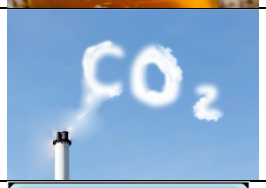
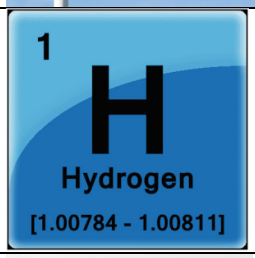
Particle Model of Matter – Revision Worksheet

1. Complete the following table by marking the state in which the material is at room temperature.

	Materials		Solid	Liquid	Gas
1.1	Cork				
1.2	Oxygen				
1.3	Hydrochloric acid				
1.4	Mercury				
1.5	Plastic				
1.6	Copper				
1.7	Chlorine				
1.8	Oil				

1.9	Wood				
1.10	Honey				
1.11	Carbon dioxide				
1.12	Hydrogen				
1.13	Rubber				
1.14	Paraffin				
1.15	Salt				

2. Summarise the three states of matter by comparing the forces, spaces and movement of the particles.

	Solids	Liquids	Gases
Spaces between particles			
Forces between particles			
Movement of particles			
Diagrammatic representation			

3. What does each of the following words mean?

3.1 Condensation _____

3.2 Evaporation _____

3.3 Boiling point _____

3.4 Melting point _____

3.5 Freezing point _____

4. If the boiling point of nitrogen is -196°C, what can be deduced about:

4.1 the amount of energy required to change the state from liquid to gas?

_____

4.2 the forces between the particles?

_____

5. Explain in terms of energy and the particle model, what happens when a gas is cooled.

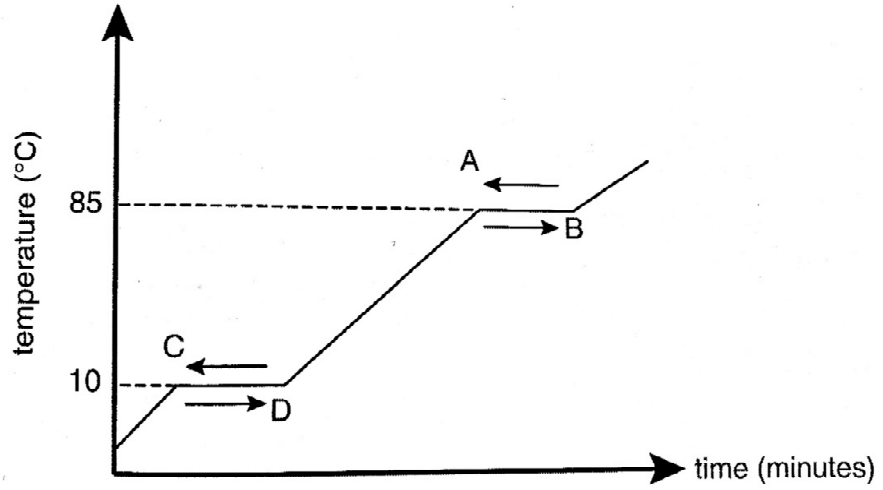
_____

_____

_____

_____

6. Study the following graph (temperature vs. time) of a material that starts as a solid, and answer the questions that follow.



What are each of the changes, indicated as A to D, called?

A _____

B _____

C _____

D _____

7. Study the following table with melting points and boiling points, and then answer the questions that follow. Take room temperature as 25°C.

Materials	Melting point (°C)	Boiling point (°C)
P	- 117	78
Q	658	2 467
R	- 39	357
S	- 182	- 164
T	1 530	2 735

7.1 Which material(s) is/are a solid at room temperature? _____

7.2 Which material(s) is/are a liquid at room temperature? _____

7.3 Which material(s) is/are a gas at room temperature? _____

7.4 Which material's forces between the particles is the strongest? _____

7.5 Which material's forces between the particles is the weakest? _____