AQA Physics U	nit 4.3- Particles Mode	l and Matter - Founda	ation		(1)	
What is the equation linking density, mass and volume?				Describe the displacement technique used to determine the volume of an irregularly shaped object.	Define specific heat capacity.	
Write the syn	nbols and units for the	following:	b		What is the equation liphing change in thermal energy mass specific heat	
density:					capacity and temperature?	
mass:				When substances change state, their mass is conserved. What does this mean? $igvee f$		
volume:						
Draw the particle models for solids, liquids and gases.			c	Describe how to determine the volume of a regularly shaped object.	Write the units and symbols for the following:	
					mass:	
				What is an internal system?	specific heat capacity:	
					Fill in the blanks using these words: state, energy, increases, particles, temperature. <b>n</b>	
State of	Charma	Characteria	d	Define internal energy.	When a substance is heated up, the stored in the system by increasing the energy of the There is either an	
Matter Solid	Snape	Structure	Movement of Particles		increase in the of the system or there is a change of	
3011u				List some factors that affect the increase of temperature of a system.	Label the diagram with the terms used for changes of state.	
Liquid				Explain the differences in density of solids, liquids and gases.		
Gas					Why is a change of state referred to as a physical change and not a chemical change?	





AQA Physics Unit 4.3- Particles Model and Matter - Foundation		(2)
Define latent heat.	For the heating and cooling curve (shown in section i), what are the terms used to describe the changes of state for:	Fill in the blanks:
	B→C	Specific latent heat of fusion: the amount of energy needed to change
	D→E	of a substance from a solid to a with no
	E → D	change of temperature.
What is the equation linking energy for a change of state, mass and specific <b>b</b> latent heat?	C→B	Specific latent heat of vaporisation: the amount of energy needed to change 1kg of a substance from liquid to with no change of
	What is happening to the particles between A-B, C-D and E-F?	
Write the symbol and unit for the following:		My main areas for improvement in this topic are:
specific latent heat:	How are kinetic energy of particles and temperature related?	
What is the difference between specific heat capacity and specific latent heat?		
	Using the diagram, explain the effect of an increase of volume on pressure.	
	(a) High pressure (b) Low pressure	
What is the equation that links pressure and volume?		
List the symbols and units for the following:		
pressure:	What are the states of matter for the diagonal sections of the graph? Add labels to 🕻	
volume:	the graph below.	
	G F	
Explain the effect of an increase in temperature on the pressure of a gas in a container.	E Temperature	
	A Time (mins)	





