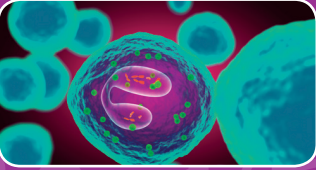


MODULES	MODULE PHENOMENON	STORYLINE	PERFORMANCE EXPECTATIONS (*PEs that integrate traditional science content with engineering through SEPs or DCIs)
1: BioTech Systems Worldwide NGSS Topic Arrangements: Structure, Function, and Information Processing; Engineering Design 	How do human body systems and subsystems work together?	Students become interns at BioTech Systems Worldwide, a bioengineering company working at the interface between human body systems and technology. As part of their training, students explore the relationship between cells, organs, and organ systems, and how they all work together. They apply what they learn from modeling activities, videos, articles, and their own research to produce informational posters and reports, and discover some of the ways technology can be used to repair or replace body parts. Students are then given their first engineering assignment: to design and build a prototype prosthetic hand!	MS-LS1-1 Conduct an investigation to provide evidence that living things are made of cells; either one cell or many different numbers and types of cells MS-LS1-2 Develop and use a model to describe the function of a cell as a whole and ways parts of cells contribute to the function. MS-LS1-3 Use argument supported by evidence for how the body is a system of interacting subsystems composed of groups of cells. MS-LS1-8 Gather and synthesize information that sensory receptors respond to stimuli by sending messages to the brain for immediate behavior or storage as memories. MS-ETS1-1 Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions. MS-ETS1-2 Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.
2: Destination Everywhere! NGSS Topic Arrangements: Weather and Climate; Energy; Engineering Design 	Weather and climate vary around the world, but we can use science and past trends to predict them.	Travel to some of the most extreme locations on the planet, with Destination Everywhere! Students visit the coldest places, the driest places, and the wettest places—then, they pick a place anywhere in the world, and put together a destination guide all about it. As they travel, students investigate weather and climate around the world. They discover how ocean currents influence global temperatures, why it's cold at the top of mountains, and what causes weather systems. Students also take a tour of the world's climate zones and analyze data to draw conclusions about weather and climate patterns. Happy travels!	MS-ESS2-4 Develop a model to describe the cycling of water through Earth's systems driven by energy from the Sun and the force of gravity MS-ESS2-5 Collect data to provide evidence for how the motions and complex interactions of air masses result in changes in weather conditions. MS-ESS2-6 Develop and use a model to describe how unequal heating and rotation of the Earth cause patterns of atmospheric and oceanic circulation that determine regional climates. MS-PS3-3 Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer.* MS-PS3-4 Plan an investigation to determine the relationships among the energy transferred, the type of matter, the mass, and the change in the average kinetic energy of the particles as measured by the temperature of the sample. MS-PS3-5 Construct, use, and present arguments to support the claim that when the kinetic energy of an object changes, energy is transferred to or from the object. MS-ETS1-1 Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution. MS-ETS1-3 Analyze data from tests to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution.
3: The Red List NGSS Topic Arrangements: Growth, Development, and Reproduction of Organisms 	How do the environment and genetics affect animals and plants?	Students become ecologists, on a mission to save endangered or threatened species from extinction. Through research and investigations, students build their awareness and knowledge of their chosen species and the threats they face. Students study plant and animal reproduction, including courtship behaviors, sexual and asexual methods of reproduction, and the inheritance and variation of traits. They also discover how some animal species look after their offspring to help ensure their survival, and explore how conservationists around the world try to ensure the survival of entire species. Then, it's their turn to come up with a conservation plan of their own.	MS-LS1-4 Use argument based on empirical evidence and scientific reasoning to support an explanation for how characteristic animal behaviors and specialized plant structures affect the probability of successful reproduction of animals and plants respectively. MS-LS1-5 Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms. MS-LS3-2 Develop and use a model to describe why asexual reproduction results in offspring with identical genetic information and sexual reproduction results in offspring with genetic variation.
4: Cities of the Future NGSS Topic Arrangements: Weather and Climate; Human Impacts; Engineering Design 	How can we reduce harmful impacts on the environment in the places where people live?	Students are tasked with designing an environmentally friendly city of the future. To better understand the need for sustainable cities, they investigate various human impacts on the environment, and the ways these can be minimized. Using three fictionalized case studies, students explore the challenge of balancing the needs of a population with the protection of the natural environment. Students also analyze data to make claims about the causes of climate change and its effects on living things. They explore real-life examples of cities that are trying to make changes for the better.	MS-ESS3-3 Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.* MS-ESS3-5 Ask questions to clarify evidence of the factors that have caused the rise in global temperatures over the past century. MS-LS1-4 Use argument based on empirical evidence and scientific reasoning to support an explanation for how characteristic animal behaviors and specialized plant structures affect the probability of successful reproduction of animals and plants respectively. MS-LS1-5 Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms. MS-ETS1-1 Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution. MS-ETS1-2 Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem. MS-ETS1-4 Develop a model to generate data for iterative testing and modification of a proposed object, tool, or process such that an optimal design can be achieved.



