



Bring Science Alive!

Grades K–5 Alignment to the Next Generation Science Standards

100% NGSS

Bring Science Alive! is built from the ground up to help teachers and students achieve the vision of the Next Generation Science Standards. Created by teachers for teachers, every lesson includes in-class investigations, online media, engaging text, and varied customizable assessments—all in support of instruction and learning of NGSS’s three dimensions: science and engineering practices, crosscutting concepts, and disciplinary core ideas.





Bring Science Alive! Kindergarten

	NGSS Performance Expectations	Unit 1: Plants and Animals	Unit 2: Pushes and Pulls	Unit 3: Weather
Physical Science	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.*		✓	
	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.*			✓
Life Science	K-LS1-1. Use observations to describe patterns of what plants and animals (including humans) need to survive.	✓		
	K-ESS2-1. Use and share observations of local weather conditions to describe patterns over time.			✓
Earth Science	K-ESS2-2. Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.	✓		
	K-ESS3-1. Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live.	✓		
	K-ESS3-2. Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather.*	✓		✓
	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.*	✓		
Engineering Design	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.	✓	✓	✓
	K-2-ETS1-2. Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.	✓	✓	✓
	K-2-ETS1-3. Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.		✓	✓

* The performance expectations marked with an asterisk integrate traditional science content with engineering through a Practice or Disciplinary Core Idea.

Bring Science Alive! Kindergarten

Dimension 1: Science and Engineering Practices	Unit 1: Plants and Animals	Unit 2: Pushes and Pulls	Unit 3: Weather
Asking Questions and Defining Problems		✓	✓
Developing and Using Models	✓	✓	✓
Planning and Carrying Out Investigations	✓	✓	✓
Analyzing and Interpreting Data	✓	✓	✓
Using Mathematics and Computational Thinking	✓		✓
Constructing Explanations and Designing Solutions	✓	✓	✓
Engaging in Arguments from Evidence	✓	✓	✓
Obtaining, Evaluating, and Communicating Information	✓	✓	✓

Dimension 2: Crosscutting Concepts	Unit 1: Plants and Animals	Unit 2: Pushes and Pulls	Unit 3: Weather
Patterns	✓		✓
Cause and Effect	✓	✓	✓
Scale, Proportion, and Quantity	✓		✓
Systems and System Models	✓	✓	
Energy and Matter	✓		
Structure and Function		✓	✓
Stability and Change	✓		✓

Dimension 3: Disciplinary Core Ideas	Unit 1: Plants and Animals	Unit 2: Pushes and Pulls	Unit 3: Weather
Physical Science	PS2.A: Forces and Motion	✓	
	PS2.B: Types of Interactions	✓	
	PS3.B: Conservation of Energy and Energy Transfer		✓
	PS3.C: Relationship Between Energy and Forces	✓	
Life Science	LS1.C: Organization for Matter and Energy Flow in Organisms	✓	
	ESS2.D: Weather and Climate		✓
Earth Science	ESS2.E: Biogeology	✓	
	ESS3.A: Natural Resources	✓	
	ESS3.B: Natural Hazards		✓
	ESS3.C: Human Impacts on Earth Systems	✓	
Engineering Design	ETS1.A: Defining and Delimiting Engineering Problems	✓	✓
	ETS1.B: Developing Possible Solutions	✓	✓
	ETS1.C: Optimizing the Design Solution	✓	✓



Bring Science Alive! Grade 1

	NGSS Performance Expectations	Unit 1: Plant and Animal Parts	Unit 2: Light and Sound	Unit 3: Sky Patterns
Physical Science	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 can be seen only when illuminated.		✓	
	1-PS4-3. Plan and conduct an investigation 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.*		✓	
Life Science	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.*	✓		
	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.	✓		
Earth Science	1-ESS1-1. Use observations of the sun, moon, and stars to describe patterns that can be predicted.			✓
	1-ESS1-2. Make observations at different times of year to relate the amount of daylight to the time of year.			✓
Engineering Design	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.	✓	✓	✓
	K-2-ETS1-2. Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.	✓	✓	✓
	K-2-ETS1-3. Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.	✓	✓	

