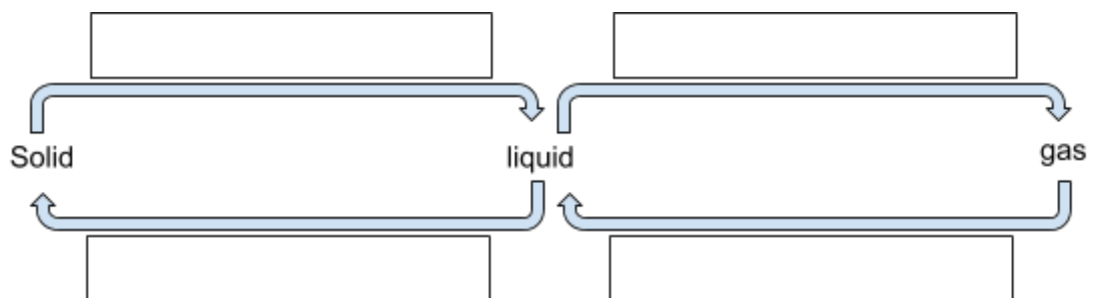


States of matter for KS3 - Worksheet

1. Name the three states of matter and draw a particle diagram for each.

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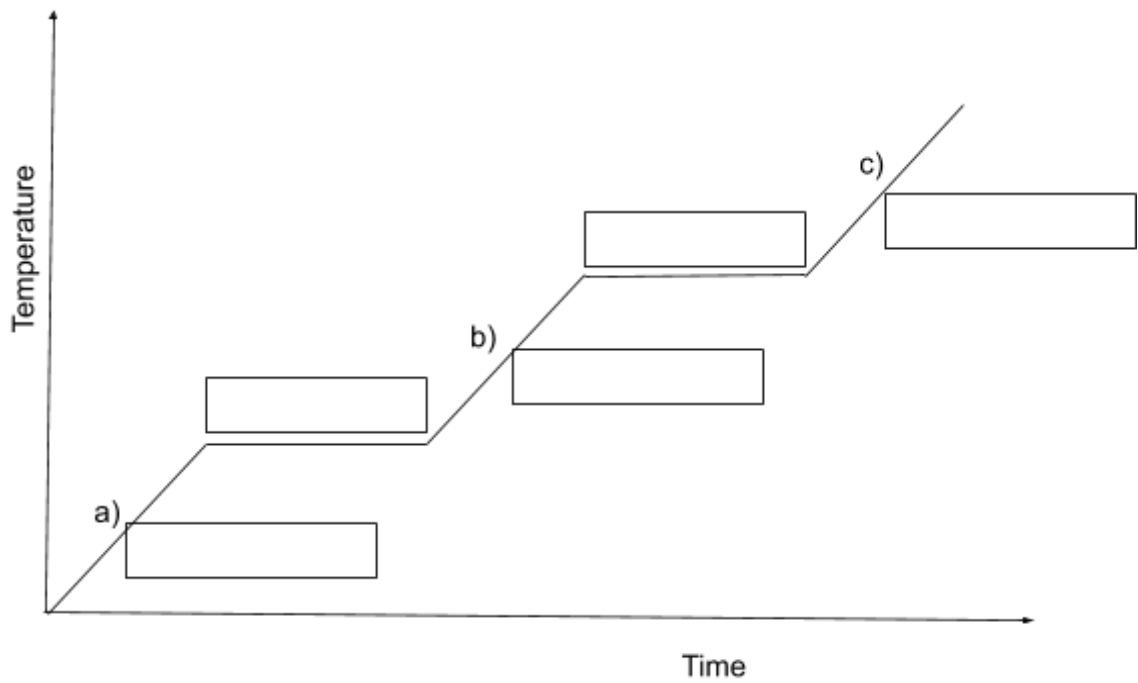
2. Complete the diagram below



