

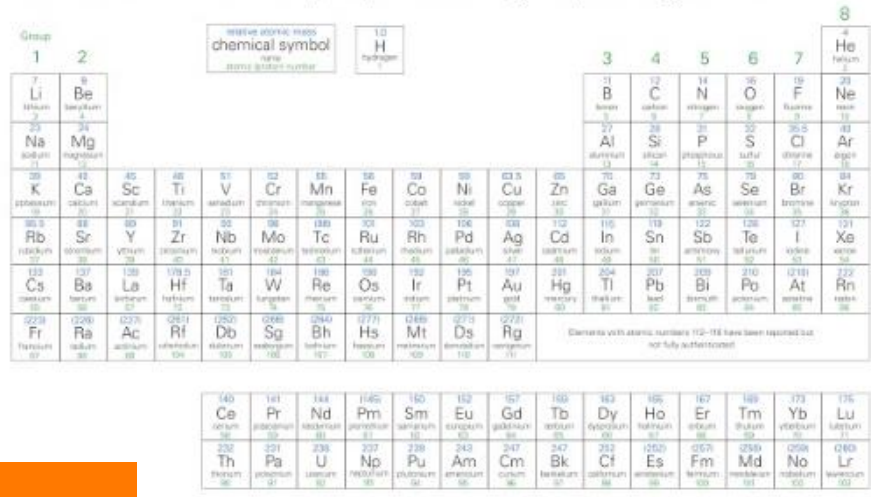
## Section 1- Elements

An **element** is a substance that cannot be broken down into other substances.

Every element has its own chemical **symbol** which are shown together in the **Periodic Table**.

Elements have different **properties**, such as colour, smell, electrical conductivity and chemical reactivity

The **Periodic Table** lists the elements. In the Periodic Table, elements with similar properties are grouped together.



## Section 3 - Compounds

A **compound** is a substance made up of more than one type of atom.

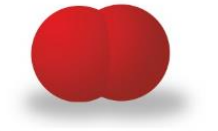
A **molecule** is a group of two or more atoms bonded together.

Hydrogen and oxygen are both elements, but when they react together they form the compound of water.

Compounds often have different properties to the elements that they are formed from.



▲ A hydrogen molecule consists of two hydrogen atoms.



▲ An oxygen molecule consists of two oxygen atoms.



▲ A water molecule has one oxygen atom joined to two hydrogen atoms.

## Section 2- Atoms

An **atom** is the smallest part of an element that can exist.

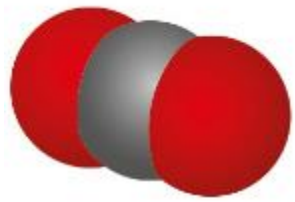
Each element is made up of only one sort of atom.

Silicon chips are found in computers, they are made up of silicon crystals. Silicon is an element, each silicon crystal is made up of many silicon atoms.

## Section 4 - Chemical formulae

A **chemical formula** shows the relative numbers of each element in a compound, which means how many atoms of an element there are in a compound compared to another element.

CO<sub>2</sub> is carbon **dioxide** because it has 2 oxygen atoms. CO is carbon **monoxide** because it only has one oxygen atom.



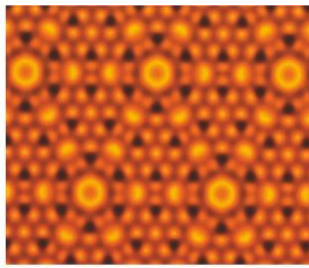
◀ A carbon dioxide molecule has one carbon atom and two oxygen atoms.



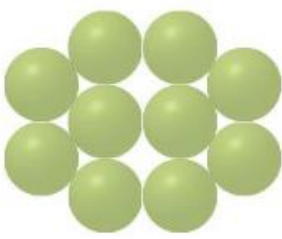
▶ A carbon monoxide molecule has one carbon atom and one oxygen atom.



Silicon chip



Surface of a silicon crystal



Silicon atoms in solid silicon

Molecule of compound made up of...	Name of compound
1 carbon atom and 1 oxygen atom	carbon <b>monoxide</b>
1 carbon atom and 2 oxygen atoms	carbon <b>dioxide</b>