## The particle model

## 1.2 The states of matter

1. Highlight the correct bold words in the sentences below.

There are **two / three / ten** states of matter. A substance can flow in the liquid and **solid / gas** states. You can compress a substance a lot in the **solid / liquid / gas** state. A substance takes the shape of the bottom of its container in the **solid / liquid / gas** state. A substance takes the shape of its whole container in the **solid / liquid / gas** state.

2. a. In the box, draw the arrangement of particles in a substance in its solid state.



b. Describe the movement of the particles in the solid.



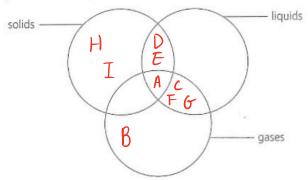
3. A student drew the diagram below to represent the particles in a liquid.

Explain what is wrong with the diagram, and draw a better one in the empty box.



The particles should be touching at the bottom of the container

- 4. Write the letter of each phrase below in the correct part of the diagram.
  - A. Made up of particles
  - B. Takes the shape of its whole container
  - C. Particles move from place to place
  - D. Particles touch each other
  - E. Can be compressed only a tiny bit
  - F. Particles are not in a pattern
  - G. Flows
  - H. Particles are in a regular pattern
  - I. Particles do not move from place to place



## **Extension**

The statements below are about the particles in a liquid. They are all correct.

- P The particles hold together strongly.
- Q The particles touch each other.
- R The particles move around, sliding over each other.
- **S** The particles are not in a regular pattern.
- a. Write the letter of the statement that best explains why you can pour a liquid. Explain your choice.
- b. Write the letter of the statement that best explains why the volume of a liquid does not change when you pour it into a bigger container. Give reasons for your choice.