Curriculum Pacing Guide 2022-2023

The purpose of this pacing guide is to assist in mapping out the assessment of curricular objectives of Science 8, to facilitate collaboration between Science 8 teachers within the division, and to provide professional development opportunities relevant to the current unit of study.

For the 2022-2023 school year, there is flexibility within each semester, meaning that there is no required order in which to teach and assess the units of study, as long as the outcomes are appropriately taught, evaluated and assessed by the end of each semester. Units A, D, and E must be completed by January 31, 2023. Please note that each unit is equally weighted in the Science 8 Program of Studies and on the Science 8 Common Summative Assessment. The suggested time frame assumes 45 minute periods, and may need to be adjusted to accommodate different schedules.

Grade 8 Science

	Reporting Standards (PTP General Outcome)	General Outcomes from Program of Studies (To be Assessed and Reported)	Specific Skill Outcomes (To be Taught, NOT necessarily Reported)	Enrichment Notes (Please Visit SharePoint for Resources)
UNIT A Mix and Flow of Matter Suggested time frame: 30 classes	8.SCI.A.1 8.SCI.A.2 8.SCI.A.3 8.SCI.A.4 8.SCI.S.PR.1	**Science, Technology, and Society (STS) and Knowledge Outcomes** 1. Investigate and describe fluids used in technological devices and everyday materials 2. Investigate and describe the composition of fluids, and interpret the behaviour of materials in solution 3. Investigate and compare the properties of gases and liquids and relate variations in their viscosity, density and buoyancy 4. Identify and describe technologies based on properties of fluids **Skill Outcome** Performing and Recording ● Conducts and records investigations into the relationships between and among observations	**Initiating and Planning** 8.SCI.S.IP.1.2 8.SCI.S.IP.1.5 8.SCI.S.IP.1.6 8.SCI.S.IP.1.8 **Performing and Recording** 8.SCI.S.PR1.3 8.SCI.S.PR1.4 8.SCI.S.PR1.6 8.SCI.S.PR1.9 8.SCI.S.PR1.10 **Analyzing and Interpreting** 8.SCI.S.AI.1.3 8.SCI.S.AI.1.4 8.SCI.S.AI.1.5 8.SCI.S.AI.1.7 8.SCI.S.AI.1.9 **Communication and Teamwork** 8.SCI.S.CT.1.1 8.SCI.S.CT.1.5	**Cross-Curricular** Mathematics ● Statistics and Probability (Data Analysis)- General Outcome 1- Critique ways in which data is presented graphically ● Number (Rate Ratio Proportion)- Specific Outcomes 4 - Demonstrate an understanding of ratio and rate ● Number (Rate Ratio Proportion)- Specific Outcomes 5 -Solve problems involving rates, ratios and proportional reasoning English Language Arts ● General Outcome 3- Manage ideas and information
UNIT D Mechanical Systems Suggested time frame: 25 classes	8.SCI.D.1 8.SCI.D.2 8.SCI.D.3 8.SCI.D.4 8.SCI.S.AI.1	**Science, Technology, and Society (STS) and Knowledge Outcomes** 1. Demonstrate the development of science and technology by describing and comparing mechanical devices that have been improved over time 2. Examine simple machines by describing the structures, functions and component parts of the overall system 3. Investigate and describe the transmission of force and energy between parts of a mechanical system 4. Examine the social and environmental contexts of science and technology, as they apply to the development of mechanical devices **Skill Outcome** Analyzing and Interpreting ● Analyzes qualitative and quantitative data, and develops and assesses possible explanation	**Initiating and Planning** 8.SCI.S.IP.1.2 8.SCI.S.IP.1.4 8.SCI.S.IP.1.7 8.SCI.S.IP.1.9 **Performing and Recording** 8.SCI.S.PR1.1 8.SCI.S.PR1.2 8.SCI.S.PR1.4 8.SCI.S.PR1.6 8.SCI.S.PR1.8 8.SCI.S.PR1.10 8.SCI.S.PR1.12 **Analyzing and Interpreting** 8.SCI.S.AI.1.5 8.SCI.S.AI.1.6 8.SCI.S.AI.1.7 **Communication and Teamwork** 8.SCI.S.CT.1.1 8.SCI.S.CT.1.4 8.SCI.S.CT.1.5 8.SCI.S.CT.1.7	**Cross-Curricular** Mathematics ● Number (Rate Ratio Proportion)- Specific Outcomes 4 - Demonstrate an understanding of ratio and rate ● Number (Rate Ratio Proportion)- Specific Outcomes 5 -Solve problems involving rates, ratios and proportional reasoning **Indigenous** Powerpoint and Script- Use of Stone Tools
UNIT E Fresh and Salt Water Systems	8.SCI.E.1 8.SCI.E.2	**Science, Technology, and Society (STS) and Knowledge Outcomes** 1. Describe the distribution and characteristics of water in local and global environments, and identify the significance of water supply and quality to the needs of humans and other living things 2. Investigate and interpret linkages among landforms, water and climate	**Initiating and Planning** 8.SCI.S.IP.1.1 8.SCI.S.IP.1.2 8.SCI.S.IP.1.4 8.SCI.S.IP.1.8 **Performing and Recording** 8.SCI.S.PR1.1 8.SCI.S.PR1.2 8.SCI.S.PR1.11 **Analyzing and Interpreting** 8.SCI.S.AI.1.3	**Cross-curricular** Mathematics ● Statistics and Probability (Data Analysis)- General Outcome 1- Critique ways in which data is presented graphically **Indigenous** Lesson Plan- Human impact on water quality

