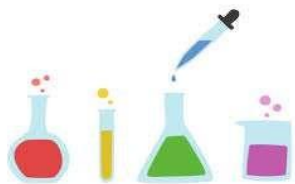


Chemistry S3 Elective Course

Course Content

As well as developing your knowledge and understanding of the world around us, you will work on a series of problem-solving skills, as well as graphing and experimental design.

The 4 units in S3 are:



pH Indicators & Making Salts

This unit is about the Chemistry of acids and alkalis/bases. You will broaden and deepen your knowledge of the pH scale and learn about different indicators. You will also perform several different neutralisation reactions to make salts. There will be lots of problem-solving and experiment design.

Lessons cover: Exploring, Comparing and Using Indicators. Acids and Bases. Neutralisation. Making Salts. Titration.

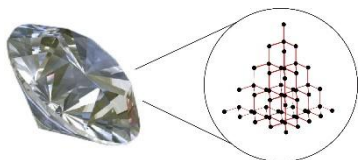
Carbon Chemistry & Fuels/Environment



Hydrocarbons are specific classes of compounds containing only carbon and hydrogen atoms. They are used to make a variety of important substances ranging from pharmaceutical drugs to plastics. However, they are predominately used as fuels and are having a significant effect on our environment.

Lessons cover: Hydrocarbons. Distinguishing Between Alkanes and Alkenes. Uses of Alkanes and Alkenes. Sources of Hydrocarbons - Fossil Fuels. Fractional Distillation. Environmental Impact.

Bonding & Structure



A strong understanding of the bonding and structure of substances allow you to explain the properties that you see, for example, diamond has an extremely high melting point.

This unit introduces how particles are arranged in substances and how this strongly influences properties.

Lessons cover: Why Atoms Bond. Covalent Bonding. Ionic Bonding. Properties of Substances. Identifying Unknown Substances.

Metals

Humans have been using metals for over 7000 years and they have a wide variety of applications. They are one of our most important resources. You will investigate the reactivity of metals and link this to ore extraction techniques. The use of metals in generating electricity may also be researched and investigated.



Lessons cover: Reaction of Metals. Metal Extraction: Using Heat or Electricity. Metals Assignment: Voltage Investigation.

Teaching Methods Pupils will learn by a mixture of direct interactive instruction and discovery, work individually or in small groups, plan investigations, and draw conclusions from results. Learning resources will be delivered via the One Note app on iPad and will also include use of a variety of digital learning tools. Pupils will be given opportunities to acquire independent study skills which should help with their studies in the Senior Phase.

Homework Policy There will be a variety of Homework tasks in each unit, including tasks to consolidate classwork, research assignments and revision. Homework may be on Microsoft Forms, One Note pages or other digital formats.

Assessment A range of assessments will be used to monitor progress and achievement, including assignments, research tasks, presenting work and peer work. At the end of most units there is a written test. The questions will test a mixture of Knowledge and Understanding and Problem-Solving skills. Practice Questions will be used in class and will be available in the Class Notebook in One Note.

Progression into the Senior Phase The S3 Chemistry Course will help you progress into the Chemistry Course at National 4 & 5 Levels. From there you can proceed to Higher Chemistry. National 5 Health Sector and National 5 Lab Science are also possible options.

The S3 Chemistry course will also be useful for progression into Biology, Physics National 4 or 5 level or into Science at National 4 level.