Lesson 3

living-things

The heart: feeling your pulse

Lesson at a glance

Open by inviting pupils to feel a tiny beat on their wrist and wonder what makes it. Teach pulse, heart and resting pulse, then model two fingers below the thumb base. Pupils predict on the Investigation Journal page whether a 15-second count will rise after one minute of star-jumps. Drive the fair-test-timer interactive through resting count, moving, and after-moving count. Pool a voluntary board tally, name the pattern, and close by naming two everyday healthy-heart 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 hand out at the start. Push desks back for safe star-jumps or marching. Open the fair-test-timer interactive on the IWB in countdown mode before the bell. Have water nearby for anyone who feels light-headed.

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. No one is made to jump — offer marching or timekeeper roles. Watch for light-headedness; water and a sit-down, then calm breathing before leaving.

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Teaching moves

- **What is a pulse?:** Teach the key point first, then model on your own wrist aloud: two fingers (never the thumb), gentle press just below the thumb base, stay quiet and wait. Head off thumb-pressing before anyone tries. If a pupil cannot find a wrist beat, offer a gentle neck try or a consented feel of a partner's wrist.
- **What do you think will happen?:** Confirm every pupil has the Investigation Journal page. Run think-pair-share on up, down or same and why, then capture three or four predictions on the board in pupil words. Remind them to jot before any counting; do not reveal the expected result.
- **Find your pulse:** Coach only finding, no counting yet: palm up, index and middle finger, gentle press. Look for still bodies and fingers held ready. Pair anyone who cannot find it with a clear beat, or try the side of the neck very gently.
- **Time each 15-second count:** Drive the fair-test-timer and name each phase out loud: Resting count (15 s) → Moving (60 s star-jumps or march) → After-moving count (15 s). Whole class starts together on your signal. Reset to 15 seconds while they sit and re-find the pulse so the second count begins straight after moving. Light fairness talk: same counting time, own pulse both times.
- **Compare what we found:** Pupils only look 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; separate what we counted from what we think it means.
- **What the evidence shows:** Start the discussion from the tally — let the class name the pattern before you lock it in. Link rising pulse to the heart pumping harder for working muscles. Return to board predictions and celebrate matches and misses alike. Steer habits talk to everyday hopeful actions (play, walking, rest, water, mixed foods) until every pupil can name two. Optionally tell the short William Harvey pump story.

What it should show

Most 15-second resting counts fall roughly in the high teens to mid-twenties and vary a lot. After star-jumps the number usually rises clearly — exact values matter less than the up pattern. A flat or lower count often means the pulse was missed one time or the second count started too late; re-find the beat and re-run the after-moving 15 seconds straight after moving.

Misconceptions & interventions

- **Pupils press with the thumb, which has its own pulse and confuses the count.** — Stop and re-model: hold up two fingers only and place them on your wrist while they watch. Say 'never the thumb' and have them switch before the next count.
- **Pupils think a higher pulse after moving means something is wrong with the heart.** — Point to the class tally of rises and revoice: after hard moving, a faster beat is the healthy, expected response as the pump works harder for the muscles, then eases back when we sit calmly.
- **Pupils think the heart 'rests' between beats like a person sitting down.** — Gently revoice that the heart keeps a rhythm all day and night, speeding up and slowing down as the body needs it — the resting count is just the calm pace, not a stop.

Differentiation

Emerging	Developing	Proficient
• If a wrist pulse is hard to find, try the side of the neck very gently or let them feel a consented partner's or teacher's wrist so they still meet the idea. • For compare, draw two heart shapes, copy the two numbers in, and circle the bigger one.	• Prompt a short 'because' on the prediction jot and a rough 'by how much' when comparing the two counts. • Whisper-compare with a partner whose count changed — curiosity about the change only, no fitness ranking.	• Ask why keeping both counts to 15 seconds makes the comparison fair. • Link to the Harvey story: how is our careful before-and-after counting a bit like what scientists do?

Cross-curricular hook

Tie to SPHE healthy-body habits and Maths measures — compare two counts and read the class tally pattern.