Suggested time frame: 20 classes	8.SCI.E.3 8.SCI.E.4	3. Examine factors affecting productivity and species distribution in marine and freshwater environments 4. Examine human impacts on aquatic systems and identify roles of science and technology in addressing related questions, problems and issues **End of Semester 1**	8.SCI.S.AI.1.8 8.SCI.S.AI.1.9 8.SCI.S.AI.1.11 **Communication and Teamwork** 8.SCI.S.CT.1.1 8.SCI.S.CT.1.2 8.SCI.S.CT.1.3	
UNIT B Cells and Systems Suggested time frame: 30 classes	8.SCI.B.1 8.SCI.B.2 8.SCI.B.3 8.SCI.B.4 8.SCI.S.CT.1	**Science, Technology, and Society (STS) and Knowledge Outcomes** 1. Investigate living things and identify ideas used to interpret their general structure, function and organization 2. Investigate and describe the role of cells within living things 3. Interpret the healthy function of human body systems and describe ways the body reacts to internal and external stimuli 4. Describe areas of scientific investigation leading to new knowledge about body systems and to new medical applications **Skill Outcome** Communication and Teamwork ● Works collaboratively on problems; and uses appropriate language and formats to communicate ideas	**Initiating and Planning** 8.SCI.S.IP.1.2 8.SCI.S.IP.1.6 8.SCI.S.IP.1.7 **Performing and Recording** 8.SCI.S.PR1.3 8.SCI.S.PR1.5 8.SCI.S.PR1.7 8.SCI.S.PR1.10 **Analyzing and Interpreting** 8.SCI.S.AI.1.1 8.SCI.S.AI.1.2 8.SCI.S.AI.1.3 8.SCI.S.AI.1.4 **Communication and Teamwork** 8.SCI.S.CT.1.1 8.SCI.S.CT.1.2 8.SCI.S.CT.1.5	**Cross-Curricular** English Language Arts ● General Outcome 5- Respect, support and collaborate with others
UNIT C Light and Optics Suggested time frame: 25 classes	8.SCI.C.1 8.SCI.C.2 8.SCI.C.3 8.SCI.S.IP.1	**Science, Technology, and Society (STS) and Knowledge Outcomes** 1. Investigate the nature of light and the role of optical systems in our lives 2. Investigate the transmission of light 3. Investigate and examine the science of image formation and vision and related technologies **Skill Outcome** Initiating and Planning ● Asks questions and plans investigations about the relationships between and among observable variables **End of Semester 2**	**Initiating and Planning** 8.SCI.S.IP.1.2 8.SCI.S.IP.1.3 8.SCI.S.IP.1.7 8.SCI.S.IP.1.8 8.SCI.S.IP.1.10 **Performing and Recording** 8.SCI.S.PR1.3 8.SCI.S.PR1.4 8.SCI.S.PR1.7 8.SCI.S.PR1.9 8.SCI.S.PR1.10 **Analyzing and Interpreting** 8.SCI.S.AI.1.1 8.SCI.S.AI.1.3 8.SCI.S.AI.1.9 8.SCI.S.AI.1.10 **Communication and Teamwork** 8.SCI.S.CT.1.4 8.SCI.S.CT.1.6	**Cross-Curricular** English Language Arts ● General Outcome 3- Manage ideas and information

Review and Prepare for Science 8 Common Summative Assessment