CROSS-CURRICULAR CONNECTIONS

Crosscutting Concepts CCC-2 Cause and Effect CCC-3 Scale, Proportion, and Quantity CCC-4 System and System Models CCC-6 Structure and Function Disciplinary Core Ideas LS1.A Structure and Function LS1.D Information Processing Engineering, Technology, and Applications of Science ETS1.A Defining Engineering Problems ETS1.B Developing Possible Solutions	Science and Engineering Practices SEP-1 Asking Questions and Defining Problems SEP-2 Developing and Using Models SEP-3 Planning and Carrying Out Investigations SEP-6 Constructing Explanations and Designing Solutions SEP-7 Engaging in Argument from Evidence SEP-8 Obtaining, Evaluating, and Communicating Information	Common Core English Language Arts RI.6.1–3 Key Ideas and Details RI.6.4, 6 Craft and Structure RI.6.7–9 Integration of Knowledge and Ideas RI.6.10 Range of Reading and Level of Text Complexity L.6.6 Vocabulary Acquisition and Use SL.6.1–2 Comprehension and Collaboration SL.6.4–6 Presentation of Knowledge and Ideas W.6.1–2 Text Types and Purposes W.6.4–5 Production and Distribution of Writing W.6.7–8 Research to Build and Present Knowledge W.6.10 Range of Writing English Language Proficiency Domains Speaking, Listening, Reading, Writing	WIDA English Language Development Standard 1: Social and Instructional Language Standard 2: The Language of Language Arts Standard 3: The Language of Mathematics Standard 4: The Language of Science Common Core Math 6.SP.B Summarize and describe distributions 6.NS.B Compute fluently with multi-digit numbers and find common factors and multiples 6.RP.A Understand ratio concepts and use ratio reasoning to solve problems
Crosscutting Concepts CCC-1 Patterns CCC-2 Cause and Effect CCC-3 Scale, Proportion, and Quantity CCC-4 System and System Models CCC-5 Energy and Matter CCC-6 Structure and Function CCC-7 Stability and Change Disciplinary Core Ideas ESS2.C The Roles of Water in Earth's Surface Processes ESS2.D Weather and Climate PS3.A Definitions of Energy PS3.B Conservation of Energy and Energy Transfer Engineering, Technology, and Applications of Science ETS1.A Defining Engineering Problems ETS1.B Developing Possible Solutions ETS1.C Optimizing the Design Solution	Science and Engineering Practices SEP-1 Asking Questions and Defining Problems SEP-2 Developing and Using Models SEP-3 Planning and Carrying Out Investigations SEP-4 Analyzing and Interpreting Data SEP-5 Using Mathematics and Computational Thinking SEP-6 Constructing Explanations and Designing Solutions SEP-7 Engaging in Argument from Evidence SEP-8 Obtaining, Evaluating, and Communicating Information Environmental Principles and Concepts Principle I People depend on natural systems Principle III Natural systems change in ways that people benefit from and can influence Principle IV There are no permanent or impermeable boundaries that prevent matter from flowing between systems	Common Core English Language Arts RI.6.1–3 Key Ideas and Details RI.6.5 Craft and Structure RI.6.7 Integration of Knowledge and Ideas L.6.6 Vocabulary Acquisition and Use SL.6.1–3 Comprehension and Collaboration SL.6.4–6 Presentation of Knowledge and Ideas W.6.1–2 Text Types and Purposes W.6.4–6 Production and Distribution of Writing W.6.7–9 Research to Build and Present Knowledge W.6.10 Range of Writing WIDA English Language Development Standard 1: Social and Instructional Language Standard 2: The Language of Language Arts Standard 3: The Language of Mathematics Standard 4: The Language of Science English Language Proficiency Domains Speaking, Listening, Reading, Writing	Common Core Math 6.EE.C Represent and analyze quantitative relationships between dependent and independent variables 6.G.A Solve real-world and mathematical problems involving area, surface area, and volume 6.NS.A Compute fluently with multi-digit numbers 6.NS.C Apply and extend previous understandings of numbers to the system of rational numbers 6.RP.A Understand ratio concepts and use ratio reasoning to solve problems 6.SP.B Summarize and describe distributions
