



PHYSICAL SCIENCE

Matter

Lesson	Lesson Objectives
What Is Matter?	<ul style="list-style-type: none">• Students explain that matter is made up of tiny particles.• Students describe states of matter.• Students apply information about particles of matter to explain observations.• Students define domain-specific vocabulary related to matter.
What Are Atoms?	<ul style="list-style-type: none">• Students explain that matter is made of atoms.• Students describe evidence for the atomic theory.• Students relate properties of atoms to properties of the substances they make up.• Students define domain-specific vocabulary related to atoms.
States of Matter	<ul style="list-style-type: none">• Students describe characteristics of solids, liquids, and gases.• Students compare and contrast solids, liquids, and gases.• Students describe the processes of melting, freezing, evaporating, and condensing.• Students define domain-specific vocabulary related to the states of matter.
Measuring Mass and Volume	<ul style="list-style-type: none">• Students explain how to measure the mass of solids and liquids.• Students explain how to measure the volume of solids and liquids.• Students estimate and compare the mass and volume of different samples.• Students define domain-specific vocabulary related to measuring mass and volume.
Properties of Matter	<ul style="list-style-type: none">• Students identify examples of properties of matter.• Students compare properties of different substances.• Students apply information about properties to identify substances.• Students define domain-specific vocabulary related to properties of matter.
Conductors and Insulators	<ul style="list-style-type: none">• Students define the terms <i>conductor</i> and <i>insulator</i>.• Students classify materials as conductors or insulators.• Students explain how the uses of materials are related to their properties.• Students interpret measurements and observations related to conductivity.• Students define domain-specific vocabulary related to conductivity.

What Are Chemical Reactions?	<ul style="list-style-type: none"> • Students differentiate physical and chemical changes. • Students identify evidence that a chemical reaction has occurred. • Students describe familiar chemical reactions. • Students define domain-specific vocabulary related to chemical reactions.
Mixtures and Solutions	<ul style="list-style-type: none"> • Students compare a variety of mixtures and solutions. • Students describe characteristics of mixtures and solutions, including concentration. • Students identify factors that affect how materials dissolve. • Students investigate how mixtures can be separated. • Students define domain-specific vocabulary related to mixtures and solutions.
Conservation of Matter	<ul style="list-style-type: none"> • Students restate the law of conservation of matter. • Students explain that matter is conserved when substances are heated, cooled, or mixed. • Students analyze evidence of the conservation of matter. • Students define domain-specific vocabulary related to the conservation of matter.
Forces and Motion	
Lesson	Lesson Objectives
What Are Forces?	<ul style="list-style-type: none"> • Students define the term <i>force</i>. • Students explain how forces are described and modeled. • Students differentiate contact and non-contact forces. • Students describe how forces affect motion. • Students define domain-specific vocabulary related to forces.
Balanced and Unbalanced Forces	<ul style="list-style-type: none"> • Students describe balanced and unbalanced forces. • Students analyze diagrams that model the forces on an object. • Students describe the effects of balanced and unbalanced forces on motion. • Students investigate forces and their effect on motion. • Students define domain-specific vocabulary related to balanced and unbalanced forces.
What Is Friction?	<ul style="list-style-type: none"> • Students explain how friction affects motion. • Students relate friction to the types of surfaces that are in contact. • Students analyze diagrams that model the force of friction. • Students define domain-specific vocabulary related to friction.
What Are Electric and Magnetic Interactions?	<ul style="list-style-type: none"> • Students describe magnetic interactions. • Students identify factors that affect the strength of a magnetic force. • Students describe electric charge and electric force. • Students identify factors that affect the strength of an electric force. • Students define domain-specific vocabulary related to magnetic and electric forces.

