

Unit 3 and 4 Biology

Over this course, students will continue to improve the fundamental scientific thinking skills: developing aims and questions, formulating hypotheses, making predictions, analysing and evaluating data, and drawing evidence-based conclusions. Students will learn to communicate and explain scientific ideas.

The Biology Course in Year 12 asks two major questions.

How do cellular processes work and how do cells communicate?

Students will learn to explain the dynamic nature of the cell in terms of key cellular processes: regulation, photosynthesis and cellular respiration. They will also analyse factors that affect the rate of biochemical reactions.

Students will apply a stimulus-response model to explain how cells communicate with each other, outline human responses to invading pathogens, distinguish between the different ways that immunity may be acquired, and explain how malfunctions of the immune system cause disease.

How are species related and what impact do humans have?

Student will learn to analyse evidence for evolutionary change, explain how relatedness between species is determined, and elaborate on the consequences of biological change in human evolution.

Student will describe how tools and techniques are used to manipulate DNA, explain how biological knowledge is applied to biotechnical applications, and analyse the interrelationship between scientific knowledge and its applications in society.

Assessment

There is practical work, topic tests, chapter questions and other tasks that students will need to complete. Responses to these tasks will determine whether the student has demonstrated a satisfactory understanding of the course.

There are two SAC Assessment tasks for each Unit and one student designed investigation required for summative assessment and a study score.