Crosscutting Concepts CCC-1 Patterns CCC-2 Cause and Effect CCC-3 Scale, Proportion, and Quantity CCC-4 System and System Models CCC-6 Structure and Function Disciplinary Core Ideas LS1.B Growth and Development of Organisms LS3.A Inheritance of Traits LS3.B Variation of Traits Science and Engineering Practices SEP-1 Asking Questions and Defining Problems SEP-2 Developing and Using Models SEP-4 Analyzing and Interpreting Data SEP-5 Using Math and Computational Thinking SEP-6 Constructing Explanations and Designing Solutions	Science and Engineering Practices (continued) SEP-7 Engaging in Argument from Evidence SEP-8 Obtaining, Evaluating, and Communicating Information Environmental Principles and Concepts Principle II People influence natural systems Principle III Natural systems change in ways that people benefit from and can influence Principle IV There are no permanent or impermeable boundaries that prevent matter from flowing between systems Principle V Decisions affecting resources and natural systems are complex and involve many factors	Common Core English Language Arts RI.6.1–2 Key Ideas and Details RI.6.4–6 Craft and Structure RI.6.7–8 Integration of Knowledge and Ideas L.6.6 Vocabulary Acquisition and Use SL.6.1–2 Comprehension and Collaboration SL.6.4 Presentation of Knowledge and Ideas W.6.1–2 Text Types and Purposes W.6.4–5 Production and Distribution of Writing W.6.6–8 Research to Build and Present Knowledge WIDA English Language Development Standard 1: Social and Instructional Language Standard 2: The Language of Language Arts Standard 3: The Language of Mathematics Standard 4: The Language of Science	English Language Proficiency Domains Speaking, Listening, Reading, Writing Common Core Math 6.EE.C Represent and analyze quantitative relationships between dependent and independent variables 6.NS.C Apply and extend previous understandings of numbers to the system of rational numbers 6.RP.A Understand ratio concepts and use ratio reasoning to solve problems 6.SP.A Develop understanding of statistical variability 6.SP.B Summarize and describe distributions
Crosscutting Concepts CCC-1 Patterns CCC-2 Cause and Effect CCC-3 Scale, Proportion, and Quantity CCC-4 System and System Models CCC-5 Energy and Matter CCC-7 Stability and Change Disciplinary Core Ideas ESS2.D Weather and Climate ESS3.C Human Impacts on Earth Systems ESS3.D Global Climate Change LS1.B Growth and Development of Organisms Engineering, Technology, and Applications of Science ETS1.A Defining Engineering Problems ETS1.B Developing Possible Solutions ETS1.C Optimizing the Design Solution Science and Engineering Practices SEP-1 Asking Questions and Defining Problems SEP-2 Developing and Using Models	Science and Engineering Practices (continued) SEP-3 Planning and Carrying Out Investigations SEP-4 Analyzing and Interpreting Data SEP-5 Using Math and Computational Thinking SEP-6 Constructing Explanations and Designing Solutions SEP-7 Engaging in Argument from Evidence SEP-8 Obtaining, Evaluating, and Communicating Information Environmental Principles and Concepts Principle I People depend on natural systems Principle II People influence natural systems Principle III Natural systems change in ways that people benefit from and can influence Principle IV There are no permanent or impermeable boundaries that prevent matter from flowing between systems Principle V Decisions affecting resources and natural systems are complex and involve many factors	Common Core English Language Arts RI.6.1–2 Key Ideas and Details RI.6.4–5 Craft and Structure RI.6.7–9 Integration of Knowledge and Ideas L.6.1 Conventions of Standard English L.6.6 Vocabulary Acquisition and Use SL.6.1–2 Comprehension and Collaboration SL.6.4–5 Presentation of Knowledge and Ideas W.6.1–2 Text Types and Purposes W.6.4–5 Production and Distribution of Writing W.6.7 Research to Build and Present Knowledge W.6.10 Range of Writing WIDA English Language Development Standard 1: Social and Instructional Language Standard 2: The Language of Language Arts Standard 3: The Language of Mathematics Standard 4: The Language of Science	English Language Proficiency Domains Speaking, Listening, Reading, Writing Common Core Math 6.EE.C Represent and analyze quantitative relationships between dependent and independent variables 6.NS.B Compute fluently with multi-digit numbers and find common factors and multiples 6.NS.C Apply and extend previous understandings of numbers to the system of rational numbers 6.SP.B Summarize and describe distributions