Gravitational Force	<ul style="list-style-type: none"> • Students describe gravity as a force that acts on objects. • Students explain that the gravitational force exerted by Earth pulls objects downward. • Students identify factors that affect the strength of the gravitational force between objects. • Students analyze everyday examples of gravity acting on objects. • Students define domain-specific vocabulary related to gravity.
Patterns of Motion	<ul style="list-style-type: none"> • Students describe patterns of motion. • Students apply information about patterns of motion to make predictions. • Students define domain-specific vocabulary related to patterns of motion.
Changes in Movement	<ul style="list-style-type: none"> • Students define the term <i>movement</i>. • Students calculate speed. • Students relate force and mass to changes in movement. • Students define domain-specific vocabulary related to changes in movement.
Using Magnets to Solve Problems	<ul style="list-style-type: none"> • Students describe magnets and the forces they exert. • Students identify common uses of magnets. • Students analyze how magnets solve problems. • Students define domain-specific vocabulary related to magnets.
Electromagnets	<ul style="list-style-type: none"> • Students describe an electromagnet. • Students explain that current flowing through a wire creates a magnetic field. • Students compare and contrast permanent magnets and electromagnets. • Students define domain-specific vocabulary related to electromagnets.
What Are Simple Machines?	<ul style="list-style-type: none"> • Students differentiate specific types of simple machines. • Students explain how simple machines change the size or direction of a force. • Students analyze the force input and output of simple machines. • Students define domain-specific vocabulary related to simple machines.
What Are Compound Machines?	<ul style="list-style-type: none"> • Students describe types of simple machines. • Students explain how simple machines are used to form compound machines. • Students investigate how compound machines perform everyday tasks. • Students define domain-specific vocabulary related to compound machines.
Energy	
Lesson	Lesson Objectives
Identifying Forms of Energy	<ul style="list-style-type: none"> • Students describe basic forms of energy. • Students analyze everyday examples of energy. • Students define domain-specific vocabulary related to forms of energy.

<p>Introduction to Sound Energy</p>	<ul style="list-style-type: none"> • Students identify sound as a form of energy. • Students explain how sound travels. • Students describe how sounds are heard. • Students relate a sound's pitch to the speed of vibrations. • Students define domain-specific vocabulary related to sound.
<p>Introduction to Light Energy</p>	<ul style="list-style-type: none"> • Students identify light as a form of energy. • Students explain how light travels. • Students describe how light interacts with matter. • Students define domain-specific vocabulary related to light.
<p>Heat</p>	<ul style="list-style-type: none"> • Students define heat as the flow of thermal energy between objects of different temperatures. • Students differentiate heat, temperature, and thermal energy. • Students describe heat flow between objects. • Students define domain-specific vocabulary related to heat.
<p>Electric Currents and Circuits</p>	<ul style="list-style-type: none"> • Students explain that energy is transferred by electric currents. • Students describe energy conservation in an electric circuit. • Students identify the components of an electric circuit. • Students differentiate open and closed circuits. • Students define domain-specific vocabulary related to electric currents and circuits.
<p>Energy in Food</p>	<ul style="list-style-type: none"> • Students explain that photosynthesis converts light energy to energy in food. • Students describe the flow of energy in ecosystems. • Students analyze models of energy flow in ecosystems. • Students define domain-specific vocabulary related to energy in food.
<p>Speed and Energy</p>	<ul style="list-style-type: none"> • Students relate an object's speed to its energy. • Students investigate speed and energy. • Students analyze the relationship between an object's kinetic and potential energy. • Students define domain-specific vocabulary related to speed and energy.
<p>Energy Transfer</p>	<ul style="list-style-type: none"> • Students describe common forms of energy. • Students describe energy transfer. • Students describe energy transformation. • Students explain that energy is conserved when it is transferred or transformed. • Students define domain-specific vocabulary related to energy transfer and transformation.
<p>Energy and Colliding Objects</p>	<ul style="list-style-type: none"> • Students recognize that energy can move and change form. • Students explain that energy is conserved when it moves or changes form. • Students relate the mass and speed of a moving object to its energy. • Students describe energy changes during collisions. • Students define domain-specific vocabulary related to energy and colliding objects.

