

Abington Heights School District Grade 2 Science, Technology & Engineering, and Environmental Literacy & Sustainability Curriculum



Themes:

- ★ Animals
- ★ Properties of Matter
- ★ Earth

Board Approval Date: April 3, 2024
Review Date:

Adoption: 2024 - 2025 SY

Grade 2 Science Curriculum Scope and Sequence

Month	Unit	Estimated Number of Weeks
September -December	Plan and Animal Relationships	12 weeks
January- March	Properties of Materials	12 Weeks
April-June	Changing Landforms	12 Weeks

Grade 2 Comet Connects Curriculum Scope and Sequence

Month	Unit	Estimated Number of Weeks
September	ENGINEERING: What is the engineering design process?	2 Weeks
October	TECHNOLOGY: How does technology make tasks easier to complete?	2 Weeks
November	ENGINEERING: What are challenges when implementing the engineer design process?	2 Weeks
December	TECHNOLOGY: How can you make a character move in a program? TECHNOLOGY: What are some internet safety practices you can use?	2 Weeks
January	ENGINEERING: Whare are challenges when implementing the engineer design process?	2 Weeks
February	TECHNOLOGY: How do robotics use block coding?	2 Weeks
March	TECHNOLOGY: How do robotics use block coding?	2 Weeks
April	ENGINEERING: What are the challenges when implementing the engineering design process?	2 Weeks
May	TECHNOLOGY: How are robotics aable to move?	2 Weeks
June	REVIEW: Students will review coding and engineering skills taught throughout the year.	2 Weeks

AHSD Grade 2 Science Curriculum		Standards		Content		Skills		Activities		Assessment / Evidence of Learning	
Month / Unit	Essential Questions	Standards	Content	Skills	Activities	Assessment / Evidence of Learning					
	Pre-requisite knowledge necessary, use to activate background knowledge: How do organisms interact with the living and nonliving environments to obtain matter and energy?	3.1.2.A Plan and conduct an investigation to determine if plants need sunlight and water to grow.	Plants depend on water and light to grow.	Planning and Carrying out Investigations: Plan and conduct an investigation collaboratively to produce data to serve as the basis for evidence to answer a question. Cause and Effect: Events have causes that generate observable patterns.	Plant and Animal Relationship Units	Plant and Animal Relationships (Grade 2) PRE: Lesson 1.1 Activity 3 CJ 1: Lesson 1.7 Activity 2 OTFA 7: Lesson 2.3 Activity 3 CJ 2a: Lesson 2.4 Activity 3 CJ 2b: Lesson 2.5 Activity 3 INV: Lesson 4.3 Activity 4 and Lesson 4.4 Activities 1-4 (S) EOU: Lesson 4.4 Activity 3 (S)					
Plant and Animal Relationships	How do organisms interact with the living and nonliving environments to obtain matter and energy?	3.1.2.B Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants	Plants depend on water and light to grow.	Developing and Using Models: Develop a simple model based on evidence to represent a proposed object or tool. Structure and Function: The shape and stability of structures of natural and designed objects are related to their function(s).	Plant and Animal Relationship Units	Plant and Animal Relationships (Grade 2) PRE: Lesson 1.1 Activity 3 OTFA 10: Lesson 3.4 Activity 4 OTFA 11: Lesson 3.5 Activity 3 CJ 3: Lesson 3.6 Activity 3 EOU: Lesson 4.4 Activity 3 (S) Pushes and Pulls (Grade 2) OTFA 14: Lesson 4.1, Activity 2					
	What is biodiversity, how do humans affect it, and how does it affect humans?	3.1.2.C Make observations of plants and animals to compare the diversity of life in different habitats.	There are many different kinds of living things in any area, and they exist in different places on land and in water.	Planning and Carrying Out Investigations: Make observations (firsthand or from media) to collect data which can be used to make comparisons. Patterns: Patterns in the natural world can be observed, used to describe phenomena, and used as evidence.	Plant and Animal Relationship Units	Plant and Animal Relationships (Grade 2) OTFA 2: Lesson 1.4 Activity 4 OTFA 8: Lesson 3.1 Activity 3					