Performance Expectation Progressions

NGSS Topic Arrangements: Structure, Function, and Information Processing; Engineering Design

BioTech Systems Worldwide covers four NGSS Performance Expectations (PEs) in Life Sciences (MS-LS1-1, MS-LS1-2, MS-LS1-3, and MS-LS1-8) and two in Engineering Design (MS-ETS1-1 and MS-ETS1-2). Together, these PEs explore systems within the human body, component parts of body systems (organs, tissues, and cells), and the use of technology to replace or enhance organs or body parts.

Focusing on humans, students design and model systems to identify body parts and their functions. They draw models to represent the transmission of sensory inputs as signals that travel along nerve cells to the brain and are then processed in the brain, resulting in immediate behaviors or memories.

Students carry out investigations to provide evidence that living things are made of cells—either one cell or many different numbers and types of cells. They model cells and their parts.

Students are presented with a problem: to design and build a prototype of a prosthetic hand that can pick up a water bottle. Working within the constraints of a budget, they sketch their design, build, and test their prosthetic hand. The class then evaluates, compares, and identifies the best design.

PROGRESSION			
PRIOR KNOWLEDGE			CURRENT GRADE
KINDERGARTEN	GRADE 1	GRADE 4	GRADE 6
Module 1 K-LS1-1 My Big Nature Adventure Students are introduced to animals, identifying that all animals, including humans, have needs to survive, such as food and water. They define <i>living</i> and <i>non-living</i> .	Module 1 1-LS1-1 K-2-ETS1-1 K-2-ETS1-2 K-2-ETS1-3 Museum of Leafology Students investigate biomimicry. They define a problem, use plants to inspire an invention to solve their problem, and then design and build the solution. Module 2 1-LS1-2 Animal Reporters Students explore how animals have body parts that capture and convey different kinds of information needed for growth and survival. They investigate animals' external body parts and chart the different ways parts are used (e.g., to move, for protection, to eat) with an emphasis on structure and function.	Module 5 4-LS1-1 4-LS1-2 Super Survivors Students model how external parts and internal organs work together in animals' processes, such as breathing and digestion. They explain how these systems help organisms survive. Students explore the role of the brain in perceiving, responding to, and recalling information taken in through the senses. They discover animals are able to use their perceptions and memories to guide their actions.	Module 3 MS-LS1-4 The Red List Students learn more about the ways animals ensure successful reproduction. They are also introduced to sexual and asexual reproduction.