3. Tick or Cross to show which states have which properties

Property	Solid	Liquid	Gas
Fixed Shape			
Fixed Volume			
Easily compressed			

5. Complete the boxes on the diagram below

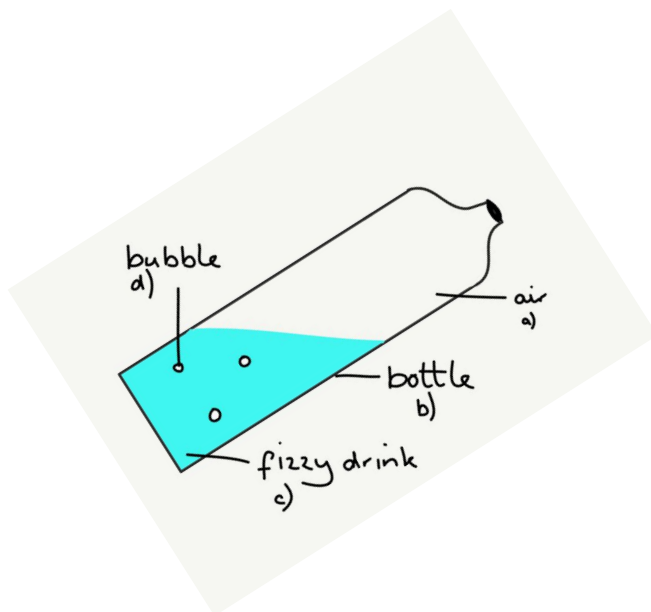


6. On the diagram above, label the melting point and boiling point on the y axis.

7. Explain, in terms of particles, what is happening at points a, b & c

- a)
-
- b)
-
- c)
-

8. The diagram below shows a bottle of fizzy drink. Label the state of a-d.



- a).....
- b).....
- c).....
- d).....

9. Wet clothes are put on a washing line to dry. The water in the clothes turns into water vapour in the air as the clothes dry.

- a) Name the change as water turns into water vapour
- b) Rain forms from water vapour in the air. Name this change
- c) The clothes dry much faster on a sunny day, explain why in terms of particles.

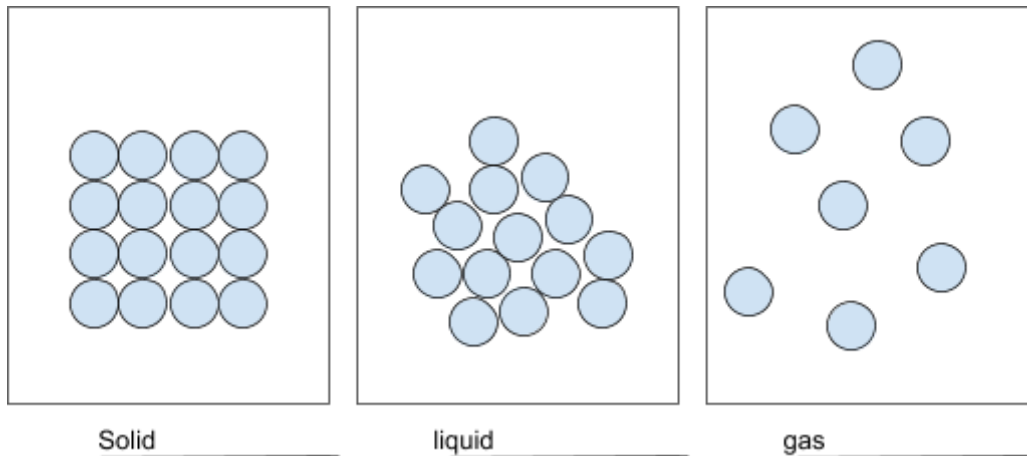
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10. Some substances can change directly from a solid to a gas, research the name of this process. Can you find an example of a substance that behaves like this?

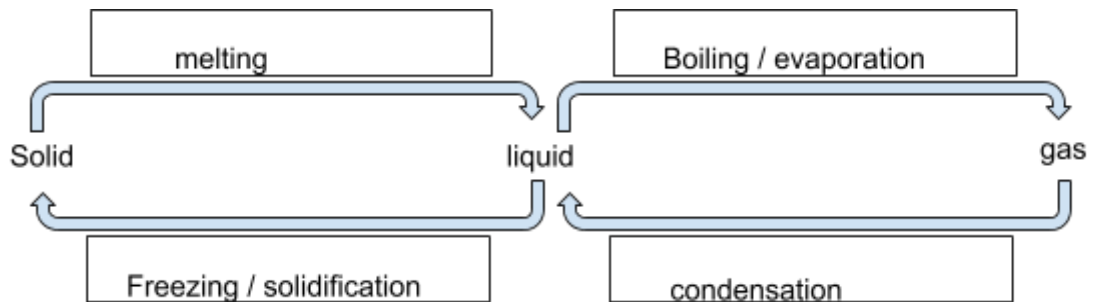
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States of matter for KS3 Worksheet - Answers

