



Content - Big ideas

KS3 - C2.3 Metals & Acids

Big Question: What is the pattern in the reactivity in metals?

Learning Outcome:

- Explore patterns in chemical reactions and the different type of reactions.

KS4 - CC03 - Atomic Structure

Big Question: What is inside the atom?

Learning Outcome:

- Look at the subatomic particles in the atom and understand the structure of the atom.
- Understand how the atom has been developed in its structure through history.

KS4 - CC04 - Developing the Periodic Table

Big Question: How has the periodic table been developed over history?

Learning Outcome:

- Understand how the atom has developed by scientists from the ideas the atom is single sphere to the modern atomic model.

KS4 - CC01 - States of Matter

Big Question: How does the arrangement of particles changed by the amount of energy a substance has?

Learning Outcome:

- Understand the loss or gain of energy in a substances causes a change in the particle arrangement and state of matter.

KS4 - CC02 - Separating Mixtures

Big Question: What are pure and impure substances?

Learning Outcome: Describe the different physical processes to separate mixtures and create a pure substance.

Prior learning

- Chemical reactions
- Atoms, elements and compounds
- Use of the periodic table
- Descriptions and diagrams of the three states of matter

Global/IOM/Subject Links

Global & IOM links:

- Waste management, farming and agriculture, global warming and climate change
- **Subject:**
Atomic structure – Maths
- Metals & Acid – D&T
- Separation Techniques – D&T

Subject specific skills development

Practical skills:

- React metals with acid and make observation on the gas product.

Subject Skills:

- Calculate the number of subatomic particles within an element.
- Describe the changing atomic theory over history to the modern day.
- Make observation on changes of state using energy.