<p>Energy Conversions</p>	<ul style="list-style-type: none"> • Students identify common forms of energy. • Students explain that energy is conserved when energy changes from one form to another. • Students describe devices that change the form of energy. • Students apply information about energy conversions to the design of a solar cooker. • Students define domain-specific vocabulary related to energy conversions.
<p style="text-align: center;">Waves and Information Transfer</p>	
<p style="text-align: center;">Lesson</p>	<p style="text-align: center;">Lesson Objectives</p>
<p style="text-align: center;">What Are Waves?</p>	<ul style="list-style-type: none"> • Students describe waves. • Students identify light and sound as types of waves that transfer energy. • Students explain how amplitude and wavelength affect sound and light. • Students analyze models of the amplitude and wavelength of waves. • Students define domain-specific vocabulary related to waves.
<p style="text-align: center;">What Is Light?</p>	<ul style="list-style-type: none"> • Students describe light as a form of energy. • Students explain that light travels in a straight line until it strikes an object. • Students explain that objects reflect light. • Students analyze the relationship between light and how objects are seen. • Students define domain-specific vocabulary related to light.
<p style="text-align: center;">Mirrors and Reflection of Light</p>	<ul style="list-style-type: none"> • Students describe how light moves. • Students describe reflection. • Students relate the angle at which light strikes a mirror to the angle at which it is reflected. • Students infer the path light travels from a light source to a mirror based on its reflection. • Students define domain-specific vocabulary related to mirrors and the reflection of light.
<p style="text-align: center;">Patterns Transfer Information</p>	<ul style="list-style-type: none"> • Students explain how people use patterns of light, sound, and digital signals to transfer information. • Students compare and contrast digital and analog signals. • Students apply information to design a way to communicate using patterns. • Students define domain-specific vocabulary related to patterns and information transfer.

LIFE SCIENCE

Structures and Processes of Living Things

Lesson	Lesson Objectives
Life Cycles of Flowering Plants	<ul style="list-style-type: none"> • Students identify stages in the life cycles of flowering plants. • Students describe the life cycles of flowering plants. • Students analyze examples of plant life cycles. • Students define domain-specific vocabulary related to the life cycles of flowering plants.
Plant Structures	<ul style="list-style-type: none"> • Students describe plant structures. • Students identify functions of specific plant structures. • Students relate plant structures to the survival, growth, and reproduction of the plant. • Students define domain-specific vocabulary related to plant structures.
Flowers	<ul style="list-style-type: none"> • Students identify flowers as an external structure of plants. • Students describe the structures and functions of flowers. • Students construct an argument that flowers are related to reproduction in plants. • Students define domain-specific vocabulary related to flowers and plant reproduction.
Structures and Processes of Living Things	<ul style="list-style-type: none"> • How Do Flowering Plants Reproduce? • Students describe reproduction in flowering plants. • Students identify processes and structures related to reproduction in flowering plants. • Students explain the processes of pollination, fertilization (seed production), seed dispersal, and germination. • Students define domain-specific vocabulary related to reproduction in flowering plants.
Materials for Plant Growth	<ul style="list-style-type: none"> • Students identify materials required for plant growth. • Students describe the sources of the materials plants use for growth. • Students analyze the role of photosynthesis in plant growth. • Students define domain-specific vocabulary related to the materials used for plant growth.
Plant Responses	<ul style="list-style-type: none"> • Students describe how plants respond to stimuli such as light, heat, and gravity. • Students investigate plant responses to stimuli. • Students define domain-specific vocabulary related to plant responses.

