



11 U Biology (SBI 3U)



Animals Structure and Function

- analyse the relationships between changing societal needs, technological advances, and our understanding of internal systems of humans;
- investigate, through laboratory inquiry or computer simulation, the functional responses of the respiratory and circulatory systems of animals, and the relationships between their respiratory, circulatory, and digestive systems;
- demonstrate an understanding of animal anatomy and physiology, and describe disorders of the respiratory, circulatory, and digestive systems.



Diversity of Living Things

- analyse the effects of various human activities on the diversity of living things;
- investigate, through laboratory and/or field activities or through simulations, the principles of scientific classification, using appropriate sampling and classification techniques;
- demonstrate an understanding of the diversity of living organisms in terms of the principles of taxonomy and phylogeny.



Genetic Processes

- evaluate the importance of some recent contributions to our knowledge of genetic processes, and analyse social and ethical implications of genetic and genomic research;
- investigate genetic processes, including those that occur during meiosis, and analyse data to solve basic genetics problems involving monohybrid and dihybrid crosses;
- demonstrate an understanding of concepts, processes, and technologies related to the transmission of hereditary characteristics.



Evolution

- analyse the economic and environmental advantages and disadvantages of an artificial selection technology, and evaluate the impact of environmental changes on natural selection and endangered species;
- investigate evolutionary processes, and analyse scientific evidence that supports the theory of evolution;
- demonstrate an understanding of the theory of evolution, the evidence that supports it, and some of the mechanisms by which it occurs.



Plants: Anatomy, Growth and Function

- evaluate the importance of sustainable use of plants to Canadian society and other cultures;
- investigate the structures and functions of plant tissues, and factors affecting plant growth;
- demonstrate an understanding of the diversity of vascular plants, including their structures, internal transport systems, and their role in maintaining biodiversity.