## AQA Physics Unit 4.3- Particles Model and Matter - Foundation Answers







before latern heat. Latert heat is the energy required for the change of state of a substance.For the heating and cooling curve (shown is section 0, what are the terms used to 0 B = C Metting D = E teoporating/Solling E = D Contensing C = B Pecaling D = E teoporating/Solling E = D Contensing C = B Pecaling D = E teoporating/Solling E = D Contensing C = B Pecaling D = E teoporating/Solling E = D Contensing C = B Pecaling D = E teoporating/Solling E = D Contensing C = B Pecaling D = E teoporating/Solling E = D Contensing C = B Pecaling D = E teoporating/Solling E = D Contensing C = B Pecaling D = E teoporating/Solling E = D Contensing C = B Pecaling D = E teoporating/Solling E = D Contensing C = B Pecaling D = E teoporating/Solling E = D Contensing C = B Pecaling D = E teoporating/Solling E = D Contensing C = B Pecaling D = E teoporating/Solling E = D Contensing C = B Pecaling D = E teoporating is the anomation of energy required to increase (Latert heat is the energy of the porticles increases. Not is the difference between specific latert heat? Not is the difference between specific latert heat is the energy needed to change the state of a substance, whereas specific latert heat is the energy needed to change the state of a substance with no temperature change.Initial the difference between A B. C D and E 17 The dimon one and so the teoporating is the anomation of energy required to increase specific latert heat? Not is the difference between specific latert heat is the energy needed to change the state of a substance with no temperature change.Initial teoporal is the energy of the porticles to preado and more and so the number of collisions on the walls of the container over a certain area and therefore a lower preado the container over a certain area and therefore a low				
What is the equation linking energy for a change of state, mass and specific latter fixed?       P - C Mething D - E Exaparating/Boiling E + D Condensing D - E Freezing       Specific latert substance fixed D - E Freezing       Specific latert substance fixed D - E Freezing         What is the equation linking energy for a change of state, mass and specific latter fixed?       What is happening to the particles between A 8, C D and E 1?       What is happening to the particles between A 8, C D and E 1?         What is the difference between specific latent heat: temperature of a substance, whereas specific latent heat is the energy needed to change the state of a substance with no temperature change.       What is the appening to the particles increases for fixed on increase of volume on pressure.         What is the equation that links prossure and volume?       It is the aquation that links prossure and volume?         What is the equation that links prossure and volume?       It is the aquation that links prossure and volume?         Pressure: (p), pascals, Pa volume: (p), metres cabed, m <sup>2</sup> Pa         Esclaim th effect of an increase in temperature on the pressure of a gas in a container. This causes an increase in the force on the walls of the container. This causes an increase in the force on the walls of the container. This causes an increase in the force on the walls of the container over a particular area and so increases the pressure.	Define latent heat. Latent heat is the energy required for the change of state of a substance.	a	For the heating and cooling curve (shown in section i), what are the terms used to describe the changes of state for:	Fill in the blanks:
What is the equation linking energy for a change of state, mass and specific       D • E Proporting/Boiling       E • O Condensing       Specific latent			B→C Melting	Specific latent heat of
What is the equation linking energy for a change of state, mass and specific liter   What is the equation linking energy for a change of state, mass and specific liter   Write the agnihol and unit for the following:   specific latert heat:   What is the difference between specific latert heat is the energy needed to change the state of a substance, whereas specific latert heat is the energy needed to change the state of a substance with no temperature change.   What is the equation that links pressure and volume? What is the equation that links pressure and volume? What is the agnihols and units for the following: pressure x volume - constant List the agnihols and units for the following: pressure: (n), pascals, Pa volume: (n), metres cubed, m <sup>3</sup> Leptain the effect of an increase in temperature on the pressure of a gas in a volume: (n), metres cubed, m <sup>3</sup> Leptain the effect of an increase in temperature on the pressure of a gas in a volume: (n), metres cubed, m <sup>3</sup> Leptain the effect of an increase in temperature on the pressure of a gas in a volume: (n), metres cubed, m <sup>3</sup> Leptain the effect of an increase in temperature on the pressure of a gas in a volume: (n), metres cubed, m <sup>3</sup> Leptain the effect of an increase in temperature on the pressure of a gas in a volume: (n), metres and so increases in the force on the valls of the container. This causes an increase in the force on the valls of the container. This causes an increase in the pressure of a gas in a volume: (n), metres cubed, m <sup>3</sup> Leptain the effect of an increase in temperature on the pressure of a gas in a volume. This causes an increase in the pressure of a gas in a volume over a particular area and so increases the pressure. What is the equation that increase in temperature on the valls of the container. This causes an increase in the force on the valls of			D→ E Evaporating/Boiling	substance from a solid
