

Energy

4. Heating and Cooling

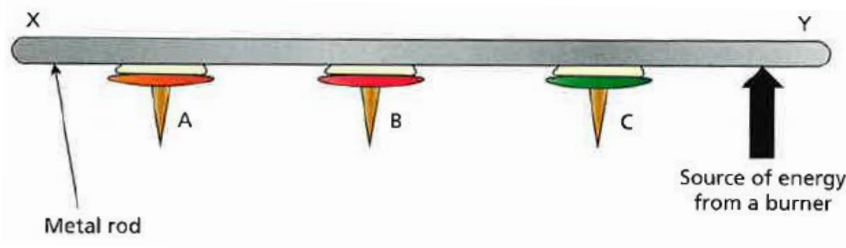
CONCEPT 3

TEST YOURSELF

INSULATION

KNOW

Q1 Look at the following diagram. Pins A, B and C are attached to a metal rod by petroleum jelly that melts at around 60°C.



Heat energy is applied at position Y.

- How does the heat energy travel from position Y to position X?
- What will happen as time goes by?
- A second piece of metal was used. It was a better conductor than the first. What will happen after energy is applied to position Y when the second piece of metal is used?
- Could this method be used with non-metals?

APPLY

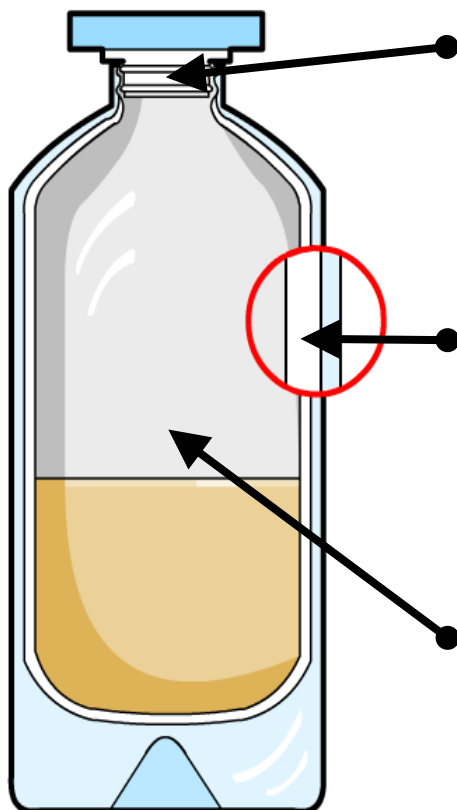
Q2 How could investigate what would be the best cover for a coffee cup to keep the coffee hotter for longer?

The options for covers are:

- black paper
- white paper
- aluminium foil (shiny)
- bubble wrap

EXTEND

- Q3 Look at the diagram of a vacuum flask. It is designed to keep hot liquids hot and cold liquids cold. Identify how this is achieved and explain how each feature helps the vacuum flask achieve its purpose.



1. The plastic (or cork) lid is an insulator and the screw top prevents...
2. There is a vacuum between two layers of glass or steel, which prevents...
3. The walls have silvery surfaces, which prevent...

