YEAR 9 SCIENCE PROGRAM

All students in Year 9 follow a common course of four science units
These units are:

- *Body Works*
  All animals, including humans, live where they can get food, water, air and shelter. These studies will help students to understand how things are obtained from the surroundings and are important to life. Topics covered include:
  - the need for a range of resources such as food, water, air and shelter for survival
  - where animals gain these resources and how they use them
  - how animal structure and function help obtain these resources
  - how animals affect their environment
  - how disease impacts on organ functioning.

- *Energy & Change (Heat & Electricity)*
  Students will learn about the science and technology of household energy and its uses. For example, an electric toaster uses electrical energy and changes it to heat energy which cooks the toast. As energy consumers, students will be able to make informed decisions regarding the safe use, purchase and conservation of energy. This subject covers:
  - what is meant by an electric current
  - the production, detection and transfer of electrical energy
  - making electric circuits
  - the use of the heating, lighting and magnetic effects of an electric current and interpreting circuit diagrams
  - heat transfer and how it can be used in everyday situations
  - the ways in by which household energy and appliances may be used safely.

- *Ecology*

  Ecology includes:
  - a study of humans and their relationship with their environment
  - the effect that non-living things have on the kinds of organisms that can live in an area
  - the effect that living organisms have on other living organisms
  - how matter and energy are used in the living world
  - the effect of human activities on nature
  - the use and conservation of the environment.

- *Interactions in Chemistry*
  The modern world is extremely dependent on chemicals used in items such as food, medicine, plastics, building, transport, fertilisers and toys - the list is endless. Students will study a variety of chemical processes and come to understand how modern society has become influenced by one particular branch of science.