<p>Comparing Plant and Animal Structures</p>	<ul style="list-style-type: none"> • Students describe the function of organs and physical structures of living things. • Students compare and contrast the function of organs and other physical structures of plants and animals. • Students define domain-specific vocabulary related to structures of living things.
<p>Life Cycles of Animals</p>	<ul style="list-style-type: none"> • Students identify stages in the life cycles of animals. • Students describe the life cycles of animals. • Students analyze examples of animal life cycles. • Students define domain-specific vocabulary related to the life cycles of animals.
<p>Animal Structures</p>	<ul style="list-style-type: none"> • Students describe animal structures. • Students identify functions of specific animal structures. • Students relate animal structures to the survival, growth, behavior, and reproduction of the animal. • Students define domain-specific vocabulary related to animal structures.
<p>The Heart</p>	<ul style="list-style-type: none"> • Students identify the function of the heart. • Students describe the structure of the heart. • Students construct an argument that the heart plays a role in survival and growth. • Students define domain-specific vocabulary related to the heart.
<p>The Brain</p>	<ul style="list-style-type: none"> • Students identify the brain as an internal structure of animals. • Students explain the structure and function of the brain. • Students construct an argument that the brain supports survival, growth, behavior, and reproduction of animals. • Students define domain-specific vocabulary related to the brain.
<p>The Skin</p>	<ul style="list-style-type: none"> • Students identify the skin as an external structure of animals. • Students describe the structure and functions of skin. • Students construct an argument that the skin supports behavior and survival of animals. • Students define domain-specific vocabulary related to the skin.
<p>The Lungs</p>	<ul style="list-style-type: none"> • Students identify the lungs as an internal structure of animals. • Students explain the structure and functions of the lungs. • Students construct an argument that the lungs support survival of animals. • Students define domain-specific vocabulary related to the lungs.
<p>The Stomach</p>	<ul style="list-style-type: none"> • Students identify the stomach as an internal structure of animals. • Students explain the structure and functions of the stomach. • Students construct an argument that the stomach supports survival and growth of animals. • Students define domain-specific vocabulary related to the lungs.

What Are Cells?	<ul style="list-style-type: none"> • Students explain that a cell is the smallest unit of life. • Students describe functions of cells. • Students differentiate plant and animal cells. • Students define domain-specific vocabulary related to cells.
How Is the Human Body Organized?	<ul style="list-style-type: none"> • Students identify levels of organization in the human body. • Students describe the organization of the human body. • Students model the organizational structure of the human body. • Students define domain-specific vocabulary related to the organization of the human body.
Human Body Systems	<ul style="list-style-type: none"> • Students define the term <i>body system</i>. • Students identify the main structures and functions of body systems. • Students model the structures, functions, and interactions of body systems. • Students define domain-specific vocabulary related to body systems.
Animal Senses	<ul style="list-style-type: none"> • Students identify examples of senses. • Students explain that senses are used to gather information. • Students describe how humans and other animals detect information using their senses. • Students define domain-specific vocabulary related to animal senses.
Animal Responses	<ul style="list-style-type: none"> • Students explain how the brain receives, processes, and responds to information. • Students recognize examples of stimuli and responses. • Students apply information about how the brain receives, processes, and responds to information. • Students define domain-specific vocabulary related animal responses.
Responding to Seasonal Changes	<ul style="list-style-type: none"> • Students explain the relationship between seasonal changes and hibernation, migration, and dormancy. • Students analyze patterns and cycles of seasonal responses in plants and animals. • Students define domain-specific vocabulary related to migration, hibernation, and dormancy.
Ecosystems	
Lesson	Lesson Objectives
Ecosystems	<ul style="list-style-type: none"> • Students describe ecosystems and their components. • Students compare and contrast different types of ecosystems. • Students develop an argument based on evidence that ecosystems support a variety of organisms. • Students define domain-specific vocabulary related to ecosystems.

