EXAM PAPER

Science Year 8 — Practice Exam 2

PREVIEW
This file has the first 15 of the 30 questions in this paper. The rest is locked: it comes with a PrepNest plan, or with the paper itself for VCE.

Total time: 45 minutes

SECTIONS IN THIS PAPER

- Science — 45 min

INSTRUCTIONS

Answer every question you can. Write your working in the space provided for long-answer questions. Marking guidance and full explanations are provided in the separate answer key.

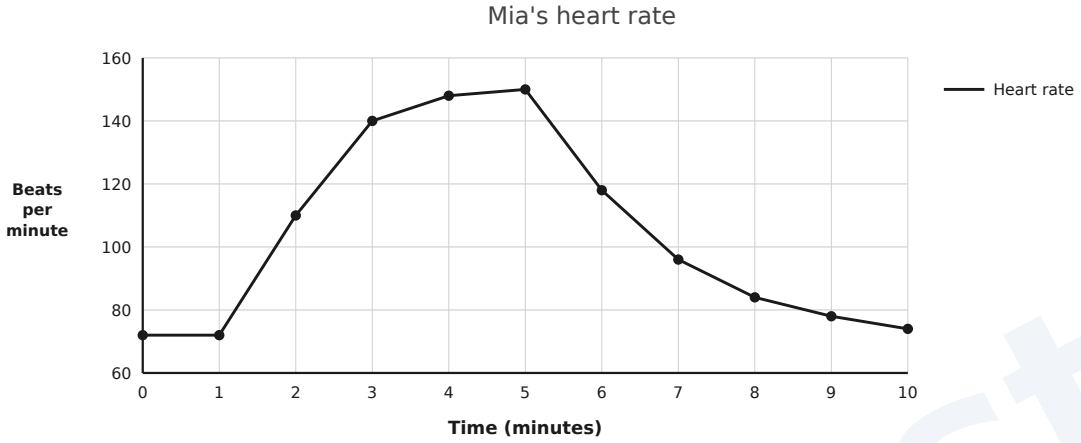
PrepNest

YEAR 8 SCIENCE

Science

45 minutes

1. The graph shows Mia's heart rate before, during and after a run. She ran from minute 2 to minute 6.
Which explanation best fits the change in her heart rate between minute 2 and minute 4?



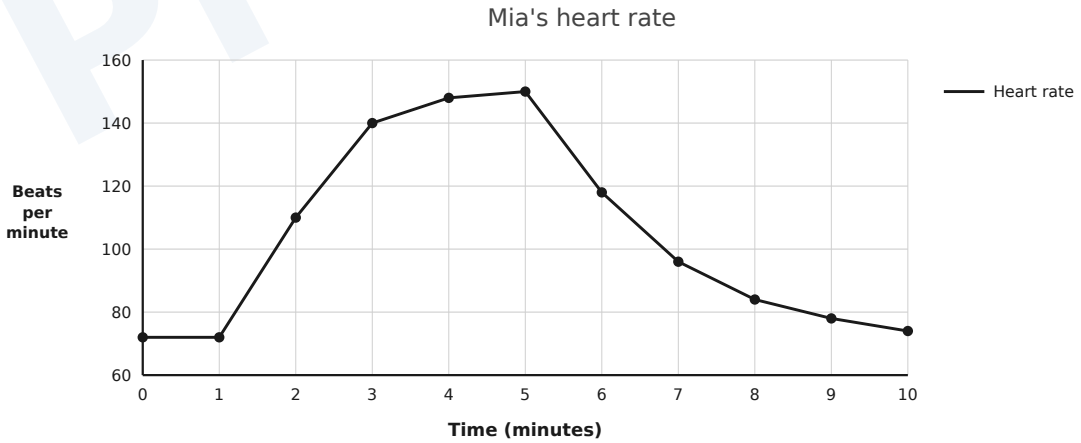
A. Her heart muscle is getting tired, so it beats faster to rest.

B. Running makes her blood thicker, so it must be pushed harder.

C. Her working muscles need more oxygen and glucose, so the heart pumps blood faster.

D. Her lungs stop working while she runs, so the heart takes over.

2. The graph shows Mia's heart rate before, during and after a run. She stopped running at minute 6.
Why is her heart rate still above 72 beats per minute at minute 8?



A. Her heart has been damaged by the run.

B. Her heart rate stays at its highest until she sleeps.

C. Her blood has run out of oxygen completely.

D. Her muscles still need extra oxygen to recover after the run.

PrepNest

3. The inside wall of the small intestine is covered in millions of tiny finger-like folds called villi. How do villi help the digestive system?

A. They give a much larger surface area for absorbing nutrients into the blood.

B. They squeeze food along the intestine.

C. They make acid to break down food.

D. They stop bacteria from entering the body.

4. A celery stalk is stood in water coloured with blue dye. A few hours later, thin blue lines run up the stalk and into the leaves.
Which tissue carried the coloured water?

