Year 6 reading comprehension: How a Vacuum Flask Works

English · Reading comprehension
Level: Medium

Student: _____ Date: _____

Instructions
- Read the text first. There are 2 questions. Read each one carefully.
- Circle the best answer. Look back at the text to find the words that tell you.
- A grown-up can read the text aloud — that's fine.
- The answers are at the end. Check them together when you have finished.

Questions

Read this, then answer questions 1–2.



How a Vacuum Flask Works

A vacuum flask keeps hot drinks hot and cold drinks cold for many hours. It works by slowing down the three ways that heat can travel: conduction, convection and radiation. Conduction is the movement of heat from particle to particle, through solids, liquids and gases, as when a spoon in a hot cup becomes hot. Convection is the movement of heat by currents in a liquid or a gas. Radiation is the movement of heat as invisible rays, the way warmth reaches you from a campfire. A flask has two walls, one inside the other, with almost all the air pumped out of the gap between them. That gap is a vacuum, and a vacuum has almost no particles, so heat cannot cross it by conduction or convection. The inner wall has a shiny coating, which reflects heat rays back towards the drink, so little escapes by radiation. The stopper is made of plastic or cork, which are poor conductors, so little heat leaks out through the top. The Scottish scientist James Dewar invented the vacuum flask in 1892. Even the best flask cannot stop heat for ever, so a drink slowly cools over many hours.

1. What does ‘reflects’ mean in the eighth sentence?

Circle one answer.

○ **A** sends back ○ **B** makes hotter ○ **C** soaks up ○ **D** hides away

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2. How many years before the year 2000 was the vacuum flask invented?

Circle one answer.

○ **A** 92 years ○ **B** 98 years ○ **C** 118 years ○ **D** 108 years

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Answer key

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1. A — sends back

The text says: “The inner wall has a shiny coating, which reflects heat rays back towards the drink, so little escapes by radiation.” The sentence around the word tells you what it means here.

2. D — 108 years

The text says: “The Scottish scientist James Dewar invented the vacuum flask in 1892.” 2000 − 1892 = 108. So it was invented 108 years before 2000.