

Changes of state recall questions

1. Write down the equation which links density, mass and volume. **Density = mass / volume**
2. What are the standard units for density, mass and volume? **kg/m³, kg, m³**
3. The mass of an object is 40 kg. The volume of the object is 0.25 m³. Calculate the density of the object. **40 / 0.25 = 160 kg/m³**
4. Draw particle diagrams to represent a solid, a liquid and a gas. **Make sure liquid particles are almost as close as gas particles.**
5. What do these words mean:
melt freeze boil evaporate condense sublimate **Sublimate is a solid turning straight into a gas without a liquid phase.**
6. Explain why water freezing is a physical change and not a chemical change. **Not making a new substance.**

Change of state application questions

1. Draw a particle diagram to explain why ice is less dense than water.
2. Describe how to measure the density of a regularly shaped object.
3. Describe how to measure the density of an irregularly shaped object.
4. What does change of state mean?
5. Explain why mass is conserved when a substance changes state.