What is the equation linking energy for a change of state, mass and specific liter heat?         Energy for a change of state - mass x specific latent heat         What is the agrinded and unit for the following:         specific latent heat?         What is the difference between specific latent heat is the energy needed to change the state of a substance, with no temperature change.         What is the equation that links pressure and volums?         pressure x volume - constant         List the signable and units for the following:         pressure: (p), pascells, Pa         volume: (p), mascells, Pa         volume: (p), mascells in temperature causes on increase in the pressure of a gas in constaint         state grant in the energy of a gas in the grant head is the mergy of a gas in constant         state grant in the energy of a gas in constant         task for container. This causes an increase in the pressure of a gas in constant         farshells         for the endifier of an increase in the pressure consthe the pressure constant for the diagonal sections of			E → D Condensing	Specific latent heat of
Litter therd?         Energy for a change of state = mass x specific latent heat         Write the symbol and unit for the following:         specific latent heat: (1), joules per kilogram, J/kg         What is the digforance between specific latent heat is the energy needed to change the state of a substance with no temperature change.         What is the equation that links pressure and volume?         pressure x volume = constant         List the signbois and units for the following:         pressure: (p), pascals, Pa         volume: (v), metres cubed, m <sup>2</sup> Explain the effect of an increase in temperature on the pressure of a gas in a Wast of the container. This causes an increase the pressure.         Benchmer, the states of a substance with no temperature on the pressure of a gas in a Wast of the container. This causes an increase the pressure.         Explain the effect of an increase in temperature on the pressure.         What is the equation that links pressure and so increases the pressure.         Work are the states of a substance, when the pressure of a gas in a Wast of the container. This causes an increase in the force on the wast of the container over a particular orea and so increases the pressure.         What are the effect of an increase in temperature on the pressure of a gas in a Wast and therefore a and the of orea the pressure.         What are the states of motioner. This causes an increases the pressure.         What are the meresse in temperature contains of the gas particles with the wast of the container. This	What is the equation linking energy for a change of state, mass and specific	Ŀ	C → B Freezing	of a substance from liq
Energy for a change of state = masx specific latent heat Write the symbol and unit for the following: specific latent heat: (L), joules per kilogram, J/kg What is the difference between specific latent heat is the energy needed to change the state of a substance, whereas specific latent heat is the energy needed to change the state of a substance, whereas specific latent heat is the energy needed to that is the equation that links pressure and volume? If the state of a substance with no temperature change. What is the equation that links pressure and volume? If the state of a substance with specific latent heat is the energy needed to change the state of a substance with no temperature change. What is the equation that links pressure and volume? If the state of a nincrease in temperature on the pressure of a gas in a ' Specific the effect of an increase in temperature on the pressure of a gas in a ' Explain the effect of an increase in temperature on the pressure of a gas in a ' An increase in temperature coulisions of the gas particles with the walls of the container. This causes an increases the pressure. Explain the effect of an increase in temperature on the pressure of a gas in a ' An increase in temperature coulisions of the gas particles with the walls of the container. This causes an increases the pressure. Explain the effect of an increase in temperature on the force on the walls of the container. An increase in temperature coulisions of the gas particles with the walls of the container. This causes an increases the pressure. Explain the effect of an increase in temperature on the force on the walls of the container. An increase in temperature coulisions of the gas particles with the walls of the container. This causes an increases the pressure. If the graph below. If the graph below. If the graph below. If the force on the walls of the container. If the force on the walls of the container decreases. If the force on the walls of the container decreases. If the graph b	latent heat?		What is happening to the particles between A-B. C-D and E-E?	
<ul> <li>Write the symbol and unit for the following:</li> <li>specific latent heat: (1), joules per kilogram, J/kg</li> <li>What is the difference between specific heat capacity and specific latent heat? </li> <li>Specific heat capacity is the amount of energy required to increase the temperature of a substance, whereas specific latent heat is the energy needed to change the state of a substance with no temperature change.</li> <li>What is the equation that links pressure and volume?</li> <li>What is the equation that links pressure and volume?</li> <li>It is the symbols and units for the following:</li> <li>pressure: (n), pascals, Pa</li> <li>volume: (V), metres cubed, m<sup>2</sup></li> <li>Container. This causes an increase in the force on the walls of the container. This causes an increase in the force on the walls of the container. This causes an increase the pressure.</li> <li>What is the ended at a so increase the pressure.</li> <li>Write the state of a and units for the following:</li> <li>pressure: (n), pascals, Pa</li> <li>volume: (V), metres cubed, m<sup>2</sup></li> <li>Container. This causes an increase in the force on the walls of the container of the graph? Add labels to the graph?</li> </ul>	Energy for a change of state = mass x specific latent heat		They are agining kinetic energy and spreading out more	My main areas for impro
