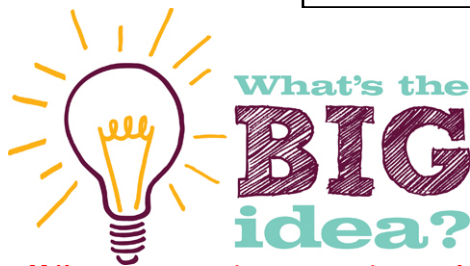


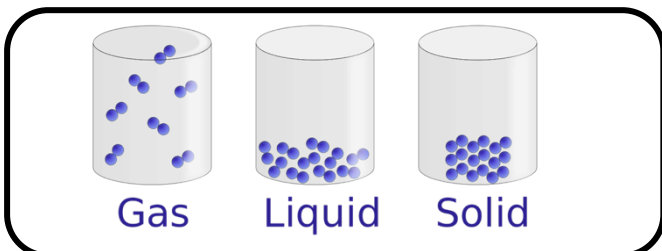
You need to know the content of this sheet. 100%

100% Sheet Particle model



Matter
All material in the Universe is made of very small particles.

When answering questions about particles think carefully about how the particles are moving, how fast they are moving and how far apart they are.



Remember what the different changes in state are called for example freezing, melting, condensing and evaporating

Expansion happens when particles gain energy through heating and move away from each other. The space between them gets bigger but the particles DO NOT get bigger.

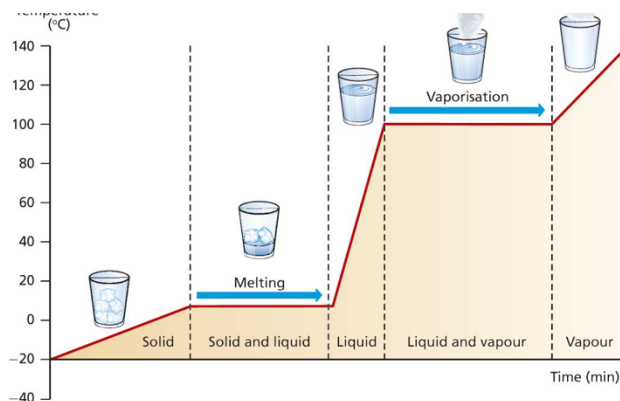


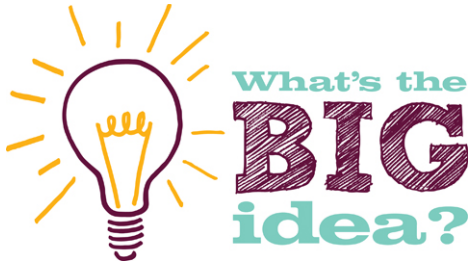
Particles in liquids or gases spread from where they are in high concentration throughout the medium that they are in

- Key words to learn**
- Particle** – a very small object such as an atom or molecule
 - Diffusion** – where particles in liquids or gases spread out
 - Evaporate** – changing from liquid to gas at the surface of the liquid
 - Condense** – changing from gas to liquid
 - Boil** – changing from liquid to gas
 - Melt** – changing from solid to liquid
 - Freeze** – changing from a liquid to solid
 - Sublime** – changing from solid to gas or vice versa without being a liquid
 - Gas pressure** – Force caused by particles colliding with the walls of a container

PRESSURE is caused by particles hitting a surface, the more they hit it or the harder they hit it, the greater the pressure

You MUST be able to label each part of this graph to show change of state

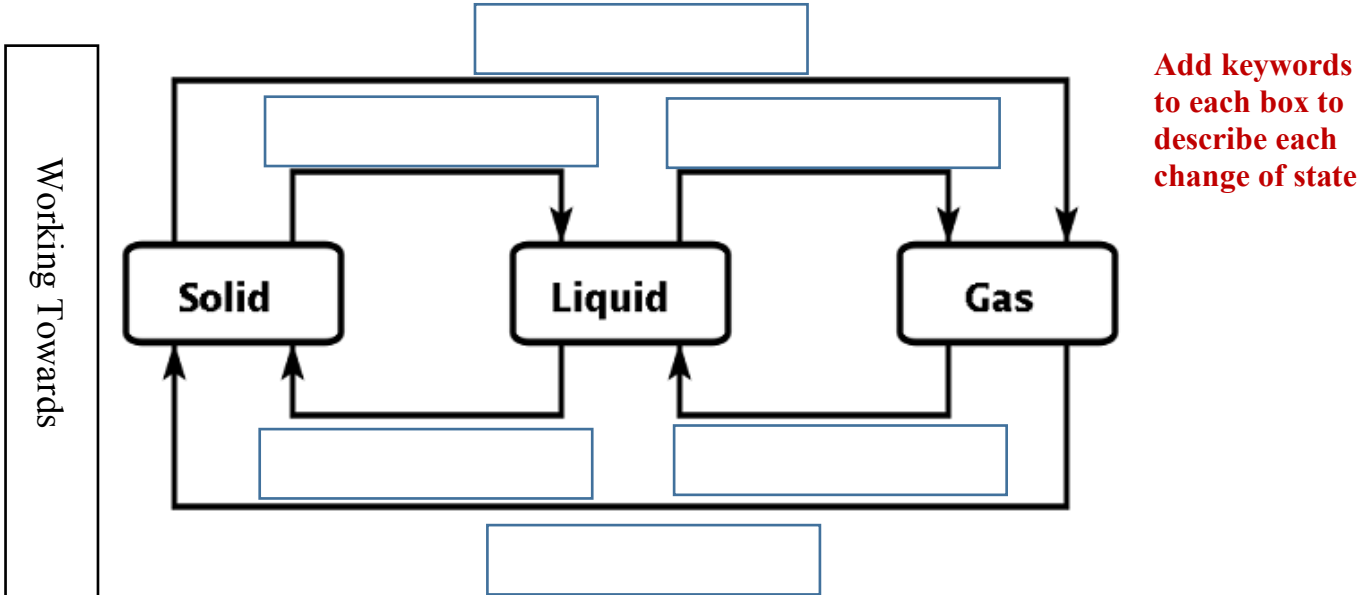




WORK FOR PROGRESS

100% Sheet Particle model

Matter
All material in the Universe is made of very small particles.



Draw a labelled diagram and use no more than 50 words to describe how particles cause pressure



Describe and **explain** what has happened to these tracks in hot weather.

STRETCH yourself and **explain** how this is prevented on our railways