



This scope and sequence has been created to ensure alignment between Hub Learning and in-class programming, and smooth transitions following potential staff/student absence. It is intended to support teachers and teams in engaging in collaborative planning for instruction.

Each reporting period has been divided into two segments, defining four quarters across the school year. Each quarter lists the outcomes to be addressed in that approximate time period. Outcomes within a quarter are identified for concentrated teaching and learning, though it is acknowledged that providing opportunities for students to make connections across topics and engage in explorations that span the school year for scientific phenomena that change over time allow students to deepen their understanding. Although there is a suggested order shown within each quarter, teachers will design teaching and learning according to their context. Please note that this resource identifies only the bolded specific outcomes and must be used in conjunction with the questions and issues identified within the [Program of Studies](#).

First Reporting Period		Second Reporting Period	
Skill Outcomes:	Initiating and Planning	Performing and Recording	Analyzing and Interpreting
Attitude Outcomes:	Interest in Science	Mutual Respect	Scientific Inquiry
		Collaboration	Stewardship
			Safety
Unit A: Biological Diversity 1. Investigate and interpret diversity among species and within species, and describe how diversity contributes to species survival 2. Investigate the nature of reproductive processes and their role in transmitting species characteristics 3. Describe, in general terms, the role of genetic materials in the continuity and variation of species characteristics; and investigate and interpret related technologies 4. Identify impacts of human action on species survival and variation within species, and analyze related issues for personal and public decision making	Topic B: Matter and Chemical Change 1. Investigate materials, and describe them in terms of their physical and chemical properties 2. Describe and interpret patterns in chemical reactions 3. Describe ideas used in interpreting the chemical nature of matter, both in the past and present, and identify example evidence that has contributed to the development of these ideas 4. Apply simplified chemical nomenclature in describing elements, compounds and chemical reactions	Unit C: Environmental Chemistry 1. Investigate and describe, in general terms, the role of different substances in the environment in supporting or harming humans and other living things 2. Identify processes for measuring the quantity of different substances in the environment and for monitoring air and water quality 3. Analyze and evaluate mechanisms affecting the distribution of potentially harmful substances within an environment Topic D: Electrical Principles and Technologies 1. Investigate and interpret the use of devices to convert various forms of energy to electrical energy, and electrical energy to other forms of energy 2. Describe technologies for transfer and control of electrical energy	Topic D: Electrical Principles and Technologies 3. Identify and estimate energy inputs and outputs for example devices and systems, and evaluate the efficiency of energy conversions 4. Describe and discuss the societal and environmental implications of the use of electrical energy Topic E: Space Exploration 1. Investigate and describe ways that human understanding of Earth and space has depended on technological development 2. Identify problems in developing technologies for space exploration, describe technologies developed for life in space, and explain the scientific principles involved 3. Describe and interpret the science of optical and radio telescopes, space probes and remote sensing technologies 4. Identify issues and opportunities arising from the application of space technology, identify alternatives involved, and analyze implications