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Bring Science Alive! Grade 1

Dimension 1: Science and Engineering Practices	Unit 1: Plant and Animal Parts	Unit 2: Light and Sound	Unit 3: Sky Patterns
Asking Questions and Defining Problems	✓	✓	✓
Developing and Using Models		✓	✓
Planning and Carrying Out Investigations	✓	✓	✓
Analyzing and Interpreting Data	✓	✓	✓
Using Mathematics and Computational Thinking	✓		✓
Constructing Explanations and Designing Solutions	✓	✓	
Engaging in Arguments from Evidence	✓	✓	✓
Obtaining, Evaluating, and Communicating Information	✓	✓	✓

Dimension 2: Crosscutting Concepts	Unit 1: Plant and Animal Parts	Unit 2: Light and Sound	Unit 3: Sky Patterns
Patterns	✓		✓
Cause and Effect	✓	✓	✓
Scale, Proportion, and Quantity	✓	✓	
Systems and System Models	✓		
Energy and Matter		✓	
Structure and Function	✓	✓	✓
Stability and Change	✓		✓

Dimension 3: Disciplinary Core Ideas	Unit 1: Plant and Animal Parts	Unit 2: Light and Sound	Unit 3: Sky Patterns
Physical Science	PS4.A: Wave Properties		✓
	PS4.B: Electromagnetic Radiation		✓
	PS4.C: Information Technologies and Instrumentation		✓
Life Science	LS1.A: Structure and Function	✓	
	LS1.B: Growth and Development of Organisms	✓	
	LS1.D: Information Processing	✓	
	LS3.A: Inheritance of Traits	✓	
	LS3.B: Variation of Traits	✓	
Earth Science	ESS1.A: The Universe and Its Stars		✓
	ESS1.B: Earth and the Solar System		✓
Engineering Design	ETS1.A: Defining and Delimiting Engineering Problems	✓	✓
	ETS1.B: Developing Possible Solutions	✓	✓
	ETS1.C: Optimizing the Design Solution	✓	✓



Bring Science Alive! Grade 2

	NGSS Performance Expectations	Unit 1: Plant and Animal Survival	Unit 2: Materials and Their Uses	Unit 3: Earth's Surface
Physical Science	2-PS1-1. Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.		✓	
	2-PS1-2. Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.*		✓	
	2-PS1-3. 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.		✓	
	2-PS1-4. Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot.		✓	
Life Science	2-LS2-1. Plan and conduct an investigation to determine if plants need sunlight and water to grow.	✓		
	2-LS2-2. Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.*	✓		
	2-LS4-1. Make observations of plants and animals to compare the diversity of life in different habitats.	✓		
Earth Science	2-ESS1-1. Use information from several sources to provide evidence that Earth events can occur quickly or slowly.			✓
	2-ESS2-1. Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land.*			✓
	2-ESS2-2. Develop a model to represent the shapes and kinds of land and bodies of water in an area.			✓
	2-ESS2-3. Obtain information to identify where water is found on Earth and that it can be solid or liquid.			✓
Engineering Design	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.	✓	✓	✓
	K-2-ETS1-2. Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.	✓	✓	✓
	K-2-ETS1-3. Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.	✓	✓	✓

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Bring Science Alive! Grade 2

Dimension 1: Science and Engineering Practices	Unit 1: Plant and Animal Survival	Unit 2: Materials and Their Uses	Unit 3: Earth's Surface
Asking Questions and Defining Problems	✓		✓
Developing and Using Models	✓	✓	✓
Planning and Carrying Out Investigations	✓	✓	✓
Analyzing and Interpreting Data	✓	✓	✓
Using Mathematics and Computational Thinking	✓	✓	
Constructing Explanations and Designing Solutions	✓	✓	✓
Engaging in Arguments from Evidence	✓	✓	✓
Obtaining, Evaluating, and Communicating Information	✓	✓	✓

Dimension 2: Crosscutting Concepts	Unit 1: Plant and Animal Survival	Unit 2: Materials and Their Uses	Unit 3: Earth's Surface
Patterns		✓	✓
Cause and Effect	✓	✓	✓
Scale, Proportion, and Quantity	✓	✓	
Systems and System Models	✓		✓
Energy and Matter		✓	✓
Structure and Function	✓		✓
Stability and Change		✓	✓

