

# Biology, Grade 11

## University Preparation

SBI3U

This course furthers students' understanding of the processes that occur in biological systems. Students will study theory and conduct investigations in the areas of biodiversity; evolution; genetic processes; the structure and function of animals; and the anatomy, growth, and function of plants. The course focuses on the theoretical aspects of the topics under study, and helps students refine skills related to scientific investigation.

**Prerequisite:** Science, Grade 10, Academic

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### Big Ideas

#### *Diversity of Living Things*

- All living things can be classified according to their anatomical and physiological characteristics.
- Human activities affect the diversity of living things in ecosystems.

#### *Evolution*

- Evolution is the process of biological change over time based on the relationships between species and their environments.
- The theory of evolution is a scientific explanation based on a large accumulation of evidence.
- Technology that enables humans to manipulate the development of species has economic and environmental implications.

#### *Genetic Processes*

- Genetic and genomic research can have social and environmental implications.
- Variability and diversity of living organisms result from the distribution of genetic materials during the process of meiosis.

#### *Animals: Structure and Function*

- Groups of organs with specific structures and functions work together as systems, which interact with other systems in the body.
- The development and uses of technology to maintain human health are based, in part, on the changing needs of society.

#### *Plants: Anatomy, Growth, and Function*

- Plants have specialized structures with distinct functions that enable them to respond and adapt to their environment.
- Plant variety is critical to the survival and sustainability of ecosystems.