<p>Ocean Ecosystems</p>	<ul style="list-style-type: none"> • Students identify physical characteristics of ocean environments. • Students describe organisms in ocean ecosystems. • Students analyze interactions of organisms in ocean ecosystems. • Students define domain-specific vocabulary related to ocean environments and ecosystems.
<p>Changes in the Environment</p>	<ul style="list-style-type: none"> • Students explain that organisms are found in habitats that meet their needs. • Students identify causes of change in environments. • Students predict the impacts of a change in an environment. • Students define domain-specific vocabulary related to changes in environments.
<p>Group Behavior</p>	<ul style="list-style-type: none"> • Students identify examples of group behavior in animals. • Students relate group behavior in animals to survival. • Students define domain-specific vocabulary related to group behavior in animals.
<p>Producers, Consumers, and Decomposers</p>	<ul style="list-style-type: none"> • Students classify organisms as producers, consumers, or decomposers. • Students describe how producers, consumers, and decomposers obtain matter and energy. • Students define domain-specific vocabulary related to producers, consumers, and decomposers.
<p>Food Chains and Food Webs</p>	<ul style="list-style-type: none"> • Students classify organisms as producers, consumers, or decomposers. • Students describe how producers, consumers, and decomposers obtain matter and energy. • Students analyze food chains and food webs. • Students define domain-specific vocabulary related to food chains and food webs.
<p>Plant Growth and the Environment</p>	<ul style="list-style-type: none"> • Students identify the basic needs of plants. • Students explain how plants meet their needs in their environments. • Students relate environmental conditions, including amounts of sunlight and water, to plant growth. • Students define domain-specific vocabulary related to plant growth and the environment.
<p>Microorganisms</p>	<ul style="list-style-type: none"> • Students describe characteristics of microorganisms. • Students describe interactions of microorganisms and other organisms in their ecosystems. • Students explain that some microorganisms can be beneficial to larger organisms, while others are harmful. • Students define domain-specific vocabulary related to microorganisms.

Traits and Behaviors

Lesson	Lesson Objectives
What Is a Trait?	<ul style="list-style-type: none"> • Students define the term <i>trait</i>. • Students differentiate inherited and acquired traits. • Students explain that there is variation in traits among similar organisms. • Students relate differences in traits to survival. • Students define domain-specific vocabulary related to traits.
Traits and the Environment	<ul style="list-style-type: none"> • Students describe inherited and acquired traits. • Students identify examples of inherited and acquired traits. • Students describe learned behaviors and instincts. • Students construct an argument that traits are influenced by the environment. • Students define domain-specific vocabulary related to traits and the environment.
Instincts and Learned Behaviors	<ul style="list-style-type: none"> • Students identify examples of instincts and learned behaviors. • Students explain how instincts and learned behaviors are related to survival. • Students compare and contrast instincts and learned behaviors. • Students define domain-specific vocabulary related to instincts and learned behaviors.

Evolution and Classification

Lesson	Lesson Objectives
Types of Fossils and How They Form	<ul style="list-style-type: none"> • Students describe different types of fossils. • Students explain how fossils form. • Students sequence the steps in fossil formation. • Students define domain-specific vocabulary related to fossils and how they form.
Fossils and Evidence of Life	<ul style="list-style-type: none"> • Students describe fossils. • Students recognize that fossils provide evidence of Earth's past environments and organisms. • Students analyze diagrams and models to gather evidence about Earth's past. • Students define domain-specific vocabulary related to fossils.
Understanding Earth's Changes	<ul style="list-style-type: none"> • Students explain that Earth has changed during its vast history. • Students describe how rock layers and fossils provide evidence of Earth's past. • Students analyze information found in fossils and rock layers. • Students define domain-specific vocabulary related to Earth's history.