DESTINATION EVERYWHERE!

GRADE 6
MODULE 2

Performance Expectation Progressions

NGSS Topic Arrangements: Weather and Climate; Energy; Engineering Design

Destination Everywhere! covers three NGSS Performance Expectations (PEs) in Earth and Space Sciences (MS-ESS2-4, MS-ESS2-5, and MS-ESS2-6), three in the Physical Sciences (MS-PS3-3, MS-PS3-4, and MS-PS3-5), and three in Engineering Design (MS-ETS1-1, MS-ETS1-2, and MS-ETS1-3). Together, these PEs focus on climate and weather, the effects of the Sun on Earth’s weather (especially the water cycle), the complexities of predicting weather, and an Engineering Design Challenge involving energy transfers.

Using an interactive map, students look for patterns in temperature, precipitation, latitude, ocean currents, and wind. Building on their Grade 5 understanding of the hydrosphere, they explore the water cycle. They discover that complex interactions between the Earth’s systems cause weather and climate.

Students study air pressure maps and learn the effects of high and low pressure on weather. They study the wind and discover that moving air masses create warm and cold fronts, which result in different types of weather.

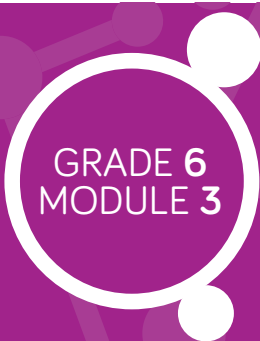
Students explore the relationship between energy and temperature. Through investigations, they find that more energy equals higher temperature. They experiment with the warming of both sand and water to understand climate. They connect these ideas to particle motion in different materials at different temperatures.

Students work on the Engineering Design Challenge, using energy from the Sun’s to keep people warm. They collect and analyze data about how different insulation materials affect the energy transferred to and from a home, and how quickly other materials heat up and cool down. They then apply this understanding to design, evaluate, and refine models of passive solar homes.

PROGRESSION

PRIOR KNOWLEDGE					CURRENT GRADE
KINDERGARTEN	GRADE 2	GRADE 3	GRADE 4	GRADE 5	GRADE 6
Module 3 K-ESS2-1 K-ESS3-2 K-PS3-1 K-PS3-2 K-2-ETS1-1 K-2-ETS1-2 K-2-ETS1-3 Be Prepared Students record local weather conditions using weather symbols. They explore how meteorologists use weather patterns to describe and forecast the weather. Students feel the ground at sunny and shaded spots in the schoolyard to begin to perceive that sunlight warms Earth’s surface. They design umbrellas to protect an area from the Sun’s warming effects.	Module 1 2-ESS2-2 2-ESS2-3 My Journey West Students explore where water resources and landforms occur. They explore maps to find patterns. They discover that water has liquid and solid forms, flows through the land in rivers, and collects in ponds, lakes, and the ocean. Module 3 2-ESS2-1 K-2-ETS1-1 K-2-ETS1-2 Save the Island Students explore the effects of erosion and sea level rise on Tangier Island, Virginia. They define design criteria to address the problem. Students learn about engineering solutions and evaluate each solution against their design criteria.	Module 4 3-ESS2-1 3-ESS2-2 Weather Warning HQ Students extend their understanding of weather from Kindergarten by learning to take and interpret weather condition measurements. Students create bar graphs of weather data, and compare seasonal weather patterns. Students explore a map of Earth with climate zones. They identify seasons in the polar, temperate, and tropical zones, and examine the weather conditions that typify the seasons in each of these three climate zones.	Module 2 4-PS3-2 4-PS3-4 3-5-ETS1-1 Sparks Energy, Inc. Students explore an engineering design problem: how to harness the effects of sunlight and energy transfer from the Sun. Students develop computer models to create and run test simulations, and to analyze different solar cooker designs to boil water.	Module 3 5-ESS2-1 H2O Response Team Using models, maps, and data, students investigate sphere interactions that cause clouds to form and rain to fall, as well as those that can prevent rain in certain areas. They investigate and then model their ideas about what causes the ocean to be salty.	Module 4 MS-ESS3-5 MS-LS1-5 Cities of the Future Students revisit how humans affect Earth’s systems. They assess the impact humans have on Earth, such as pollution, deforestation, and climate change. They explore ways to track humans’ environmental impact (e.g., biomonitoring), and consider how data can be used to help develop solutions to protect Earth’s resources.

