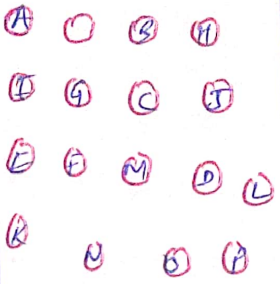
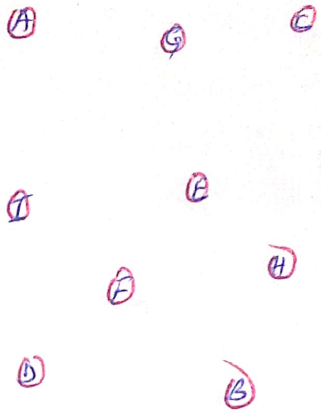
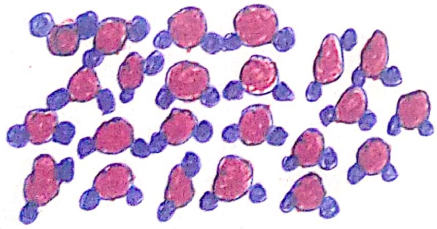
1.

	Solid	Liquid	Gas
Diagram of molecules			
Sentence explaining how molecules will be moving.	Particles of a solid move or vibrate in fixed positions. The particles are closely packed	Particles of a liquid are not as closely packed as in solids. They are free to move.	Particles of a gas are widely spaced and are free to move in any direction.

2. In a solid, increase in thermal energy increases the kinetic energy of the particles hence they begin to vibrate. The heat energy weakens the forces of attraction holding the solid particles together.

3.

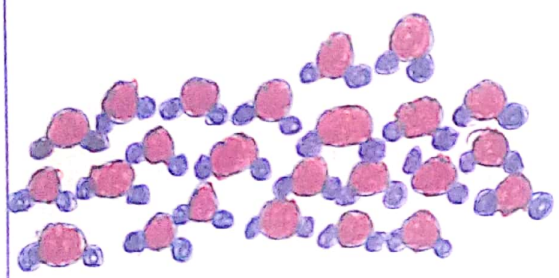
Diagram	Description:
	Molecules of water vibrate in fixed positions.

4. The termometer is showing the Kelvin temperature scale
5. As you increase the temperature, the kinetic energy of the water molecule increase and the particles vibrate move vigorously.
6. Melting point of water is 286 K.

7. Above the Melting point, the particles of water vibrate more. The particles are free to move.
Below the melting point, vibration of the particles is reduced due to decrease in kinetic energy.

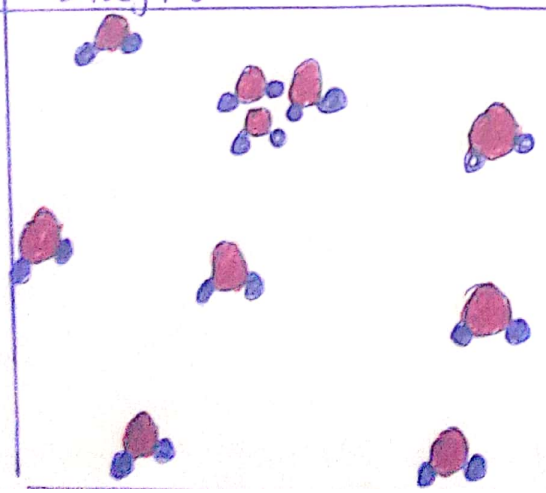
10. Above the boiling point, particles of water move randomly within the container.
Below the boiling point, particles of water move randomly within the container. They have no definate shape.

8.

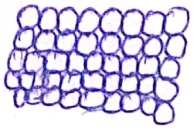
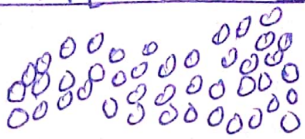
Diagram.	Description.
	The vibration of the particles is more as compared to the solid phase. The kinetic energy of the particles is increased.

9. Boiling point of water is 430K.

10.

Diagram.	Description.
	The particles of water are widely spaced and move randomly in all directions.

12. Substance Selected: Neon.

	Solid	Liquid	Gas
Diagram of molecules			
Sentence explaining how molecules are moving.	The particles are held in fixed positions. Whe the temperature is increased, vibration of the particles increas and vice versa.	The particles are not as closely packed as in solids, Increase in heat energy increases the rate of vibration of the particles and viceversa	The particles are widely spaced and move randomly in all directions. Increase in heat energy increases the rate of vibration.

13. Neon is similar to water in each state of matter. This is because increase in heat energy leads to corresponding increase in vibration of particles.

14. Therefore the predictions made in 1 above are correct. The behavior of change of state from solid, to gas to liquid is identical.

15. Substance: Argon.

Melting point: 86K.

The melting point of argon is determined by first selecting argon then liquid to determing the temperature in which argon melts.