Dimension 3: Disciplinary Core Ideas	Unit 1: Plant and Animal Survival	Unit 2: Materials and Their Uses	Unit 3: Earth's Surface
Physical Science	PS1.A: Structure and Properties of Matter	✓	
	PS1.B: Chemical Reactions	✓	
Life Science	LS2.A: Interdependent Relationships in Ecosystems	✓	
	LS4.D: Biodiversity and Humans	✓	
Earth Science	ESS1.C: The History of Planet Earth		✓
	ESS2.A: Earth Materials and Systems		✓
	ESS2.B: Plate Tectonics and Large-Scale System Interactions		✓
	ESS2.C: The Roles of Water in Earth's Surface Processes		✓
Engineering Design	ETS1.A: Defining and Delimiting Engineering Problems	✓	✓
	ETS1.B: Developing Possible Solutions	✓	✓
	ETS1.C: Optimizing the Design Solution	✓	✓



Bring Science Alive! Grade 3

NGSS Performance Expectations		Unit 1: Environments and Living Things	Unit 2: Forces and Motion	Unit 3: Weather and Climate	Unit 4: Life Cycles and Traits
Physical Science	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.*		✓		
Life Science	3-LS1-1. Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.				✓
	3-LS2-1. Construct an argument that some animals form groups that help members survive.		✓		
	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.				✓
	3-LS3-2. Use evidence to support the explanation that traits can be influenced by the environment.				✓
Earth Science	3-LS4-1. Analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago.		✓		
	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.				✓
	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.		✓		
	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.*		✓		
Engineering Design	3-ESS2-1. Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.				✓
	3-ESS2-2. Obtain and combine information to describe climates in different regions of the world.				✓
	3-ESS3-1. Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.*				✓
	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.	✓	✓	✓	
	3-5-ETS1-2. Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.	✓	✓	✓	
	3-5-ETS1-3. Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.		✓	✓	

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Bring Science Alive! Grade 3

Dimension 1: Science and Engineering Practices		Unit 1: Environments and Living Things	Unit 2: Forces and Motion	Unit 3: Weather and Climate	Unit 4: Life Cycles and Traits
Asking Questions and Defining Problems			✓	✓	
Developing and Using Models		✓			✓
Planning and Carrying Out Investigations		✓	✓	✓	✓
Analyzing and Interpreting Data		✓	✓	✓	✓
Using Mathematics and Computational Thinking		✓		✓	
Constructing Explanations and Designing Solutions		✓	✓	✓	✓
Engaging in Arguments from Evidence		✓	✓	✓	
Obtaining, Evaluating, and Communicating Information		✓		✓	✓
Dimension 2: Crosscutting Concepts		Unit 1: Environments and Living Things	Unit 2: Forces and Motion	Unit 3: Weather and Climate	Unit 4: Life Cycles and Traits
Patterns			✓	✓	✓
Cause and Effect		✓	✓	✓	✓
Scale, Proportion, and Quantity		✓	✓	✓	
Systems and System Models		✓	✓		
Energy and Matter					
Structure and Function		✓		✓	✓
Stability and Change		✓		✓	
Dimension 3: Disciplinary Core Ideas		Unit 1: Environments and Living Things	Unit 2: Forces and Motion	Unit 3: Weather and Climate	Unit 4: Life Cycles and Traits
Physical Science	PS2.A: Forces and Motion		✓		
	PS2.B: Types of Interactions		✓		
Life Science	LS1.B: Growth and Development of Organisms				✓
	LS2.C: Ecosystem Dynamics, Functioning, and Resilience	✓			
	LS2.D: Social Interactions and Group Behavior	✓			
	LS3.A: Inheritance of Traits				✓
	LS3.B: Variation of Traits				✓
	LS4.A: Evidence of Common Ancestry and Diversity	✓			
	LS4.B: Natural Selection				✓
	LS4.C: Adaptation	✓			
Earth Science	LS4.D: Biodiversity and Humans	✓			
	ESS2.D: Weather and Climate				✓
	ESS3.B: Natural Hazards				✓
Engineering Design	ETS1.A: Defining and Delimiting Engineering Problems	✓	✓	✓	
	ETS1.B: Developing Possible Solutions	✓	✓	✓	
	ETS1.C: Optimizing The Design Solution		✓	✓	



