

Biology:

Unit 1: Unity and Diversity

In this unit students study the activities of cells and their structure and function at light and electron microscope levels. Students are encouraged to conduct practical investigations including their own design to assist them to develop knowledge and understanding and to illustrate concepts.

Unit 2: Organisms and their environment

In this unit students study environmental factors common to all habitats and investigate structural and physiological adaptations of organisms to particular ecological niches. Techniques used to monitor environmental change and maintain ecosystems are investigated. Students are required to conduct fieldwork.

Unit 3: Signatures of Life

In this unit students investigate the significant role of proteins in cell functioning. The study of the structure and function of DNA and RNA leads students to investigate the diversity of proteins.

Unit 4: Continuity and Change

In this unit students focus on molecular genetics and investigate individual units of inheritance and the genomes of individuals and species. Students undertake practical investigations that involve the manipulation of DNA and inheritance traits. Students investigate changes to species and the process of natural selection.

Each unit deals with specific content and is designed to enable students to achieve a set of outcomes. Each outcome is described in terms of key knowledge. A set of key skills is applicable to all units. The set of skills consists of the ability to:

- *Investigate and inquire scientifically*
- *Apply biological understandings*
- *Communicate biological information and understandings*