THE RED LIST



Performance Expectation Progressions

NGSS Topic Arrangements: Growth, Development, and Reproduction of Organisms

The Red List covers three NGSS Performance Expectations (PEs) in Life Sciences (MS-LS1-4, MS-LS1-5, MS-LS3-2). Together, these PEs investigate plant and animal reproduction, genetics, factors that affect an organism’s growth, and the protection of endangered species.

Students analyze data to learn more about the ways plants and animals ensure successful reproduction. They formalize their understanding of heredity from previous grades by studying genetics.

Students explore how genes relate to physical characteristics and explain genetic variation in offspring, comparing asexual and sexual reproduction.

Finally, students study the genetic and environmental factors influencing plant and animal growth.

PROGRESSION				
PRIOR KNOWLEDGE				
KINDERGARTEN	GRADE 1	GRADE 2	GRADE 3	GRADE 5
Module 1 K-LS1-1 My Big Nature Adventure Students are introduced to relationships between living things and the environment. They begin to understand that organisms depend on their habitat for their needs, and discover that different organisms live in different habitats.	Module 1 1-LS1-1 1-LS3-1 Museum of Leafology Students examine external plant parts, as well as seeds. They create models to show how the shape, size, and other features of a plant seed are related to its dispersal method. Students investigate similarities and differences between adult plants and their offspring. Module 2 1-LS3-1 Animal Reporters Students deepen their understanding of traits, inheritance, and variation, contrasting the appearance and physical characteristics of parents and their offspring.	Module 4 2-LS2-2 A Garden for Life Students explore the relationships between flowering plants and pollinators. They model the connections between the shape and color of a flower and the structures of its pollinators.	Module 2 3-LS3-1 3-LS4-2 Welcome to the Biodome Students revisit trait inheritance to understand how traits are acquired from both parents. They grow different varieties of plants to explore patterns of trait variation. They also begin to explore how trait variation can give individuals a survival advantage. Module 3 3-LS4-3 3-LS4-4 How to Survive an Ice Age Students discover that environmental conditions can affect traits (e.g., weasels’ white winter fur, wind-shaped trees). They differentiate between changed traits that are/are not passed onto offspring.	Module 2 5-LS2-1 Yellowstone: Uncovered Students deepen their understanding of the relationships between plants, animals, and the environment. They examine ecosystem interdependencies, and consider how changes to an ecosystem affect all the organisms and alter the food web.

CITIES OF THE FUTURE

Performance Expectation Progressions

NGSS Topic Arrangements: Weather and Climate; Human Impacts; Engineering Design

GRADE 6
MODULE 4

Cities of the Future covers two NGSS Performance Expectations (PEs) in Life Sciences (MS-LS1-4 and MS-LS1-5), two in Earth and Space Sciences (MS-ESS3-3 and MS-ESS3-5), and three in Engineering Design (MS-ETS1-1, MS-ETS1-2, and MS-ETS1-4). Together, these PEs investigate environmental change and ways that we can use science and engineering to monitor and mitigate our environmental impact.

