

# Energy

## 4. Heating and Cooling

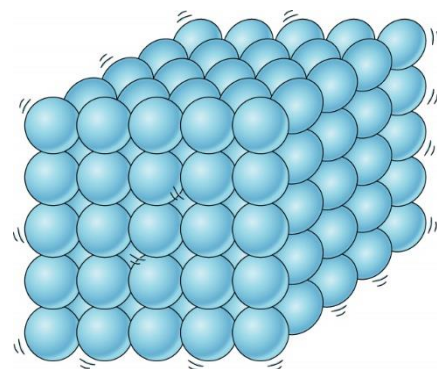
### CONCEPT 2

### TEST YOURSELF

#### HEATING

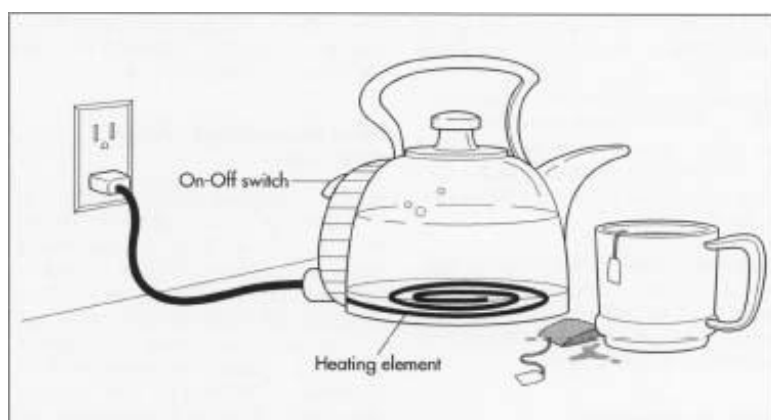
##### KNOW

- Q1 What are the three ways that energy can be transferred?
- Q2 Look at the diagram that represents a 3D arrangement of particles in a metal. Why would this metal be a good conductor?



##### APPLY

- Q3 Why might a saucepan have a cast iron body and a wooden handle?
- Q4 An electric kettle has the heating element at the bottom. This is partly in case you only want to heat up a small amount of water, but it is also a good way of heating up a larger amount. Explain why.



##### EXTEND

- Q5 How does a bonfire transfer energy to the surroundings?
- Q6 What happens to objects that absorb infrared radiation?
- Q7 Look at the diagram. It shows three identical electric fires. Each fire has three heating elements that can either ON or OFF. Which fire would you use on a cold winter day to get warm as quickly as possible? Explain your choice.