Specific latent heat: (1), joules per kilogram, J/kg What is the difference between specific heat capacity and specific latent heat? Specific heat capacity is the amount of energy required to increase the temperature of a substance, whereas specific latent heat is the energy needed to change the state of a substance with no temperature change. What is the equation that links pressure and volume? What is the equation that links pressure and volume? It is the symbols and units for the following: pressure: (p), pascals, Pa volume: (v), metres cubed, m <sup>3</sup> Explain the effect of an increase in temperature on the pressure of a gas in a 'container. An increase in temperature cuses the pressure of a gas particles with the walls of the container. This causes an increase in the pressure of a gas in a 'container. An increase in temperature cuses the pressure of a gas in a 'container. An increase in temperature cuses the pressure of a gas in a 'container. An increase in temperature cuses the pressure of a gas in a 'container. An increase in temperature cuses the pressure of a gas in a 'container. An increase in temperature cuses the pressure of a gas in a 'container. An increase in temperature cuses the pressure of a gas in a 'container. An increase in temperature cuses in temperature contexes in the pressure of a gas in a 'container. An increase in temperature cuses the pressure. What are the states of mutter for the diagonal sections of the graph? Add labels to 'the graph? Add labels to	Write the symbol and unit for the following:		They are guilting knette energy and spreading out more.	]
What is the difference between specific heat capacity and specific latent heat?         Specific heat capacity is the amount of energy required to increase the temperature of a substance, whereas specific latent heat is the energy needed to change the state of a substance, whereas specific latent heat?         What is the equation that links pressure and volume?         pressure x volume = constant         List the symbols and units for the following:         pressure: (p), pascals, Pa         volume: (v), metres cubed, m*         Explain the effect of an increase in temperature on the pressure of a gas in a `container.         An increase in temperature coulsions of the gas particles with the walls of the container. This causes an increase in the pressure.         What is the effect of an increase in temperature on the pressure of a gas in a `container.         An increase in temperature causes more collisions of the gas particles with the walls of the container. This causes an increase in the pressure.         Outme: over a particular area and so increases the pressure.	specific latent heat: (L), joules per kilogram, J/kg		How are kinetic energy of particles and temperature related?	
What is the difference between specific heat capacity and specific latent heat?   Specific heat capacity is the amount of energy required to increase the temperature of a substance, whereas specific latent heat is the energy needed to change the state of a substance with no temperature change.   What is the equation that links pressure and volume? pressure x volume = constant List the symbols and units for the following: pressure: (p), pascals, Pa volume: (M), metres cubed, m <sup>3</sup> Explain the effect of an increase in temperature on the pressure of a gas in a formation. An increase in temperature causes more collisions of the gas particles with the walls of the container. This causes an increase in the force on the walls of the container. This causes an increase in the force on the walls of the container over a particular area and so increases the pressure. What are the states of matter for the diagonal sections of the graph? Add labels to the graph below. Time (minu)			As the temperature increases the kinetic energy of the particles increases.	
Specific heat capacity is the amount of energy required to increase the temperature of a substance, whereas specific latent heat is the energy needed to change the state of a substance with no temperature change.	What is the difference between specific heat capacity and specific latent heat?	C		
Using the diagram, explain the effect of an increase of volume on pressure. What is the equation that links pressure and volume? What is the equation that links pressure and volume? pressure x volume = constant List the symbols and units for the following: pressure: (p), pascals, Pa volume: (V), metres cubed, m <sup>3</sup> Explain the effect of an increase in temperature on the pressure of a gas in a container. An increase in temperature causes more collisions of the gas particles with the walls of the container. This causes an increase in the force on the walls of the container. An increase in temperature causes more collisions of the gas particles with the walls of the container. This causes an increase in the force on the walls of the container. An increase in temperature causes more collisions of the gas particles with the walls of the container. This causes an increase in the force on the walls of the container. An increase in temperature causes more collisions of the gas particles with the walls of the container. This causes an increase in the force on the walls of the container. An increase in temperature causes more collisions of the gas particles with the walls of the container. This causes an increase in the force on the walls of the container. An increase in temperature causes more collisions of the gas particles with the walls of the container. This causes an increase in the force on the walls of the container. An increase in temperature causes more collisions of the gas particles with the walls of the container. This causes an increase in the force on the walls of the container. An increase in temperature causes more collisions of the gas particles with the walls of the container. This causes an increase in the force on the walls of the container. An increase in temperature causes more collisions on the gas particles with the walls of the container. An increase in temperature causes more collisions of the gas particles with the container. An increase in temperature caus	Specific heat capacity is the amount of energy required to increase th	he		
