# Prescribed Learning Outcomes • By Grade

## GRADE 10

## Processes of Science

It is expected that students will:

- A1 demonstrate safe procedures
- A2 perform experiments using the scientific method
- A3 represent and interpret information in graphic form
- A4 demonstrate scientific literacy
- A5 demonstrate ethical, responsible, cooperative behaviour
- A6 describe the relationship between scientific principles and technology
- A7 demonstrate competence in the use of technologies specific to investigative procedures and research

### Life Science: Sustainability of Ecosystems

It is expected that students will:

- B1 explain the interaction of abiotic and biotic factors within an ecosystem
- B2 assess the potential impacts of bioaccumulation
- B3 explain various ways in which natural populations are altered or kept in equilibrium

#### Physical Science: Chemical Reactions and Radioactivity

*It is expected that students will:* 

- C1 differentiate between atoms, ions, and molecules using knowledge of their structure and components
- C2 classify substances as acids, bases, or salts, based on their characteristics, name, and formula
- C3 distinguish between organic and inorganic compounds
- C4 analyse chemical reactions, including reference to conservation of mass and rate of reaction
- C5 explain radioactivity using modern atomic theory

#### Physical Science: Motion

- C6 explain the relationship of displacement and time interval to velocity for objects in uniform motion
- C7 demonstrate the relationship between velocity, time interval, and acceleration

#### Earth and Space Science: Energy Transfer in Natural Systems

*It is expected that students will:* 

- D1 explain the characteristics and sources of thermal energy
- D2 explain the effects of thermal energy within the atmosphere
- D3 evaluate possible causes of climate change and its impact on natural systems

## Earth and Space Science: Plate Tectonics

- D4 analyse the processes and features associated with plate tectonics
- D5 demonstrate knowledge of evidence that supports plate tectonic theory