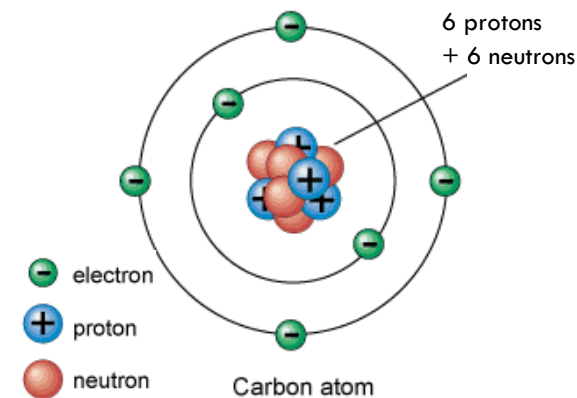
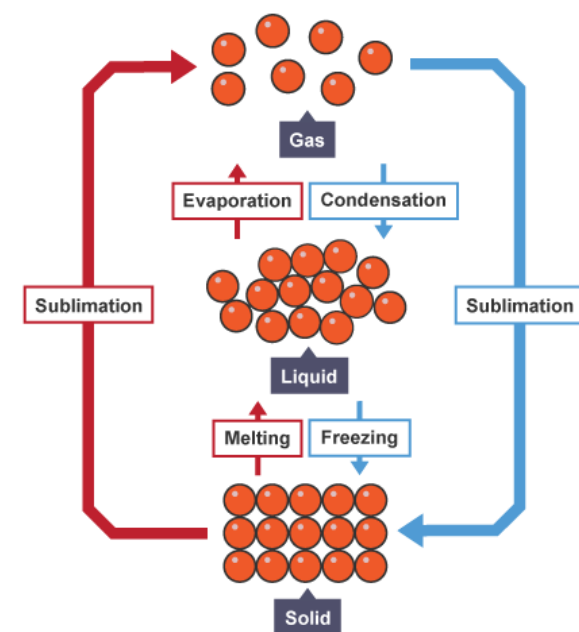




Particles	A general term for a small piece of matter
States of matter	The different states matter can exist in- solid, liquid and gas.
Solid	Plastic and wood are solids at room temperature. The particles in a solid are close together and arranged in a regular way
Liquid	Petrol and water are liquids at room temperature. The particles in a liquid are close together and arranged in a random way
Gas	Air and helium are gases at room temperature. The particles in a gas are far apart and arranged in a random way
Bond	Sticks' two more atoms together.
Evaporation	When a liquid turns into a gas
Condensation	When a gas turns into a liquid
Melting	When a solid turns into a liquid.
Freezing	When a liquid turns into a solid.
Sublimation	When a solid turns into a gas without going through a liquid stage, For example solid carbon dioxide turn straight to gas
Product	The matter formed in the reaction are called the products
Reactant	Chemicals that react together are called the reactants
Irreversible reaction	A change is called irreversible if it cannot be changed back again. In an irreversible change, new materials are always formed .
Reversible reaction	A reversible change is a change that can be undone or reversed.
Electron	A negatively charged subatomic particle
Proton	A positively charged subatomic particle with a relative mass of 1
Neutron	No charge subatomic particle with a relative mass of 1
Nucleus	The nucleus is the small, dense region consisting of protons and neutrons
Charges of subatomic particles	Neutrons have no charge, protons have a positive charge, electrons have a negative charge.
Proton number	Number of protons in an atom also called atomic number.



States of matter



The Atom



Reversible and irreversible reactions

Strengthen understanding If you can answer these question you have Mastered the LO.	PQ - Extend understanding If you can answer these you have exceeded the LO.
1.1. I can describe the arrangement and energy of particles in each state of matter.	
1. List the states of matter. 2. Describe the particles in a solid 3. Describe the energy of particles in each state of matter.	4. Which state of matter is usually densest? 5. Why are particles in a solid held together tightly? 6. Explain the relationship between kinetic energy and density.
1.2. I can recall the interconversions between states of matter. 1.3. I can explain the changes in arrangement, movement and energy of particles during these interconversions.	
1. recall 3 interconversions. 2. Describe the arrangement of particles during melting. 3. If matter is heated what happens to the internal kinetic energy?	4. what is the state change from solid to gas called? 5. If water evaporates what can be assumed? 6. If the kinetic energy was to decrease what would happen to the sate of matter?
1.4. Recall the meaning of products and reactants. 1.5. I can describe irreversible and reversible reactions.	
1. recall the definitions of product and reactants. 2. Give an example of a irreversible reaction. 3. Define a reversible reaction.	4. $\text{Mg} + \text{O} \longrightarrow ?$ 5. $\text{C} + \text{O} \longrightarrow ?$ 6. List 4 examples of reversible reactions.
2.1. I can describe the Dalton model of the atom. 2.2. I can recall the subatomic particles: electron, proton, and neutron. 2.3. I can describe that the nucleus is very small compared to the overall size of the atom.	
1. Draw and label an atom. 2. List the charges of protons, neutron and electrons. 3. List the masses associated with each subatomic particle.	4. Use an analogy to describe the size of the nucleus compared to the atom. 5. Draw an atom with a proton number of 12. 6. If there are 15 protons, 15 electrons and 14 neutrons what is the total mass of the atom?
2.4. I can recall the relative charge and mass of the subatomic particles. 2.5 I can explain why particles have equal numbers of protons and electrons.	
1. If there are 8 electrons how many protons will there be? 2. Describe the overall charge of an atom.	3. If the atom lost an electron what would happen to the overall charge? 4. How does the proton number relate to the atomic number?