A. Phloem

B. Xylem

C. Epidermis

D. Root hairs

5. A student wants to find out whether light affects how much water a plant loses through its leaves.
Which set-up is a fair test?

A. One plant kept in light for a day, then the same plant kept in the dark for a day with less water

B. A large plant kept in light and a small plant kept in the dark, both weighed after 24 hours

C. Two plants of the same type and size, given the same water, one kept in light and one in the dark, both weighed after 24 hours

D. Two plants of different types, both kept in light, one watered more than the other

6. The air sacs (alveoli) in the lungs have walls that are only one cell thick, and each is wrapped in tiny blood vessels.
Why is this structure important?

A. The thin walls let the lungs stretch further than any other organ.

B. The blood vessels keep the alveoli warm.

C. The thin walls stop dust from entering the blood.

D. Oxygen and carbon dioxide only have a very short distance to move between the air and the blood.

7. Along the Mid-Atlantic Ridge, two tectonic plates are moving apart and magma rises to fill the gap, forming new sea floor.
What type of plate boundary is this?

A. Divergent

B. Convergent

C. Transform

D. Subduction

PrepNest

8. The Himalayas, the highest mountains on Earth, are still rising by a few millimetres every year.
What is the best explanation?

A. Volcanoes are erupting under the mountains and adding lava to the top.

B. The Indian Plate is still pushing into the Eurasian Plate, crumpling and lifting the rock.

C. The mountains are growing because new rock forms at a mid-ocean ridge beneath them.

D. Snow building up on the peaks adds to their height.

9. Mesosaurus was a small reptile that lived in fresh water about 280 million years ago. Its fossils are found in southern Africa and in South America, but nowhere else.
How do these fossils support the theory of plate tectonics?

A. Mesosaurus swam across the Atlantic Ocean between the two continents.

B. The fossils were carried across the ocean by ocean currents.

C. Africa and South America were once joined, so Mesosaurus could live across both.

D. Mesosaurus must have evolved separately on each continent.

10. Scientists measured the age of rock on the sea floor at different distances from an ocean ridge.
What do the results suggest?

Age of sea-floor rock near an ocean ridge

Distance from the ridge (km)	Age of the rock (million years)
0	0
50	2
100	4
150	6

A. The sea floor is the same age everywhere.

B. The oldest sea floor is found at the ridge.

C. The sea floor is sinking back into the ridge.

D. New sea floor forms at the ridge and moves away from it over time.

PrepNest

11. The table shows the age of sea-floor rock at different distances from an ocean ridge. About how far does the sea floor move away from the ridge each year?

Age of sea-floor rock near an ocean ridge

Distance from the ridge (km)	Age of the rock (million years)
0	0
50	2
100	4
150	6

A. 2.5 cm

B. 25 cm

C. 2.5 m

D. 25 km

12. Australia has no active volcanoes on the mainland and far fewer large earthquakes than New Zealand.
What is the best explanation?

A. Australia is too dry for volcanoes to form.

B. Australia is near the middle of a tectonic plate, while New Zealand sits on the boundary between two plates.

C. Australia is on a divergent boundary, where earthquakes cannot happen.

D. New Zealand is much closer to the South Pole.

13. Sandstone is made of grains of sand that have been pressed and cemented together, and it sometimes contains fossils.
What type of rock is sandstone?

A. Igneous

B. Metamorphic

C. Sedimentary

D. Volcanic

14. Granite has crystals large enough to see easily. Basalt has crystals too small to see without a microscope. Both formed when melted rock cooled.
What explains the difference in crystal size?

A. Granite cooled quickly at the surface, while basalt cooled slowly underground.

B. Granite is much older than basalt, so its crystals have had longer to grow since it cooled.

C. Basalt was crushed into small crystals by the weight of rock above it.

D. Granite cooled slowly deep underground, while basalt cooled quickly at or near the surface.

PrepNest

15. Limestone buried deep underground is heated and squeezed for millions of years, but it does not melt.
Which rock forms?

A. Marble

B. Granite

C. Sandstone

D. Basalt

PrepNest

LOCKED The rest of the paper comes with a PrepNest plan · prepnest.com.au/pricing

16.

17.

18.

19.

20.

PrepNest

LOCKED The rest of the paper comes with a PrepNest plan · prepnest.com.au/pricing

21.

22.

23.

24.

LOCKED The rest of the paper comes with a PrepNest plan · prepnest.com.au/pricing

25.

26.

27.

28.

29.

LOCKED The rest of the paper comes with a PrepNest plan · prepnest.com.au/pricing

30.

15 questions locked, up to question 30.

PrepNest

PREVIEW

That’s the end of the preview

You’ve seen the first 15 of the 30 questions in Science Year 8 — Practice Exam 2. The full paper is worth 30 marks.

STILL TO COME	QUESTIONS	MARKS
Science	15	15

The full paper comes with

- Every question, printed exactly like the ones in this preview
- The complete answer key, with the working behind every mark
- A topic report after marking, showing what to practice next

Get the full paper at

prepnest.com.au/practice/exams/science-year_8-2

PrepNest