15 Conduction

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.

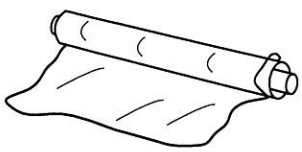
a Thermal energy moves from the cooler parts of a solid to the hotter parts. .....

b Conduction works better in solids than in liquids or gases. .....

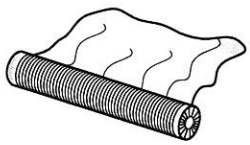
c Conduction does not work in a vacuum. .....

3 Look at these items.

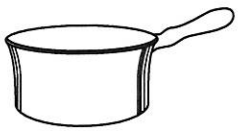
expanded polystrene cup



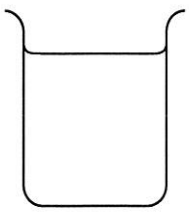
cling film



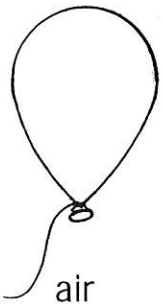
cooking foil



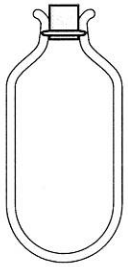
saucepan



water



air



vacuum flask

a Colour the thermal conductors in red.

b Colour the thermal insulators in blue.

16 Convection

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

solid(s) | thermal | current | rises | liquid(s) | falls | gas(es) | sound

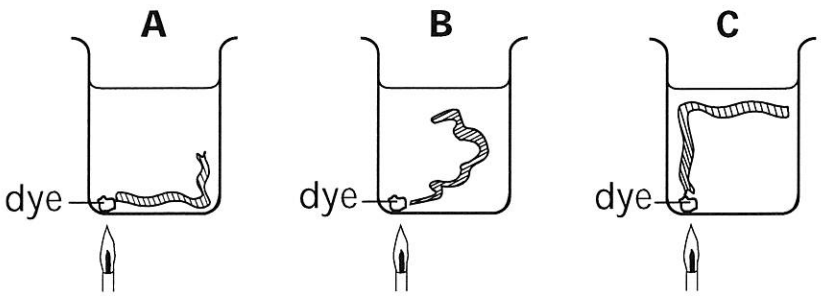
a Convection happens in ..... and ..... but not in ..... .

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. .....