Year 11 Chemistry Learning Map

- TERM 1 -

Electrolysis

In this topic we will learn how high reactivity metals can be extracted from ores to produce pure metals. We will also learn how electrolysis can be used to purify metals and split compounds to produce useful substances such as bleach and hydrogen.

Rates of Reaction

In this topic we learn about the different types of reactions which exist, from exploding fireworks to rusting of metal. We look at the factors which can speed up and slow down reactions and how these can be manipulated to create large quantities of products.

LINKS TO PRIOR LEARNING

Previously students will have learnt:

- About products and reactants in chemical reactions.
- About elements, compounds and the periodic table as well as what happens during chemical reactions.
- About how to write balanced chemical equations including state symbols.
- How oxidation and displacement reactions occur in relation to the reactivity series.

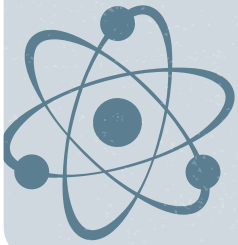
- TERM 2 -

Hydrocarbons

In this topic we will learn how crude oil is separated to form many useful fractions which go on to become useful fuels and materials like plastics.

Chemical Analysis

We will also learn how techniques enable chemists to calculate known quantities of materials which supports evidence analysis in forensic investigations and drug manufacture.



LINKS TO PRIOR LEARNING

Previously students will have learnt:

- How oxidation and displacement reactions occur in relation to the reactivity series.
- How mixtures are separated using fractional distillation to produce fuels and energy resources.

- TERM 3 -

Using Resources

We will learn the importance of recycling materials such as metals and the factors involved in performing a life cycle assessment of a product.

LINKS TO PRIOR LEARNING

Previously students will have learnt:

- How oxidation and displacement reactions occur in relation to the reactivity series.