Bring Science Alive! Grade 4

	NGSS Performance Expectations	Unit 1: Plant and Animal Structures	Unit 2: Energy	Unit 3: Earth's Changing Surface	Unit 4: Waves and Information
Physical Science	4-PS3-1. Use evidence to construct an explanation relating the speed of an object to the energy of that object.		✓		
	4-PS3-2. Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents.		✓		
	4-PS3-3. Ask questions and predict outcomes about the changes in energy that occur when objects collide.		✓		
	4-PS3-4. Apply scientific ideas to design, test, and refine a device that converts energy from one form to another.		✓		
	4-PS4-1. Develop a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move.				✓
	4-PS4-2. Develop a model to describe that light reflecting from objects and entering the eye allows objects to be seen.		✓		
	4-PS4-3. Generate and compare multiple solutions that use patterns to transfer information.*				✓
Life Science	4-LS1-1. Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.	✓			
	4-LS1-2. Use a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways.	✓			
	4-ESS1-1. Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time.				✓
Earth Science	4-ESS2-1. Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.				✓
	4-ESS2-2. Analyze and interpret data from maps to describe patterns of Earth's features.				✓
	4-ESS3-1. Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.		✓		
	4-ESS3-2. Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans.*				✓
Engineering Design	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.	✓	✓	✓	✓
	3-5-ETS1-2. Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.	✓	✓	✓	✓
	3-5-ETS1-3. Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.	✓	✓	✓	✓

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Bring Science Alive! Grade 4

Dimension 1: Science and Engineering Practices	Unit 1: Plant and Animal Structures	Unit 2: Energy	Unit 3: Earth's Changing Surface	Unit 4: Waves and Information
Asking Questions and Defining Problems	✓	✓	✓	✓
Developing and Using Models	✓		✓	✓
Planning and Carrying Out Investigations	✓	✓	✓	✓
Analyzing and Interpreting Data	✓	✓	✓	✓
Using Mathematics and Computational Thinking		✓	✓	
Constructing Explanations and Designing Solutions	✓	✓	✓	✓
Engaging in Arguments from Evidence	✓	✓		✓
Obtaining, Evaluating, and Communicating Information	✓	✓		✓
Dimension 2: Crosscutting Concepts	Unit 1: Plant and Animal Structures	Unit 2: Energy	Unit 3: Earth's Changing Surface	Unit 4: Waves and Information
Patterns			✓	✓
Cause and Effect	✓	✓	✓	✓
Scale, Proportion, and Quantity		✓		✓
Systems and System Models	✓	✓		✓
Energy and Matter		✓		
Structure and Function	✓			
Stability and Change			✓	
Dimension 3: Disciplinary Core Ideas	Unit 1: Plant and Animal Structures	Unit 2: Energy	Unit 3: Earth's Changing Surface	Unit 4: Waves and Information
Physical Science	PS3.A: Definitions of Energy	✓		
	PS3.B: Conservation of Energy and Energy Transfer	✓		
	PS3.C: Relationship Between Energy and Forces	✓		
	PS3.D: Energy in Chemical Processes and Everyday Life	✓		
	PS4.A: Wave Properties			✓
Life Science	PS4.B: Electromagnetic Radiation	✓		
	PS4.C: Information Technologies and Instrumentation			✓
	LS1.A: Structure and Function	✓		
Earth Science	LS1.D: Information Processing	✓		
	ESS1.C: The History of Planet Earth		✓	
	ESS2.A: Earth Materials and Systems		✓	
	ESS2.B: Plate Tectonics and Large-Scale System Interactions		✓	
	ESS2.E: Biogeology		✓	
Engineering Design	ESS3.A: Natural Resources	✓		
	ESS3.B: Natural Hazards		✓	
	ETS1.A: Defining and Delimiting Engineering Problems	✓	✓	✓
	ETS1.B: Developing Possible Solutions	✓	✓	✓
	ETS1.C: Optimizing The Design Solution	✓	✓	✓



