Science							
Topic	**Key Concepts**	**Related Concepts**	**Theme**	**ATL skills**	**Lines of Inquiry**	**Summative Assessments**	**Assessment Objectives**
Stand-alone: introduction to the scientific method	Responsibility Form Causation	Organisation	**Who We Are**	**Communication Skills** Exchanging-information skills (listening, interpreting, speaking) **Social Skills** Developing positive interpersonal relationships and collaboration skills (using self-control, managing setbacks, supporting peers) Developing social-emotional intelligence **Self-Management Skills** States of mind (emotional management, self-motivation, resilience).	- the scientific method	Students to use the scientific method to describe the steps of one of this unit's experiment.	Baseline Assessments Physical science Earth & space science Life science Introduce scientific method (steps...) Topics for experiments: - Plants - Animals - Forces - Temperature "
Stand-alone: plant and animal survival	Form Connection Perspective	Patterns Survival Environment	**Where We Are in Place and Time**	**Communication Skills** Exchanging Information (Speaking, Listening, Interpreting) **Social Skills** Developing social-emotional intelligence **Thinking Skills** Critical-thinking skills (analysing and evaluating issues and ideas) Reflections/metacognition skills (reconsidering the process of learning)	- what plants and animals need to survive - how animals and plants change the environment to meet their needs	Students complete a graphic organiser to show the needs of plants and animals in their environments to survive.	**K-LS1-1.** Use observations to describe patterns of what plants and animals (including humans) need to survive. **K-ESS2-2.** Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.
Integrated: Living things have certain requirements to grow and stay healthy.	Form Function Responsibility	Biodiversity, ecosystems, life cycles	**Sharing the Planet Central Idea:** Living things have certain requirements in order to grow and stay healthy.	**Self-Management Skills** States of mind (mindfulness, perseverance) **Communication skills** ICT skills (using technology to gather, investigate and communicate information) **Research Skills** Information-literacy skills (formulation and planning, data gathering and recording, synthesising and interpreting, evaluating and communicating) Media literacy skills (interacting with media to use and create ideas and information) **Thinking skills** Critical-thinking skills (analysing and evaluating issues and ideas) Reflections/metacognition skills (reconsidering the process of learning)	- Different plants and animals - Features of habitats - Protecting living things and their habitats	Students will be asked what plant/flower/tree/animal they are interested in learning and knowing more about. They will describe their characteristics, benefits and our responsibility towards it.	**K-ESS3-1.** Use a model to represent the relationship between the needs of different plants and animals (including humans) and the places they live. **K-ESS3-3.** Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment. * **K-2-ETS1-1.** Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.

Stand-alone: sunlight on Earth's surface and weather conditions	Function Causation Perspective	Weather conditions Weather forecasting Earth's surface Sunlight	**How We Express Ourselves**	**Thinking Skills** Creative-thinking skills (generating novel ideas and considering new perspectives) **Communication Skills** Literacy skills (reading, writing and using language to gather and communicate information) **Research skills** Media literacy skills (interacting with media to use and create ideas and information)	- the effect of sunlight on Earth's surface - patterns of local weather conditions - purpose of weather forecasting	Students create a display of different weather conditions. This will be used as a role play area.	Physical Science K-PS3-1. Make observations to determine the effect of sunlight on Earth's surface. K-PS3-2. Use tools and materials to design and build a structure that will reduce the warming effect of sunlight on an area.* Earth and Space Science K-ESS2-1. Use and share observations of local weather conditions to describe patterns over time. K-ESS3-2. Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather.* Engineering K-2-ETS1-1. Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.
Integrated **Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object. Analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or a pull.***	Change Function Connection		**How the World Works Central Idea:** Forces cause things to move in different ways.	**Thinking Skills** Transfer skills (using skills and knowledge in multiple contexts) **Research Skills** Information-literacy skills (formulation and planning, data gathering and recording, synthesising and interpreting, evaluating and communicating) Ethical use of media/information (understanding and applying social and ethical technology) **Self-Management Skills** Organization skills (managing time and tasks effectively)	- How objects may be moved - How forces act on objects - How we use our knowledge about forces in everyday objects		**K-PS2-1.** Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object. **K-PS2-2.** Analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or a pull.*

Taking Action

Taking action is one of the five essential elements of the PYP and an intricate part of the inquiry cycle which could be interpreted as a "conclusion" to learning. When taking action, students make connections to new knowledge they have acquired and apply their skills in everyday life.

Please note: At times areas of the curriculum will change based on the learning needs and interests of the students.