

1 Draw lines to match the words to the sentences.

conduction

These conduct thermal energy well.

thermal conductors

These are poor conductors of thermal energy.

thermal insulators

Energy passing along a solid from the hotter end to the cooler end.

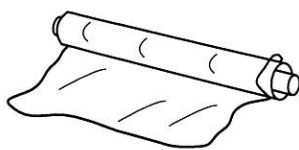
2 Write *true* or *false* for each sentence.

- a Thermal energy moves from the cooler parts of a solid to the hotter parts. ....
- b Conduction works better in solids than in liquids or gases. ....
- c Conduction does not work in a vacuum. ....

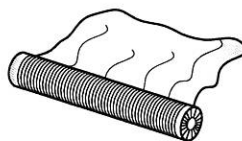
3 Look at these items.



expanded polystyrene cup



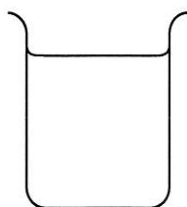
cling film



cooking foil



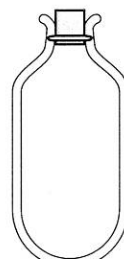
saucepan



water



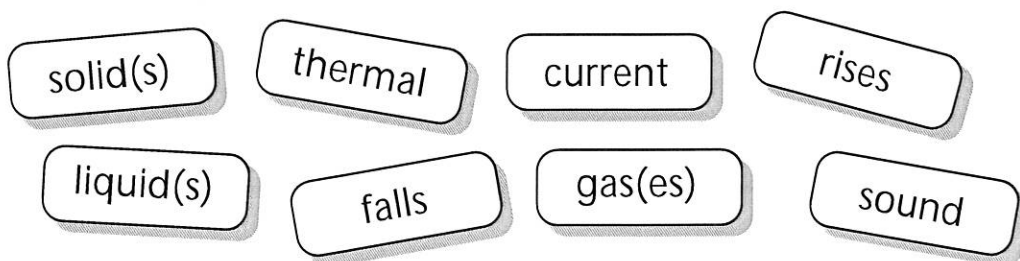
air



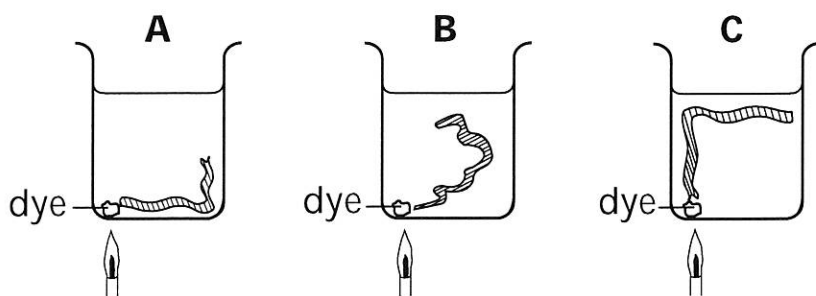
vacuum flask

- a Colour the thermal conductors in red.
- b Colour the thermal insulators in blue.

- 1 Use these words to fill in the gaps. You may use words once, more than once or not at all.



- a Convection happens in ..... and ..... but not in .....
- b Convection transfers ..... energy.
- c A convection ..... happens when one part of the ..... or ..... is hotter than another part.
- d In convection, the hotter liquid or gas ..... and the cooler liquid or gas .....
- 2 Some purple dye is put into a beaker of water. A Bunsen burner heats one corner of the beaker.



Which picture shows what happens to the dye? .....

- 3 Write *true* or *false* for each sentence.
- a Hot air falls and cool air rises. ....
- b Thermal energy can be transferred through solids by convection currents. ....
- c Hot water rises, cold water falls. ....
- d Thermal energy can be transferred through liquids and gases by convection currents. ....