Years 11 - 12 Science

Biological Science

Biological Science is concerned with the study of the phenomenon of life in all its manifestations. It encompasses studies of the origin, development, functioning and evolution of living systems and the consequences of intervention in those systems.

Biological Science is characterized by a view of life as a unique phenomenon with a fundamental unity. It is an integrating study, drawing on many branches of knowledge in attempting to develop an understanding living processes and systems in which the complexity of interacting factors can make quantification and prediction difficult.

Biological Science provides students with an insight into the scientific manner of investigating problems pertaining to the living world and the processes of science which lead to the discovery of new knowledge. It provides students with a deeper understanding and an enhanced aesthetic appreciation of the living world. Participation in Biological Science enable students to engage in creative scientific thinking and to apply their knowledge in practical situations. Studies of Biological Science will assist students in foreseeing the consequences for the living world of their own and society's activities. This will enable them to participate as informed and responsible citizens in decision-making processes, the outcomes of which will affect the living world.

Some topics studied include: Diversity of Life, Ecology, Outdoor Studies, Cell Biology (Plant and Animal), Physiology, Reproduction, Reproductive Technology, Molecular Biology, Genetics, Biotechnology, Genetic Engineering and Evolution.

Biology is a science, which is relevant to everyone. The course uses many different learning activities and experiences. These include a wide range of practical laboratory work, field trips, discussions, modelling, library research. The course integrates technology as a vehicle for learning. Students undertake an extended experimental investigation and, in Year Twelve, have the opportunity to qualify for the highly regarded CSIRO CREST Award.

This subject is useful for both science and non-science orientated students who want a more rounded selection of subjects. In studying Biology a good level of literacy is an advantage and a sound background in Junior Science is recommended. Students who are interested in pursuing careers such as medicine, veterinary science, animal husbandry,

horticulture, agriculture, biomedical science, secondary teaching, biotechnology or any course relating to life science should consider this subject. Combined with one or both other sciences offered at this school, it can provide the important "two sciences" prerequisite necessary for entry into most science and science-related tertiary courses.

Assessment in Biology includes three main task types: the Written Task, which takes the form of a supervised assessment, the Extended Response, which involves both allocated class time and the students' own time, and the Extended Experimental Investigation which is conducted over a complete term of the course. The final achievement level is based on six of the most recent items of assessment which the student has completed during the two years of the course.