

Science

Topic	Key Concepts	Related Concepts	Theme	ATL skills	Lines of Inquiry	Assessment Objectives
Stand-alone: introduction to the scientific method	Function Form Connection	Geography, location, scale	How We Organize Ourselves Central Idea: People develop maps to navigate the world and organise spaces.	Thinking Skills Transfer skills (using skills and knowledge in multiple contexts) Communication Skills Exchanging-information skills (listening, interpreting, speaking) ICT skills (using technology to gather, investigate and communicate information)	- Different types of maps - How people read and create maps - Where we use and find maps	Scientific Method or Science and Engineering Practices
Stand-alone: Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.	Form Function Responsibility	Personal hygiene, nutrition	Who We Are Central Idea: Healthy lifestyles can be achieved by making personal choices.	Self Management Skills States of mind (mindfulness, perseverance, emotional management, self-motivation, resilience) Research Skills Information-literacy skills (formulation and planning, data gathering and recording, synthesising and interpreting, evaluating and communicating)	- Choices we make every day - Physical and mental wellbeing - Consequences of choices	Scientific Method or Science and Engineering Practices 1-LS1-1. Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs."



<p>Stand-alone</p> <p>Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive. Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.</p>	<p>Causation Responsibility Perspective</p>	<p>Composting, decomposition, finite and infinite resources</p>	<p>Sharing the Planet Central Idea: People can make choices to support the sustainability of Earth's resources</p>	<p>Thinking Skills Creative-thinking skills (generating novel ideas and considering new perspectives)</p> <p>Social Skills Developing positive interpersonal relationships and collaboration skills (using self-control, managing setbacks, supporting peers)</p> <p>Self Management Skills Organization skills (managing time and tasks effectively)</p>	<p>- Impact of our actions on resources - The importance of sustainable practices - Reusing resources in different ways</p>	<p>Scientific Method or Science and Engineering Practices</p> <p>1-LS1-2. Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive. 1-LS3-1. Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.</p>
<p>Integrated</p> <p>Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate. Make observations to construct an evidence-based account that objects in darkness can be seen only when illuminated.</p> <p>Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a</p>	<p>Form Change Connection</p>		<p>How the world works Central Idea: We can use our understanding of how light and sound works to use them creatively.</p>	<p>Thinking Skills Critical-thinking skills (analysing and evaluating issues and ideas)</p> <p>Communication Skills Literacy skills (reading, writing and using language to gather and communicate information)</p>	<p>- Properties of light and sound - Manipulating light and sound for creativity - What life would be like without light and sound</p>	<p>Scientific Method or Science and Engineering Practices</p> <p>1-PS4-1. Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate. 1-PS4-2. Make observations to construct an evidence-based account that objects in darkness can be seen only when illuminated. 1-PS4-3. Plan and conduct investigations to determine the effect of placing objects made with different materials in the path of a beam of light. 1-PS4-4. Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance.*</p> <p>K-2-ETS1-2. Develop a simple sketch, drawing, or physical model to</p>



given problem.						illustrate how the shape of an object helps it function as needed to solve a given problem.	
<p>Integrated</p> <p>Use observations of the sun, moon, and stars to describe patterns that can be predicted.</p> <p>Make observations at different times of year to relate the amount of daylight to the time of year.</p>	<p>Function</p> <p>Causation</p> <p>Responsibility</p>		<p>Where We Are In Place and Time</p> <p>Central Idea:</p> <p>Space exploration leads to new discoveries and understanding our place in the universe.</p>	<p>Thinking Skills</p> <p>Reflections/metacognition skills (reconsidering the process of learning)</p> <p>Research skills</p> <p>Media literacy skills (interacting with media to use and create ideas and information)</p> <p>Ethical use of media/information (understanding and applying social and ethical technology)</p>	<ul style="list-style-type: none"> - The exploration of space - Structure of the universe - Responsibility of astronauts 	<p>Scientific Method or Science and Engineering Practices</p> <p>1-ESS1-1. Use observations of the sun, moon, and stars to describe patterns that can be predicted.</p> <p>1-ESS1-2. Make observations at different times of year to relate the amount of daylight to the time of year. "</p>	
<p>Integrated</p> <p>Plan and conduct investigations to determine the effect of placing objects made with different materials in the path of a beam of light.</p> <p>Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance.*</p> <p>Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a</p>	<p>Perspective</p> <p>Causation</p> <p>Connection</p>		<p>How We Express Ourselves</p> <p>Central Idea:</p> <p>Celebrations reflect cultures and traditions.</p>	<p>Communication skills</p> <p>Exchanging information skills (listening, interpreting, speaking)</p> <p>Social skills</p> <p>Developing social-emotional intelligence</p>	<ul style="list-style-type: none"> - Different types of celebrations - Celebrations connect to beliefs and values - Reasons people celebrate 	<p>Scientific Method or Science and Engineering Practices</p>	



given problem.							
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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.

