Year 9: ASK Yourself!

Subject: Physics
Unit: 3 – Particle Model

	Launching 1-2	Developing 3-4	Progressing 5-6	Mastering 7-9
Skills				
	To be able to use particle diagrams to communicate ideas about relative densities of different states. To be able to use density = mass/volume to calculate density.	To be able to use the particle model to explain the effect on temperature of increasing the pressure of a gas at constant volume.	To be able to use the particle model to explain the effect on temperature of increasing the pressure of a gas at constant volume. To be able to use the particle model to explain why the latent heat of vaporisation is much larger than the latent heat of fusion. To be able to use the specific heat capacity equation to calculate mass, specific heat capacity or temperature change.	To be able to use the specific heat capacity equation to calculate mass, specific heat capacity or temperature change. To be able to use the equation pV = constant to calculate the pressure or volume of a gas at constant temperature. Use the equation $E = mL$
Knowledge				
	To be able to describe changes of state as physical changes. To be able to describe how heating raises the temperature of a system. To be able to state that when an object changes	To be able to describe how mass is conserved when substances change state. To be able to explain that changes of state are physical, not chemical, changes because the material recovers	To be able to explain that changes of state conserve mass. To be able to describe that the temperature of a gas is related to the average kinetic energy of the molecules.	To be able to explain that internal energy is the total kinetic energy and potential energy of all the particles that make up a system.

	state there is no change in temperature. To be able to recall that gases can be compressed or expanded by pressure changes. To be able to state that in the particle model the higher the temperature the faster the molecules move.	its original properties if the change is reversed. To be able to describe that heating raises the temperature or changes the state of a system but not at the same time.	To be able to use the particle model to explain that increasing the volume of a gas, at constant temperature, can lead to a decrease in pressure.	