1. Name the three states of matter and draw a particle diagram for each.



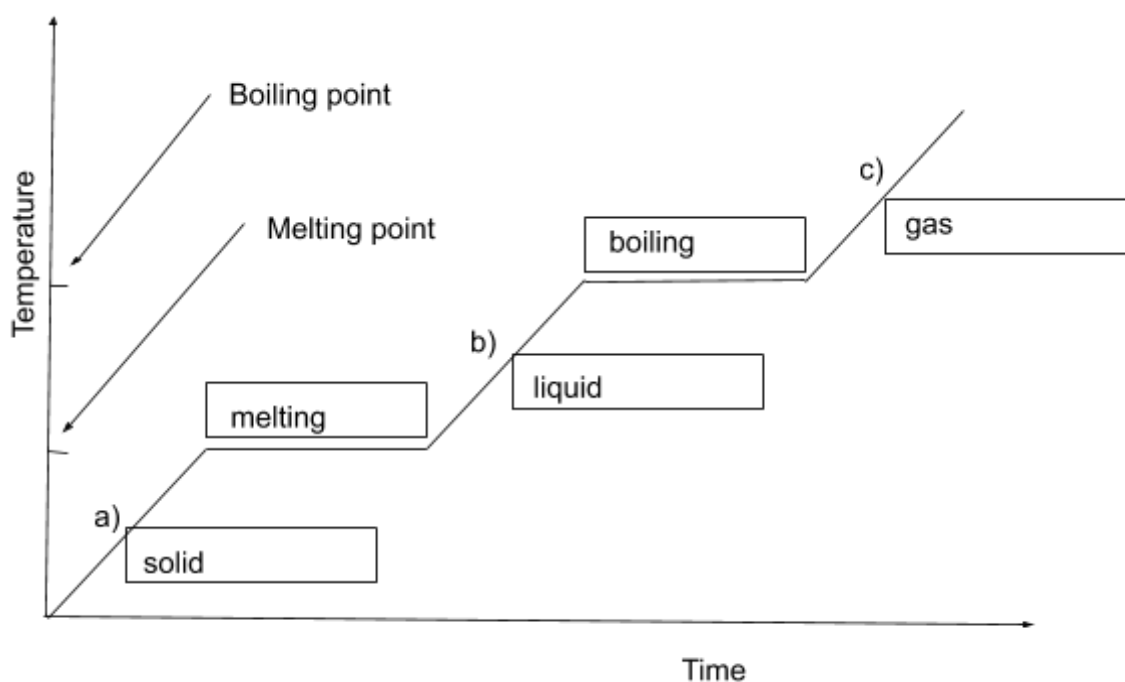
2. Complete the diagram below



3. Tick or Cross to show which states have which properties

Property	Solid	Liquid	Gas
Fixed Shape	✓	x	x
Fixed Volume	✓	✓	x
Easily compressed	x	x	✓

5. Complete the boxes on the diagram below



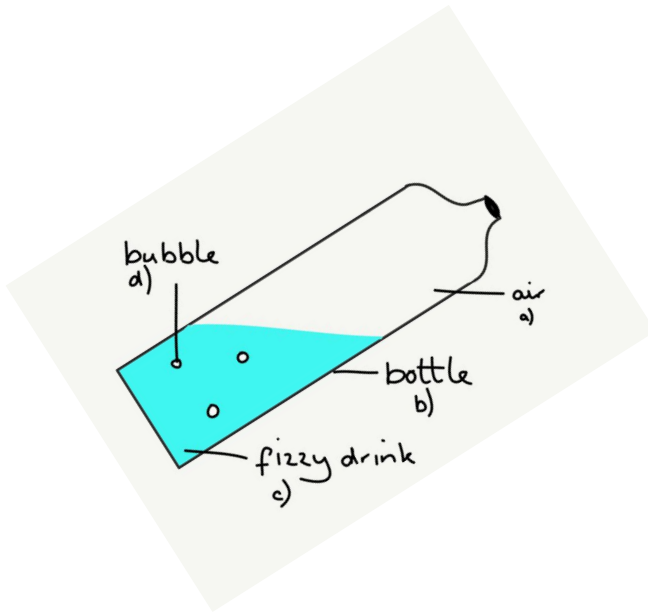
6. On the diagram above, label the melting point and boiling point on the y axis.

[see diagram](#)

7. Explain, in terms of particles, what is happening at points a, b & c

- a) The particles in a solid are heated and vibrate,
- b) The particles in the liquid are heated and start to move around more quickly
- c) The particles in the gas move faster

8. On the diagram below, add states to labels a-d.



- a) gas
- b) solid
- c) liquid
- d) gas

9. Wet clothes are put on a washing line to dry. The water in the clothes turns into water vapour in the air as they dry.

- d) Name the change as water turns into water vapour **evaporation**
- e) Rain forms from water vapour in the air. Name this change **condensation**
- f) The clothes dry much faster on a sunny day, explain why in terms of particles.

The sun provides heat energy, which is transferred to the particles, so the particles in the liquid are heated and start to move around more quickly. The movement of the liquid particles overcomes the forces of attraction between the particles and the substance evaporates.

10. Some substances can change directly from a solid to a gas, research the name of this process. Can you find an example of a substance that does this?

The process is called sublimation. An example is carbon dioxide.