

living-things

The heart: feeling your pulse

Lesson at a glance

Open by inviting pupils to feel the tiny throb on their wrist and wonder what makes it. Teach pulse, heart and resting pulse, then model two-finger placement before anyone predicts. Pupils jot on the Investigation Journal whether the 15-second count will go up, down or stay the same after one minute of star-jumps. Drive the fair-test-timer through resting count, moving, and after-moving count; pool a voluntary class tally and close on why the heart speeds up plus two everyday healthy habits.

Learning objectives

- Find a pulse and count beats for a short timed interval
- Compare resting pulse with pulse after moving and say what changed
- Name two everyday habits that help keep the heart healthy

Before the bell – prep

Print one Investigation Journal page per pupil and open the fair-test-timer interactive on the IWB in countdown mode. Push desks back for safe star-jumps or marching on the spot. Keep water handy and know who should march rather than jump.

Materials

Item	Qty	Per	Source	Low-cost substitute
Investigation Journal page	1	pupil	provided printable	plain paper with spaces for prediction, resting count, after-moving count, and what changed
stopwatch	1	class	school kit	the fair-test-timer interactive on the IWB, or the classroom clock with a second hand
clear floor space for star-jumps or marching on the spot	1	class	classroom	march on the spot beside desks if the room cannot be cleared

Safety watch-point

Never press hard on the neck; never use the thumb. Watch for light-headedness after jumping — offer water and a sit-down. No pupil is made to jump; march or timekeep instead.



Teaching moves

- **Getting Started:** Hand out the Investigation Journal page immediately so it is on every desk. Keep the hook light — a few volunteers try their wrist while you hold back naming the star-jump plan, so curiosity carries the next minutes.
- **What is a pulse?:** Explain pulse, heart and resting pulse in plain talk, then model the worked cycle aloud on your own wrist: two fingers (never the thumb) just below the thumb base, gentle press, quiet wait. Head off thumb-pressing before pupils try.
- **What do you think will happen?:** Quick hands-up check every pupil has the journal page, then think-pair-share: will the 15-second count go up, down or stay the same, and why. Capture three or four pupil-worded predictions on the board; do not reveal the expected result.
- **Find your pulse:** Coach only finding, no counting yet: palm up, index and middle finger on the thumb side of the wrist, gentle press. Pair anyone who cannot find it with a consenting partner's clear beat, or try the side of the neck very gently — never hard.
- **Time each 15-second count:** Name each phase out loud as you drive the fair-test-timer: Resting count (15 s) → write; Moving (60 s star-jumps or march) → sit; After-moving count (15 s) → write. Reset seconds before each start so there is no silent hunt mid-flow. Offer march-on-spot and timekeeper roles; stop cleanly on your signal.
- **Compare what we found:** Pupils look only at the two numbers already on the journal page — no rewriting. Ask which is bigger and what changed. Pool voluntary numbers only on the board and tally up / similar / down; leave the tally visible without locking the class pattern yet.
- **What the evidence shows:** Ask what the tally shows before you summarise; then lock in that most pulses rose because working muscles need more from the blood so the heart pump speeds up. Return to board predictions, celebrate matches and misses alike. Invite two everyday healthy habits in a kind, practical tone — no fitness ranking. Optionally tell the short William Harvey story lightly at the end.
- **Reflect and tidy:** Quick pair share: one surprise about the heart today, or one healthy habit to try this week. Calm breathing for 30 seconds, push desks back, and check anyone who felt dizzy is settled before they leave.

What it should show

Resting 15-second counts often land roughly in the high teens to mid-twenties and vary a lot. After star-jumps most counts rise clearly — exact numbers matter less than the up pattern. A flat or lower second count usually means the pulse was not found both times or the after-moving count did not start straight after moving; re-find and re-run the second 15 seconds promptly.



Misconceptions & interventions

- **Pupils press with the thumb to feel the pulse, which has its own beat and confuses the count.** — Hold up your hand and show index and middle finger only on the wrist spot. Say ‘two fingers, never the thumb’ and have them switch before the timed counts.
- **Pupils think the heart ‘rests’ between beats the way a person sits down.** — Revoice gently: the heart keeps a rhythm all day and night, speeding up and slowing down as the body needs it — the throb they feel is that steady pump.
- **‘A higher pulse means something is wrong.’** — Point to the class tally of rises after moving: a higher count after hard work is the healthy, expected response, and it eases back toward resting after a calm sit-down.

Differentiation

Emerging	Developing	Proficient
• If the wrist pulse will not come, try the side of the neck very gently or feel a consenting partner’s (or the teacher’s) wrist so the idea is still met; as helper, watch for quiet hands instead of counting own body if anxiety rises. • For comparison, draw two heart shapes, place the two numbers in them, and circle the bigger one.	• March on the spot if star-jumps are not right; still complete both 15-second counts and say whether the number went up, down or stayed similar. • Whisper-compare the size of the change with a partner — curiosity only, no ranking who is ‘fitter’.	• Explain in one sentence why keeping both counts at 15 seconds makes the comparison fair. • Link the rise to muscles needing more from the blood, and name a third everyday habit beyond the two shared by the class.

Cross-curricular hook

Tie to Maths Data — voluntary board tally of up / similar / down counts, then read the class pattern together.