Students revisit how humans affect the Earth’s systems and explore solutions to protect the Earth’s resources.

They interrogate evidence in order to understand the factors that contribute to climate change and the impacts of climate change on Earth.

Students develop design criteria for building a new town or city that minimizes the potentially harmful effects of humans on the environment. They design a solution, generate data to evaluate and reiterate this design, and work to improve it.

PROGRESSION				
PRIOR KNOWLEDGE				CURRENT GRADE
KINDERGARTEN	GRADE 2	GRADE 3	GRADE 5	GRADE 6
Module 1 K-ESS3-1 My Big Nature Adventure Students explore how organisms depend on their habitat for their needs. They study different habitats, and explore the different organisms that live there. Module 3 K-ESS2-1 K-2-ETS1-1 Be Prepared Students investigate the schoolyard and feel the ground in different places. They identify causes for these differences, such as the presence of sunlight or shade, discovering that sunlight warms Earth’s surface. This lays foundations for their growing understanding of the Sun’s role in Earth’s climate and the greenhouse effect. Module 4 K-ESS2-2 K-ESS3-3 K-2-ETS1-1 I Can Students explore how people affect the environment, and are introduced to the idea that humans can protect the environment. To apply their understanding, students identify problems around the school that can be solved by reusing, recycling, or reducing.	Module 1 2-ESS2-2 2-ESS2-3 My Journey West Students begin to interpret and create maps, laying foundations that they will build on in order to interpret maps that show additional data, such as temperature and precipitation. They observe patterns in the locations of liquid water and ice on Earth. Module 3 2-ESS1-1, 2-ESS2-1, K-2-ETS1-1, K-2-ETS1-2 Save the Island Students build on the idea that the environment changes. They discover that some environmental changes happen quickly while others happen very slowly. Students explore the effects of erosion and sea level rise on Tangier Island, Virginia. They evaluate different engineering solutions. Module 4 2-LS2-1 2-LS4-1 A Garden for Life Students build on their understanding that organisms depend on their environment. They discover that organisms can be impacted by changes to their habitats. They apply their learning to the design of a garden for pollinators.	Module 3 3-LS4-3 3-LS4-4 How to Survive an Ice Age Students develop the idea that people can protect the environment. They investigate the effects of environmental conditions on plant and animal traits, and the effects of environment change on individual species and on habitat biodiversity. Module 4 3-ESS2-1 3-ESS2-2 Weather Warning HQ Students measure and interpret data about a variety of weather conditions, to identify seasonal and regional patterns. They define climate and understand how it relates to weather.	Module 2 5-LS2-1 Yellowstone: Uncovered Students examine ecosystem interdependencies, and consider how changes to an ecosystem affect all the organisms and alter the food web. Module 3 5-ESS2-1 5-ESS3-1 3-5-ETS1-1 3-5-ETS1-2 3-5-ETS1-3 H2O Response Team Students investigate interactions among Earth’s systems and how humans impact those systems. They explore sphere interactions that cause clouds to form and rain to fall, and discover how people can protect limited fresh water resources. Students take on an engineering challenge: to design, test, and revise iterations of a water-conservation campaign.	Module 2 MS-PS3-3 MS-ETS1-1 MS-ETS1-3 Destination Everywhere! Building on their understanding of the hydrosphere from Grade 5, students explore the complex interactions between Earth’s systems that cause weather and climate. They tackle an engineering design problem: to use the Sun’s energy to keep people warm. They design, refine, and evaluate their models of passive solar homes. Module 3 MS-LS1-4 The Red List Students reinforce their ideas about the relationships between organisms and their environment. They explore how changes to the environment can affect plant and animal survival, and they investigate plant and animal interdependencies. They research endangered species and ways to protect them.