AHSD Grade 2 Science Curriculum		Standards		Content		Skills		Activities		Assessment / Evidence of Learning	
Month / Unit	Essential Questions	Standards	Content	Skills	Activities	Assessment / Evidence of Learning					
Properties of Matter	How do particles combine to form the variety of matter one observes?	3.2.2.A. Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.	Different kinds of matter exist and many of them can be either solid or liquid, depending on temperature. Matter can be described and classified by its observable properties.	<p>Planning and Carrying Out Investigations: Plan and conduct an investigation collaboratively to produce data and serve as the basis for evidence to answer a question.</p> <p>Patterns: Patterns in natural and human designed world can be observed.</p>	Unit 2: Properties of Matter	<p>Properties of Materials (Grade 2) OTFA 3; Lesson 1.5 Activity 3 OTFA 4; Lesson 1.6 Activity 2 CJ 1; Lesson 1.9 Activity 4 CJ 2; Lesson 2.2 Activity 4 EOU; Lesson 4.4 Activity 2 (S)</p>					
	How do particles combine to form the variety of matter one observes?	3.2.2.B. Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.	Different properties are suited to different properties.	<p>Analyzing and Interpreting Data: Analyze data from tests of an object or tool to determine if it works as intended.</p> <p>Cause and Effect: Simple test can be designed to gather evidence to support or refute ideas about causes.</p>	Unit 2: Properties of Matter	<p>Properties of Materials (Grade 2) OTFA 4; Lesson 1.6 Activity 2 CJ 1; Lesson 1.9 Activity 4 OTFA 11; Lesson 3.2 Activity 4 CJ 3; Lesson 3.5 Activity 4 OTFA 14; Lesson 4.1 Activity 2 EOU; Lesson 4.4 Activity 2 (S)</p>					
	How do particles combine to form the variety of matter one observes?	3.2.2.C. Make observations to construct an evidence based account of how an object made of a small set of pieces can be disassembled and made into a new object.	A great variety of objects can be built up from a small set of pieces.	<p>Constructing Explanations and Designing Solutions: Make observations (firsthand or from media) to construct an evidence-based account for natural phenomena.</p> <p>Energy and Matter: Objects may break into smaller pieces and be put together into larger pieces or change shapes.</p>	Unit 2: Properties of Matter	<p>Properties of Materials (Grade 2) OTFA 4; Lesson 1.6 Activity 2 CJ 1; Lesson 1.9 Activity 4 TS; Lesson 2.1 Activity 4 OTFA 11; Lesson 3.2 Activity 4 CJ 3; Lesson 3.5 Activity 4 OTFA 14; Lesson 4.1 Activity 2 EOU; Lesson 4.4 Activity 2 (S)</p>					
	How do substances combine or change?	3.2.2.D. Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot.	Heating or cooling a substance may cause changes that can be observed. Sometimes these changes are reversible, and sometimes they are not.	<p>Engaging in Argument from Evidence: Construct an argument with evidence to support a claim.</p> <p>Cause and Effect: Events have causes that generate observable patterns.</p>	Unit 2: Properties of Matter	<p>Properties of Materials (Grade 2) OTFA 7; Lesson 2.1 Activity 3 CJ 2; Lesson 2.2 Activity 4 OTFA 9; Lesson 2.4 Activity 4</p>					

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Changing Landforms	Pre-requisite knowledge necessary, use to activate background knowledge: How do people reconstruct and date events in earth's planetary history.	3.3.K.C Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live. 3.3.2.A Use information from several sources to provide evidence that Earth events can occur quickly or slowly.	Some events happen very quickly; others occur very slowly, over a time period much longer than one can observe.	Constructing Explanations and Designing Solutions: Make observations from several sources to construct an evidence-based account for natural phenomena. Stability and Change: Things may change slowly or rapidly.	Changing Landforms Unit	Changing Landforms (Grade 2) PRE: Lesson 1.1 Activity 2 CJ 3: Lesson 3.4 Activity 2 EOU 1: Lesson 3.5 Activities 2 + 3 (S) OTFA 10: Lesson 4.3 Activity 3 OTFA 11: Lesson 4.4 Activity 2 EOU 2: Lesson 4.5 Activity 3 (S)					
	How do earth's major systems interact?	3.3.2.B Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land.	Wind and water can change the shape of the land.	Constructing Explanations and Designing Solutions: Compare multiple solutions to a problem. Stability and Change: Things may change slowly or rapidly.	Changing Landforms Unit	Changing Landforms (Grade 2) PRE: Lesson 1.1 Activity 2 TS: Lesson 2.1 Activity 3 OTFA 3: Lesson 2.2 Activity 3 OTFA 4: Lesson 2.3 Activity 2 OTFA 5: Lesson 2.4 Activity 2 OTFA 6: Lesson 2.5 Activity 3 CJ 2: Lesson 2.6 Activities 2 + 3 OTFA 8: Lesson 3.3 Activity 2 CJ 3: Lesson 3.4 Activity 2 EOU 1: Lesson 3.5 Activities 2 + 3 (S) OTFA 10: Lesson 4.3 Activity 3 OTFA 11: Lesson 4.4 Activity 2 EOU 2: Lesson 4.5, Activity 3 (S)					
	Why do continents move and what causes earthquakes and volcanoes?	3.3.2.C Develop a model to represent the shapes and kinds of land and bodies of water in an area.	Maps show where things are located. One can map the shapes and kinds of land and water in any area.	Developing and Using Models: Develop a model to represent patterns in the natural world. Patterns: Patterns in the natural world can be observed.	Changing Landforms Unit	Changing Landforms (Grade 2) TS: Lesson 3.1 Activity 4 OTFA 7: Lesson 3.2 Activity 3					
	How do the properties and movements of water shape earth's surface and affect its systems?	3.3.2.D Obtain information to identify where water is found on Earth and that it can be solid or liquid.	Water is found in the ocean, rivers, lakes, and ponds. Water exists as solid ice and in liquid form.	Obtaining, Evaluating, and Communicating Information: Obtain information using various texts, text features (e.g., headings, tables of contents, glossaries, electronic menus, icons), and other media that will be useful in answering a scientific question. Patterns: Patterns in the natural world can be observed.	Changing Landforms Unit	Changing Landforms (Grade 2) TS: Lesson 2.1 Activity 3 TS: Lesson 2.3 Activity 1					