

Science

Topic	Key Concepts	Theme	ATL skills	Lines of Inquiry	Assessment Objectives
<p>Stand-alone: Construct an argument that some animals form groups that help members survive.</p> <p>Stand-alone: Analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago.</p>	<p>Responsibility</p> <p>Change</p> <p>Perspective</p>	<p>WWA: Knowledge of culture provides an insight into our humanity.</p>	<p>Social Skills Developing social-emotional intelligence</p> <p>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)</p>	<ul style="list-style-type: none"> - Our own cultural heritage - Generational changes - Cultural similarities and differences 	<p>Scientific Method or Science and Engineering Practices</p> <p>3-LS2-1. Construct an argument that some animals form groups that help members survive.</p> <p>3-LS4-1. Analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago.</p> <p>3-LS4-3. Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.</p> <p>3-LS4-4. Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.*</p> <p>3-5-ETS1-1. Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost."</p>
<p>Integrated:</p> <p>Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.</p> <p>Obtain and combine information to describe climates in different regions of the world.</p> <p>Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.*</p> <p>Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.</p>	<p>Connection</p> <p>Form</p> <p>Responsibility</p>	<p>S'IP: Changes in weather and climate impact human societies in a variety of ways.</p>	<p>Thinking Skills Critical-thinking skills (analysing and evaluating issues and ideas) Reflections/metacognition skills (reconsidering the process of learning)</p> <p>Communication skills ICT skills (using technology to gather, investigate and communicate information)</p>	<ul style="list-style-type: none"> - How does weather influence the way people live - What are the elements of weather - How can we influence the climate 	<p>Scientific Method or Science and Engineering Practices</p> <p>3-ESS2-1. Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.</p> <p>3-ESS2-2. Obtain and combine information to describe climates in different regions of the world.</p> <p>3-ESS3-1. Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.*</p> <p>3-5-ETS1-1. Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost."</p>



<p>Stand-alone: Develop models to describe what organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.</p> <p>Stand-alone: Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms.</p>	<p>Form Function Change</p>	<p>HWEO: The Performing Arts allows creativity, expression and enjoyment.</p>	<p>Communication Skills Exchanging-information skills (listening, interpreting, speaking) Literacy skills (reading, writing and using language to gather and communicate information)</p> <p>Thinking Skills Creative-thinking skills (generating novel ideas and considering new perspectives)</p>	<ul style="list-style-type: none"> - Forms of performing arts - How to create a successful performance - Similarities and differences between the features of Performing Arts 	<p>Scientific Method or Science and Engineering Practices</p> <p>3-LS1-1. Develop models to describe what organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.</p> <p>3-LS3-1. Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms.</p> <p>3-LS3-2. Use evidence to support the explanation that traits can be influenced by the environment.</p> <p>3-LS4-2. Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing. "</p>
<p>Stand-alone: Use evidence to support the explanation that traits can be influenced by the environment.</p> <p>Stand-alone: Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing.</p>	<p>Form Causation Change</p>	<p>WWPT: Exploration leads to discoveries, opportunities and new understandings.</p>	<p>Research Skills Media literacy skills (interacting with media to use and create ideas and information)</p> <p>Self-management Organization skills (managing time and tasks effectively)</p>	<ul style="list-style-type: none"> - How exploration has taken place over time - Reasons people explore - Explorers and explorations 	<p>Scientific Method or Science and Engineering Practices</p>



<p>Integrated: Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object. Make observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion. Ask questions to determine cause and effect relationships of electric or magnetic interactions between two objects not in contact with each other. Define a simple design problem that can be solved by applying scientific ideas about magnets.* Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.</p>	<p>Function Causation Connection</p>	<p>HTWW: People apply the understanding of forces to design.</p>	<p>Thinking Skills Transfer skills (using skills and knowledge in multiple contexts) Creative-thinking skills (generating novel ideas and considering new perspectives) Social skills Developing positive interpersonal relationships and collaboration skills (using self-control, managing setbacks, supporting peers)</p>	<p>- Different types of forces and how they work - The relationship between force and motion - How we use our knowledge of forces to invent</p>	<p>Scientific Method or Science and Engineering Practices 3-PS2-1. Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object. 3-PS2-2. Make observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion. 3-PS2-3. Ask questions to determine cause and effect relationships of electric or magnetic interactions between two objects not in contact with each other. 3-PS2-4. Define a simple design problem that can be solved by applying scientific ideas about magnets.* 3-5-ETS1-1. Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost."</p>
<p>Stand-alone: Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all. Stand -alone: Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.* Stand-alone: Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.</p>	<p>Form Perspective Connection</p>	<p>HWOO: Cities are designed to enhance the interconnectedness in people's daily lives.</p>	<p>Communication skills ICT skills (using technology to gather, investigate and communicate information) Self-management skills States of mind (mindfulness, perseverance, emotional management, self-motivation, resilience)</p>	<p>- Lifestyles and attractions in different cities - Our choice of cities - How cities are connected</p>	

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.





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