

Loud and quiet sounds

Lesson at a glance

Open with a soft clap then a louder clap, and one soft then harder hit on a ready drum, asking only what changed. Pupils predict which hit will be louder on the same drum and mark it on the Investigation Journal page. In groups they hit a drum or tin skin soft then hard, listening from the same spot and feeling the bounce with a light finger. The sound-explorer interactive on the drum scene shows bigger rings for louder hits; name the harder-hit → bigger-wobble → louder link, then record soft vs hard and an I-found-out stem.

Learning objectives

- Predict and test how to make the same sound louder or quieter
- Link a harder tap to a bigger wobble and a louder sound

Before the bell – prep

Set out one drum or tin with cling-film/balloon skin per small group before the bell — the skin is essential for feeling the wobble. Put Investigation Journal pages on desks. Open the sound-explorer interactive on the drum scene. Clear space so groups are not ear-to-ear.

Materials

Item	Qty	Per	Source	Low-cost substitute
classroom drum or tin with cling film (membrane skin)	1	group	school kit	empty biscuit tin with a balloon skin or stretchy bag stretched over the top and secured with a rubber band
shaker (optional listen-only loud/quiet check)	1	group	school kit	sealed pot with a few dry rice grains or pasta pieces
elastic-band guitar (box or tub with elastic bands stretched across; optional extension)	1	group	classroom	single thick elastic band stretched over a sturdy book or empty tissue box
Investigation Journal page	1	pupil	provided printable	plain paper with predict / observe / find out headings written by the teacher



Safety watch-point

Gentle hits only, away from faces; stop very loud banging near ears. Keep class-friendly volume throughout.



Teaching moves

- **Getting Started:** Sound one soft clap, then a clearly louder clap; ask only What changed? Then one soft and one harder hit on the ready drum. Draw out harder hit or bigger movement. Stay with louder/quieter — avoid pitch, tune or note.
- **Loud and quiet:** Name quiet and loud from the claps they just heard. Add that things making sound often wobble a little. Do not give the bigger-wobble → louder link yet — that waits until after they feel the skin.
- **What do you predict?:** Pose: which is louder on the same drum, soft hit or hard hit? Take three or four reasoned predictions and jot short phrases on the board. Pupils mark quiet/loud face or soft/hard on the Journal page before any kit goes out — about 30 seconds.
- **Soft hit, hard hit:** Model once: same drum, same place, soft then hard. Groups try three soft and three harder hits; circulate asking What did you hear? What did your finger feel? If a group only bangs, reset the soft-then-hard sequence. Hands-on and talk only — no Journal writing yet.
- **See the bigger wobble:** Open sound-explorer on the drum scene; move quiet → medium → loud and spell out bigger rings mean louder, still a drum sound. Ask Did the sound get louder? then Does it still sound like a drum? Name the science link now: harder hit, bigger wobble, louder sound. Loud is not the same as high. Keep real drums on the tables.
- **Record what you noticed:** Re-read two or three board predictions first. Pupils show soft vs hard with faces or words and finish I found out... Support emerging writers with stems said aloud: The soft hit was... The hard hit was...
- **Loud and quiet around us:** Three minutes of science talk only — do not pack instruments yet. Draw school and home examples (whisper vs yard bell, soft rain vs wind). Revoice: harder hit → bigger wobble → louder; softer hit → quieter. Stay with force of hit.



What it should show

Harder hits sound louder and the skin feels a bigger bounce; the sound stays the same kind of drum sound. A group that says it went higher is mixing loud with high — ask them to listen again for loudness only. If the skin barely moves, the hard hit was still too gentle or the membrane is slack.



Misconceptions & interventions

- **Pupils mix loud with high — they say the hard hit went higher instead of louder.** — Keep saying louder or quieter, not higher or lower. Replay soft then hard on the same drum and ask only which was easier to hear from further away.
- **Pupils think a louder sound means a different kind of sound, not the same drum with more force.** — On the sound-explorer drum scene, move strength up and ask Does it still sound like a drum? Point back to the real skin they felt bounce more.

Differentiation

Emerging	Developing	Proficient
• Pair at the teacher table for three soft then three harder hits; record with quiet/loud faces only and a spoken I found out... stem scribed if needed.	• After the main comparison, ask Why did the hard hit feel different under your finger? and add that reason to the I found out... stem.	• Critique fairness: same drum, same spot, only the hit changed — what would spoil the comparison? Optional: stronger vs gentler pluck on an elastic-band if one is already on the bench.

Cross-curricular hook

Link to Music — controlling dynamics (loud/quiet) on classroom instruments without changing the pitch of the sound.