

Atoms, Molecules, Elements, Compounds and Mixtures

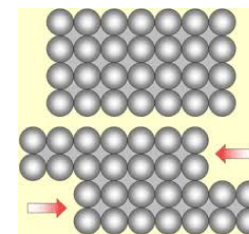
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Year 8 Chemical Sciences

Atoms & Elements

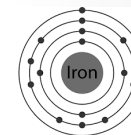
- Substances made up with ONE type of atom



Iron



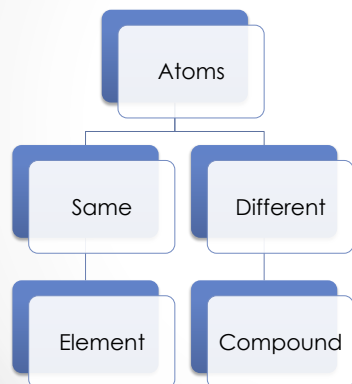
Iron atoms



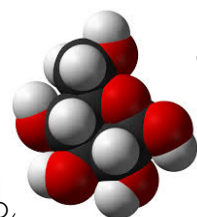
Iron atoms

Molecules

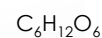
- Clusters of two or more ATOMS bound together



N₂

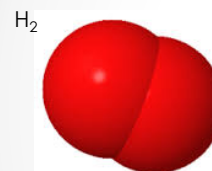


Glucose

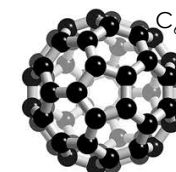


Molecular Elements

- All molecules identical



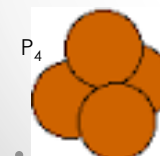
H₂



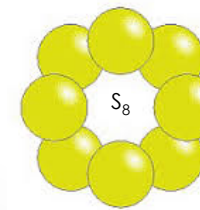
Buckyballs



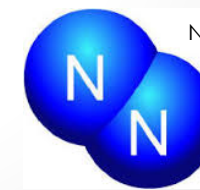
Cl₂



P₄



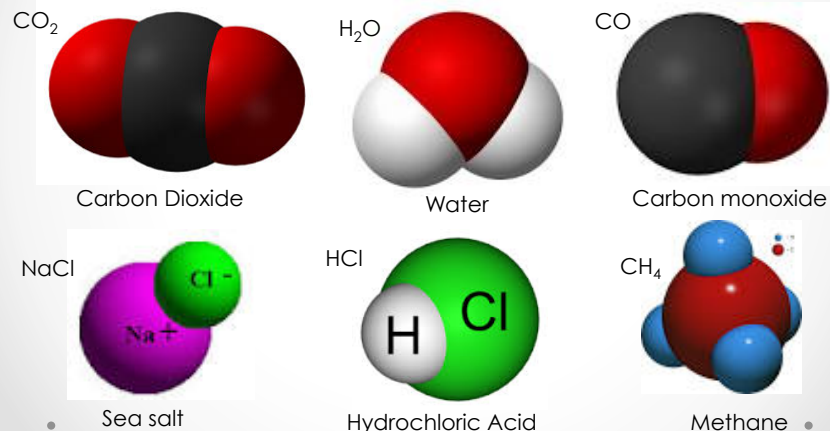
S₈



N₂

Molecular Compounds

- More than ONE type of atom



Mixtures

- Made from different substances that are **NOT chemically joined**
- Each substance keeps its own properties
- Each substance is easily separated from mixture



Activity: Place a heading 'Mixtures' in your notebooks
In **groups of 2 or 3** grab a box of rocks and record your observations as notebooks.

Describe the colour, shape and size of each type of rock present

Separate some of the rocks into piles of the same type of rock
Has the colour, size and shape of the rocks changed? Record your answers

Discuss in your groups how you could combine the rocks to make a compound.

Think about if they would still have the same colour, shape and size

Activity 9

- Take out notebooks
- Place the heading "Mixtures & Compounds"
- Write the AIM
 - To study how the properties of iron and sulfur are affected by:
 1. Mixing them together
 2. Heating the mixture strongly
- Draw a table in your notebook with the following headings to recode your observations

Substance	Appearance	Magnetism
Iron		
Sulfur		
Iron & Sulfur Mixture		
Iron & Sulfur after Heating		