change the state of a substance with no temperature change. What is the equation that links pressure and volume? pressure x volume = constant List the symbols and units for the following: pressure: (p), pascals, Pa volume: (V), metres cubed, m <sup>2</sup> Explain the effect of an increase in temperature on the pressure of a gas in a for container. An increase in temperature causes more collisions of the gas particles with the walls of the container. This causes an increase in the force on the walls of the container over a particular area and so increases the pressure.	temperature of a substance, whereas specific latent heat is the energy needed	to	Using the diagram, explain the effect of an increase of volume on pressure.	
What is the equation that links pressure and volume? pressure x volume = constant List the symbols and units for the following: pressure: (p), pascals, Pa volume: (V), metres cubed, m <sup>3</sup> Explain the effect of an increase in temperature on the pressure of a gas in a container. An increase in temperature causes more collisions of the gas particles with the walls of the container. This causes an increase in the force on the walls of the container over a particular area and so increases the pressure.	change the state of a substance with no temperature change.		(a) High pressure (b) Low pressure	
pressure x volume = constant List the symbols and units for the following: pressure: (p), pascals, Pa volume: (V), metres cubed, m <sup>3</sup> Explain the effect of an increase in temperature on the pressure of a gas in a An increase in temperature causes more collisions of the gas particles with the walls of the container. This causes an increase in the force on the walls of the container over a particular area and so increases the pressure. Multiple of collisions on the walls of the container over a particular area and so increases the pressure.	What is the equation that links pressure and volume?	d	An increase in volume causes the particles to spread out more and so the	
List the symbols and units for the following: pressure: (p), pascals, Pa volume: (V), metres cubed, m <sup>3</sup> Explain the effect of an increase in temperature on the pressure of a gas in a container. An increase in temperature causes more collisions of the gas particles with the walls of the container. This causes an increase in the force on the walls of the container over a particular area and so increases the pressure. Mathematical descent	nressure v volume - constant		number of collisions on the walls of the container decreases. So, there is	
List the symbols and units for the following: pressure: (p), pascals, Pa volume: (V), metres cubed, m <sup>3</sup> Explain the effect of an increase in temperature on the pressure of a gas in a container. An increase in temperature causes more collisions of the gas particles with the walls of the container. This causes an increase in the force on the walls of the container over a particular area and so increases the pressure. What are the states of matter for the diagonal sections of the graph? Add labels to i the graph below. What are the states of matter for the diagonal sections of the graph? Add labels to i the graph below.			less force exerted on the container over a certain area and therefore a lower	
pressure: (p), pascals, Pa volume: (V), metres cubed, m <sup>3</sup>	List the symbols and units for the following:		pressure.	
volume: (V), metres cubed, m <sup>3</sup> Explain the effect of an increase in temperature on the pressure of a gas in a container. An increase in temperature causes more collisions of the gas particles with the walls of the container. This causes an increase in the force on the walls of the container over a particular area and so increases the pressure.	pressure: (p), pascals, Pa		What are the states of matter for the diagonal sections of the graph? Add labels to <b>i</b>	
Explain the effect of an increase in temperature on the pressure of a gas in a container. An increase in temperature causes more collisions of the gas particles with the walls of the container. This causes an increase in the force on the walls of the container over a particular area and so increases the pressure.	volume: <b>(V), metres cubed, m</b> <sup>3</sup>		the graph below.	
Explain the effect of an increase in temperature on the pressure of a gas in a container. An increase in temperature causes more collisions of the gas particles with the walls of the container. This causes an increase in the force on the walls of the container over a particular area and so increases the pressure.			F F	
Explain the effect of an increase in temperature on the pressure of a gas in a container. An increase in temperature causes more collisions of the gas particles with the walls of the container. This causes an increase in the force on the walls of the container over a particular area and so increases the pressure.			Gas/	
An increase in temperature causes more collisions of the gas particles with the walls of the container. This causes an increase in the force on the walls of the container over a particular area and so increases the pressure.	Explain the effect of an increase in temperature on the pressure of a gas in a container.	e		
walls of the container. This causes an increase in the force on the walls of the container over a particular area and so increases the pressure.	An increase in temperature causes more collisions of the gas particles with t	the		
container over a particular area and so increases the pressure.	walls of the container. This causes an increase in the force on the walls of t	the		
A Time (mins)	container over a particular area and so increases the pressure.		Вланис	
A Time (mins)			Solid	
A' Time (mins)				
			A Time (mins)	



fusion: the amount of energy needed to change **1kg** of a to a **liquid** with no change of temperature.

vaporisation: the amount of energy needed to change 1kg juid to **gas** with no change of **temperature**.

ovement in this topic are:

\k

4

j

