

Lesson 3 · living-things

The Heart: Feeling Your Pulse

Lesson at a glance

Open by having 3rd class sit still, hand on chest, and guess whether running speeds the heart up, slows it down, or changes nothing. Pupils find their wrist pulse, watch you model a 15-second count on the fair-test-timer, then predict to a partner. Each child counts at rest and after a minute of star-jumps, recording both numbers in the Resting and After star-jumps boxes of the Investigation Journal, repeating once. The data-recorder pools a sample into a bar chart, then a display-only talk on what keeps a heart healthy.

Learning objectives

- Find a pulse and observe that the heart beats faster after movement
- Record pulse counts before and after exercise and describe what keeps a heart healthy

Before the bell – prep

Print the Investigation Journal pulse page (Resting / After star-jumps boxes, plus spare boxes for the second run) one per pupil and have them on desks. Load the fair-test-timer and data-recorder on the IWB before the bell. Clear a space so children can do star-jumps without bumping desks. No kit beyond the timer, the journal page and pencils.

Materials

Item	Qty	Per	Source	Low-cost substitute
Investigation Journal page	1	pupil	classroom	a sheet of plain paper folded into Resting and After columns, with room to write each count twice
stopwatch	1	group	school kit	the fair-test timer on the IWB, used for the whole class together

Safety watch-point

Watch for any child who feels light-headed during star-jumps — they sit out and count a partner's pulse instead. Any child who shouldn't do star-jumps is timekeeper or marches gently. Clear desks so nobody bumps.

Teaching moves

- **What the Heart Does:** This is the make-or-break beat: get all 25–30 children to securely find a pulse — two fingers (not the thumb) on the wrist below the base of the thumb, press as gently as a feather. Walk the room and help every empty hand. Offer the neck pulse beside the windpipe early as a backup, not a last resort. Spend longer here than budgeted and borrow time from step 6 — the timed count cannot work until everyone has found a pulse.
- **A Modelled Count, Then Predict:** Model the whole cycle aloud: 'I predict my count goes up because my body works harder... I counted 18.' Run the fair-test-timer in display mode so the class sees how long 15 seconds lasts. Write up, down, same on the board with a tally of hands, and remind them a prediction is never wrong — it's the start of the science. Pupils don't count their own yet; that's the next step.
- **Count, Move, Count Again:** Run three clear beats to the timer: rest and count (write it first, before any movement, for a true resting value), one minute of star-jumps, then straight back to sitting and count again. Tell children to keep fingers near the pulse during the last few jumps and count the instant they stop — the pulse drops fast while they resettle. Repeat the full cycle once into the spare boxes. Fast finishers sketch a prediction for dancing or watch a partner — no device task.
- **Pool the Class Change:** Drive the data-recorder in explore mode. Call up six to eight pupils for their resting and after pair, type them in, and reveal the bar chart in one click. Frame it as a sample, not the whole class. After each pair, ask 'hands up if your after-number was bigger too,' so unpicked children check their own data. The After star-jumps bars should stand taller — name why: working muscles need more blood, so the heart pumps faster.
- **Making Sense and Keeping a Heart Healthy:** Keep this display-only and verbal, no writing. Draw out two ideas: the heart speeds up when we move because muscles need more blood, and it stays strong with exercise and rest. Ask whether their two pairs of counts were close, and why testing twice helps. If pulse-finding ran long, trim this discussion to recover the time.

What it should show

Nearly every pupil's after-star-jumps count should be clearly higher than their resting count, and the data-recorder's After bars should stand taller than the Resting bars. A child whose after-number isn't higher usually counted too slowly after stopping — the pulse had already fallen — or pressed too hard and miscounted. Re-run, keeping fingers near the pulse during the last jumps and counting the instant they sit.

Misconceptions & interventions

- **Pupils use their thumb to feel the pulse, then think they've found two heartbeats because the thumb has its own pulse.** — Stop and show the two-finger method on the wrist — index and middle, never the thumb. Have them re-find it; the single steady beat is the heart.
- **Pupils think a faster heartbeat after running means something is wrong or unhealthy.** — Revoice the chart in step 5: a faster heart while moving is the body working well, sending more blood to the muscles. It slows again with rest, and exercise keeps the muscle strong.
- **Pupils press harder to feel the pulse more strongly and lose it instead.** — Tell them to press 'as gently as feeling a feather' — too much pressure flattens the vessel. Demonstrate the light touch and let them retry on the wrist or neck.

Differentiation

Emerging	Developing	Proficient
<ul style="list-style-type: none"> • Use the neck pulse if the wrist is too hard to feel, and pair the child with you at the teacher table for the first count. • Let them march gently on the spot rather than star-jump if movement is a barrier, and still count the change. 	<ul style="list-style-type: none"> • Ask them to compare their two resting counts and say whether testing twice gave similar numbers, and why that matters. 	<ul style="list-style-type: none"> • Ask them to predict and explain what their count would do after dancing versus after rest, and how they'd make the after-count fairer by starting it faster.

Cross-curricular hook

Tie to the Maths Data strand — pupils read the bar chart and compare resting and after counts as bigger, smaller or the same.