**A Level Chemistry**

**Overview**

**Do you wonder why water increases in size when it freezes? Do you wonder why copper can be red….and black….and blue….and green? Do you wonder why pure carbon can be used to both write on paper and cut glass? Do you wonder why alcohol can be used routinely in drinks and yet is also in paint stripper?** If these are the sorts of questions that fascinate and intrigue you then studying chemistry at A level will inspire you for the future. Chemistry is a vibrant and exciting subject. Chemistry is the connection between all sciences – from the making of new materials to understanding biological systems, and from the food we eat to the medicines which keep us healthy. We rely on chemicals every day of our lives and this course will help you understand and link different concepts and ideas together.

The course is designed to give pupils a breadth and depth of knowledge in the fundamental key concepts of all areas of chemistry - physical, organic, and inorganic. Each module of the course is taught both theoretically and experimentally; with a range of practicals being carried out throughout the course. As well as supplementing and consolidating the knowledge taught the practicals embed new skills such as: refluxing, organic synthesis, referencing and researching – all of which are relevant and transferable to future university careers.

The course units are as follows:

Development of practical skills in chemistry Foundations in chemistry

Periodic table and energy Core organic chemistry and analysis

Physical chemistry and transition elements Organic chemistry and analysis

**Whilst there will be some specific ‘bridging work’ set on the school website before the end of term, developing an understanding of the following prior to this would be useful:**

Atomic structure

Names and formulae of laboratory and organic acids and alkalis

Bonding and properties of metallic compounds, ionic compounds, simple covalent molecules, and giant covalent structures

Basic organic chemistry (functional groups of alkanes and alkenes)

Factors affecting rates of reaction and equilibrium

Chemical equations and energy.

**Save your work in a portfolio that can be incorporated into your subject folder if/once you decide to commence this course.**