hard materials are always louder and soft ones always silent.** — Have them feel paper beside the sock and re-listen both. Soft, thick materials soak up some of the wobble; thin hard paper usually does little.



**Differentiation**

| Emerging                                                                                                                                                                                                                                                                                                                                  | Developing                                                                                                                                                                                                                                       | Proficient                                                                                                                                                                                                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Pair at the teacher table; child points to the quietest wrapping on the board chart while you scribe louder / same / quieter from the word bank.</li> <li>• Accept drawings or happy/sad faces instead of written words; leave the prediction as a simple circle on the journal page.</li> </ul> | <ul style="list-style-type: none"> <li>• After recording, ask why the sock beat the paper using soft and thick from the key words.</li> <li>• Invite them to name one other soft classroom item that might muffle sound the same way.</li> </ul> | <ul style="list-style-type: none"> <li>• Challenge them to explain why the fair-listen spot must stay fixed, using the board chart as evidence.</li> <li>• Ask: if we only had paper, how could we wrap it to muffle better — more layers, or a tighter wrap?</li> </ul> |

**Cross-curricular hook**

Link to Aistear/SPHE quiet places and to English oral language — pupils revoice ‘The soft sock muffled the sound’ in a full sentence.