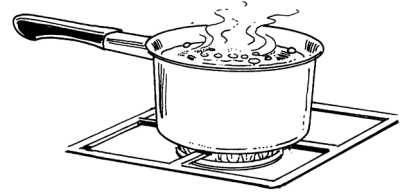


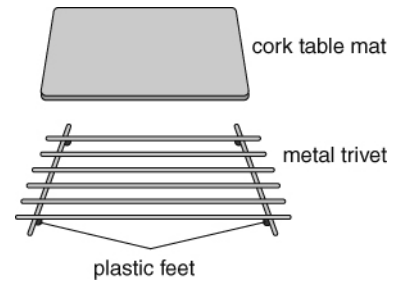
Energy can be transferred from hot to cooler objects by conduction, convection, radiation and evaporation.

- 1 The drawing shows vegetables being cooked in boiling water. The pan is made of metal and it has a wooden handle. Use ideas about particles to explain how:
- energy is transferred from the part of the pan heated by the flame to the water inside the pan.
 - energy spreads through the water in the pan.

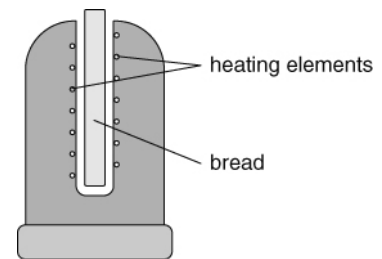


- 2 The diagram shows a cork table mat and a metal trivet. They can both be used to protect a table from hot pans.

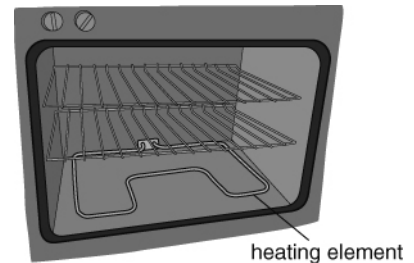
Explain why the metal trivet needs to have plastic feet but the cork mat does not.



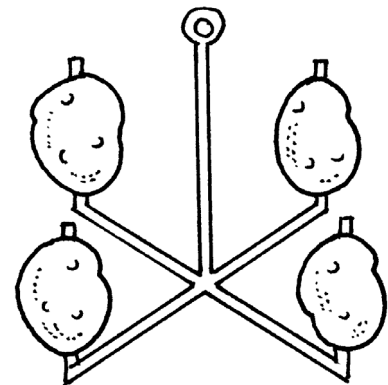
- 3 The diagram shows a toaster. Explain how you know that the energy must be getting from the elements to the bread by radiation and not conduction or convection.



- 4 The oven has the heating element at the bottom. Explain why the top of the oven is actually the hottest part.



- 5 Why does a wooden spoon feel warmer to the touch than a metal spoon?
- 6 The diagram shows a 'potato baking rack'. What is the advantage of putting the potatoes on the metal spikes while cooking them in an oven?
- 7 Fred opens the door of a freezer. Explain why this makes his feet feel colder but not his face.



I can...

- identify energy transfer processes
- use the particle model to explain how energy is transferred by conduction and convection.