

C4 Chemistry

1. Atoms are made of 3 types of smaller sub-atomic particles called protons, neutrons and electrons.
2. Each atom has a nucleus - containing the protons and neutrons - and electrons, which orbit (move around) the nucleus.
3. The charge and mass of electrons, protons and neutrons are shown in this table:

	Proton	Neutron	Electron
Charge	+1	0	-1
Mass	1	1	Very small

4. Elements contain only one type of atom.
5. Compounds have 2 or more elements chemically bonded together.
6. The periodic table shows all the elements.
7. The early periodic table was arranged in order of atomic weight, but Mendeleev changed this pattern slightly to make elements fit in groups with similar properties.
8. To fit atoms in the groups he wanted, Mendeleev had to move some elements. This created gaps or changed the order.
9. Mendeleev predicted the properties of the elements which would later be discovered and filled the gaps. This provided evidence for his periodic table.
10. The elements on the modern periodic table are arranged in increasing atomic number.
11. The atomic number is the number of protons in an atom.
12. The mass number is the sum of the number of protons and neutrons in an atom.
13. Rows across the periodic table are called periods.
14. Columns going down the periodic table are called groups.
15. Most elements are metals. Metals are found on the left and middle of the periodic table.
16. Metals have the following general physical properties; they are hard, shiny, malleable, good conductors of heat, good conductors of electricity, ductile and strong.
17. The block in between groups 2 and 3 are called the transition metals.
18. Transition metals are used as catalysts in different reactions.
19. Catalysts are chemicals that speed up a chemical reaction and they don't get used up.
20. To test a gas to see if it is oxygen, you put a glowing splint in the gas. Oxygen will relight a glowing splint.
21. A measuring cylinder is used to measure the volume of a liquid.
22. Metal oxides form alkali solutions when dissolved in water.
23. Non-metal oxides form acidic solutions when dissolved in water.
24. Group 1 elements are called the alkali metals.
25. Group 7 elements are called the halogens.
26. Group 0 (sometimes known as group 8) are called the noble or inert gases. This means they are unreactive.
27. Group 1 metals are very reactive and react violently with water.
28. Group 1 react with water to form an alkaline solution of the metal hydroxide and hydrogen gas.
29. Group 1 metals are softer and less dense than transition metals.