

Science



Overview of the Course

- Students will follow a broad, coherent course of study that adds to their knowledge and understanding of the living, material and physical worlds.
- Students will develop a range of transferable skills by undertaking practical activities to help prepare them for the examination questions based on the 16 Core practical investigations. They will learn to make observations, analyse data appropriately and explain conclusions in terms of scientific concepts.

Unit 1 - Biology

- **Biology:**
 - How cells function in organisms
 - Cell division and Respiration
 - Human biology and health issues including diseases and disease prevention
 - Plant biology
 - Photosynthesis
 - Coordination and control in humans
 - Human reproduction and contraception
 - Inheritance
 - Variation and evolution
 - Genetic engineering
 - Classification of organisms
 - Adaptation
 - Ecology
 - Human influences on the environment.

Unit 2 - Chemistry

- **Chemistry:**
 - The Periodic table
 - Chemical structures and their properties
 - Chemical reactions and how to analyse substances
 - Chemical changes
 - Electrolysis
 - Organic chemistry

Chemistry of the atmosphere including human influences on this and sustainable development.

Unit 3 - Physics

- **Physics:**
Energy generation (including nuclear fission and fusion) and the uses of energy
Waves
Magnetism
Atomic structure and forces that affect the world
Students will learn how to apply mathematical concepts to explain the Physical concepts learnt.