Bring Science Alive! Grade 5

NGSS Performance Expectations		Unit 1: Living Things and Ecosystems	Unit 2: Earth Systems	Unit 3: Changes in Matter	Unit 4: Earth, the Moon, and the Stars
Physical Science	5-PS1-1. Develop a model to describe that matter is made of particles too small to be seen.			✓	
	5-PS1-2. Measure and graph quantities to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved.			✓	
	5-PS1-3. Make observations and measurements to identify materials based on their properties.			✓	
	5-PS1-4. Conduct an investigation to determine whether the mixing of two or more substances results in new substances.			✓	
Life Science	5-PS2-1. Support an argument that the gravitational force exerted by Earth on objects is directed down.				✓
	5-PS3-1. Use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun.	✓			
	5-LS1-1. Support an argument that plants get the materials they need for growth chiefly from air and water.	✓			
Earth Science	5-LS2-1. Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.	✓			
	5-ESS1-1. Support an argument that differences in the apparent brightness of the sun compared to other stars is due to their relative distances from Earth.				✓
	5-ESS1-2. Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky.				✓
Engineering Design	5-ESS2-1. Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.		✓		
	5-ESS2-2. Describe and graph the amounts and percentages of water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth.		✓		
	5-ESS3-1. Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.		✓		
Engineering Design	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.	✓	✓	✓	✓
	3-5-ETS1-2. Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.	✓	✓	✓	✓
	3-5-ETS1-3. Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.	✓	✓	✓	✓

Bring Science Alive! Grade 5

Dimension 1: Science and Engineering Practices	Unit 1: Living Things and Ecosystems	Unit 2: Earth Systems	Unit 3: Changes in Matter	Unit 4: Earth, the Moon, and the Stars
Asking Questions and Defining Problems	✓	✓	✓	✓
Developing and Using Models	✓	✓	✓	✓
Planning and Carrying Out Investigations	✓	✓	✓	✓
Analyzing and Interpreting Data	✓	✓	✓	✓
Using Mathematics and Computational Thinking		✓	✓	
Constructing Explanations and Designing Solutions	✓	✓	✓	✓
Engaging in Arguments from Evidence	✓		✓	✓
Obtaining, Evaluating, and Communicating Information	✓	✓		

Dimension 2: Crosscutting Concepts	Unit 1: Living Things and Ecosystems	Unit 2: Earth Systems	Unit 3: Changes in Matter	Unit 4: Earth, the Moon, and the Stars
Patterns	✓			✓
Cause and Effect	✓	✓	✓	✓
Scale, Proportion, and Quantity	✓	✓	✓	✓
Systems and System Models	✓	✓		✓
Energy and Matter	✓		✓	
Structure and Function	✓	✓		✓
Stability and Change	✓			✓

Dimension 3: Disciplinary Core Ideas	Unit 1: Living Things and Ecosystems	Unit 2: Earth Systems	Unit 3: Changes in Matter	Unit 4: Earth, the Moon, and the Stars
Physical Science	PS1.A: Structure and Properties of Matter		✓	
	PS1.B: Chemical Reactions		✓	
	PS2.B: Types of Interactions			✓
	PS3.D: Energy in Chemical Processes and Everyday Life	✓		
Life Science	LS1.C: Organization for Matter and Energy Flow in Organisms	✓		
	LS2.A: Interdependent Relationships in Ecosystems	✓		
	LS2.B: Cycles of Matter and Energy Transfer in Ecosystems	✓		
	ESS1.A: The Universe and its Stars			✓
Earth Science	ESS1.B: Earth and the Solar System			✓
	ESS2.A: Earth Materials and Systems		✓	
	ESS2.C: The Roles of Water in Earth's Surface Processes		✓	
	ESS3.C: Human Impacts on Earth Systems		✓	
Engineering Design	ETS1.A: Defining and Delimiting Engineering Problems	✓	✓	✓
	ETS1.B: Developing Possible Solutions	✓	✓	✓
	ETS1.C: Optimizing The Design Solution	✓	✓	✓