Particles

Reading: pages 191-194 higher, pages 193-196 foundation

Knowledge

1. What is the equation to calculate density?

2. How do you calculate the volume of a regular object?

3. How can the volume of an irregular object be found?

4. The energy needed to raise the temperature of 1Kg of a material by 1°C is known as…..

5. What is specific latent heat?

6. What is the equation to calculate specific latent heat?

7. What happens to mass during a change of state?

8. What is gas pressure?

9. Name the change of state from a gas to a liquid

Application

1. What is the specific latent heat of vaporisation?

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2. Compare the arrangement and energy of the particles in a solid and a gas

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3. While a kettle boils, 0.018 kg of water changes to steam. Calculate the amount of energy required for this change. Specific latent heat of vaporisation of water = 2.3×10^6 J / kg.
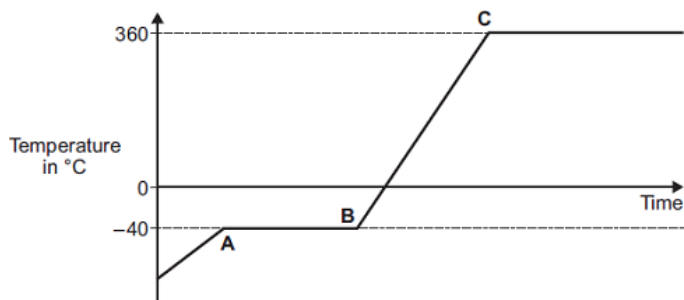
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4. The graph below shows how the temperature of a substance changes while it is heated.

Explain what is happening to the temperature and the particles in:

A-B ………

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B-C ………

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5. Describe what happens to the energy and arrangement of the particles as water turns into ice

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6. Describe how to find the density of an irregular object. Include all the equipment you would need.

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7. A piece of chocolate has a mass of 1.282 kg and a volume of 2 m³. Calculate the density of chocolate.

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Extend

8. Cork has a density of 240 kg/m³. Calculate the volume that a 10g of wine cork will occupy. Give your answer in standard form.

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9. Explain why the pressure in a gas increases when the temperature increases

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