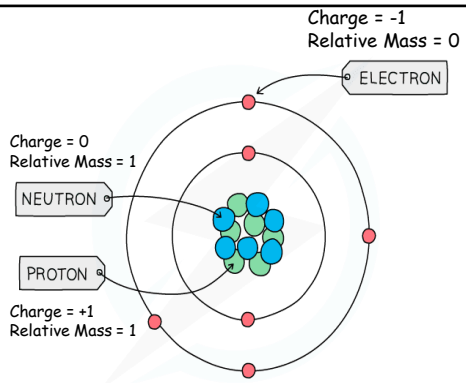
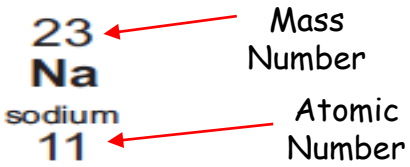
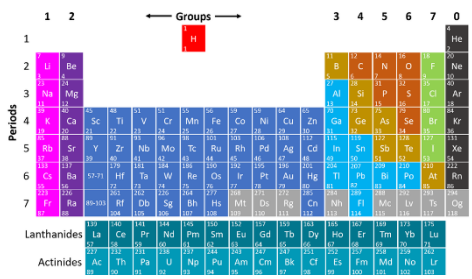
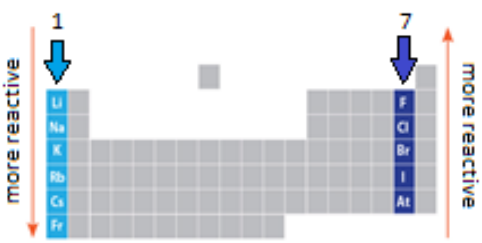
C — Atomic Structure & Periodic Table — Y8

Rationale

In this topic you will learn about the structure of an atom. You will look at the small sub-atomic particles that are found inside atoms and should be able to name them and describe where they can be found. You will also be introduced to the periodic table and look at how scientists use this to organise elements into groups. You will learn how scientists developed the periodic table using evidence from experiments. You will explore how the periodic table informs us about the structure of the different atoms and look at the properties of particular groups

Diagrams	Keywords	Definitions
	Proton Neutron Electron	A positively charged particle (+1), found in the nucleus of the atom. A neutral particle (0), found in the nucleus of the atom. A negatively charged particle (-1), found orbiting the nucleus of an atom in energy shells. Arranged in shells. Maximum number in each shell: 2, 8, 8.
	Mass Number Atomic Number	Tell us the number of protons added to the number of neutrons in an atom. Tells us the number of protons in an atom. This is the same as the number of electrons.
	Periodic Table	All known elements are arranged in the periodic table. The columns are known as groups and the rows are known as periods. Elements in the same group have similar properties. The group number tells us how many electrons are in the atom's **outer shell**.
 	Metals Non-Metals	Metals are mainly on the left of the periodic table. Metals are shiny, malleable (can bend), ductile (can be hammered thin), have high melting and boiling points, and are good conductors of heat and electricity. Non-metals are mainly on the right of the periodic table. Non-metals are dull, brittle (break easily), have low melting and boiling points, and are poor conductors of heat and electricity.
	Group 1 (Alkali Metals) Group 7 (Halogens)	Also known as the **Alkali Metals**. They are very reactive. Elements further down the group are **more** reactive. Also known as the **Halogens**. They are very reactive. Elements further down the group are **less** reactive.