<p>Extinct Plants and Animals</p>	<ul style="list-style-type: none"> • Students describe extinction. • Students identify causes of extinctions. • Students describe mass extinction events. • Students contrast background extinction rates and current rates of extinction. • Students define domain-specific vocabulary related to extinction.
<p>Survival and Differences Among Organisms</p>	<ul style="list-style-type: none"> • Students describe adaptations. • Students identify examples of adaptations. • Students relate variations in traits to survival. • Students predict the effects of variations in traits. • Students define domain-specific vocabulary related to adaptations and variations among organisms.
<p>Animal Habitats</p>	<ul style="list-style-type: none"> • Students describe a variety of habitats. • Students explain that animals must be able to meet their needs in their habitat. • Students explain the relationship between organisms' adaptations and their habitats. • Students construct an argument that specific habitats support the survival of some organisms but not others. • Students define domain-specific vocabulary related to animal habitats.
<p>Classification of Organisms</p>	<ul style="list-style-type: none"> • Students identify characteristics that all living things have in common. • Students compare and contrast organisms and their characteristics. • Students classify organisms based on their characteristics. • Students infer characteristics of organisms based on their classification. • Students define domain-specific vocabulary related to classification of organisms.
<p>Classifying Plants</p>	<ul style="list-style-type: none"> • Students describe the characteristics of plants. • Students compare and contrast different plants. • Students classify plants based on their characteristics. • Students define domain-specific vocabulary related to plants.
<p>Comparing Animals</p>	<ul style="list-style-type: none"> • Students describe characteristics of different types of animals. • Students differentiate vertebrates and invertebrates. • Students classify animals based on their characteristics. • Students define domain-specific vocabulary related to comparing and classifying animals.

EARTH SCIENCE

Earth and Space

Lesson	Lesson Objectives
Earth, the Sun, and the Moon	<ul style="list-style-type: none"> • Students describe characteristics of Earth, the Sun, and the Moon. • Students describe the relative positions and motions of Earth, the Sun, and the Moon. • Students model the orbits of Earth, the Sun, and the Moon. • Students define domain-specific vocabulary related to Earth, the Sun, and the Moon.
How Earth Moves	<ul style="list-style-type: none"> • Students explain that Earth revolves around the Sun in a year. • Students explain that Earth rotates on its axis in a 24-hour day. • Students analyze effects of Earth's motion. • Students define domain-specific vocabulary related to Earth's movement.
Patterns of Daily Change	<ul style="list-style-type: none"> • Students identify patterns of daily change. • Students explain the role of Earth's rotation in the day/night cycle. • Students explain how the Sun appears to move in the sky. • Students analyze patterns of change in shadows. • Students define domain-specific vocabulary related to patterns of daily change.
Comets, Asteroids, and Meteoroids	<ul style="list-style-type: none"> • Students explain the role of gravity in the formation of the solar system. • Students describe the role of gravity in the motion of solar system objects. • Students analyze how gravity affects motion in the galaxy. • Students define domain-specific vocabulary related to gravity and motion in space.
The Planets	<ul style="list-style-type: none"> • Students describe characteristics of the planets in the solar system. • Students compare properties of the inner planets and the outer planets. • Students define domain-specific vocabulary related to the planets.
What Are Moons?	<ul style="list-style-type: none"> • Students describe characteristics of moons. • Students explain the relationship between planets and moons. • Students distinguish moons from other objects in the solar system. • Students define domain-specific vocabulary related to moons.
The Sun	<ul style="list-style-type: none"> • Students describe characteristics of the Sun and other stars. • Students explain that the Sun is the center of the solar system. • Students describe the structure of the Sun. • Students support an argument explaining why the Sun seems to be bigger and brighter than other stars. • Students define domain-specific vocabulary related to the Sun.

The Phases of the Moon	<ul style="list-style-type: none"> • Students describe changes in the observable shape of the Moon over the course of about a month. • Students recognize patterns in the changes of the Moon's appearance. • Students predict changes in the Moon's appearance based on patterns. • Students define domain-specific vocabulary related to phases of the Moon.
Moon Phases and Tides	<ul style="list-style-type: none"> • Students identify the four major phases of the Moon. • Students analyze the cause of the major phases of the Moon. • Students relate the four major phases of the Moon to tide cycles. • Students define domain-specific vocabulary related to phases of the moon and tides.
What Are Stars?	<ul style="list-style-type: none"> • Students describe characteristics of all stars. • Students compare and contrast the sizes and brightnesses of stars. • Students explain why stars other than the Sun look like points of light. • Students define domain-specific vocabulary related to stars.
Seasonal Changes in Stars	<ul style="list-style-type: none"> • Students describe constellations. • Students identify seasonal patterns in the appearance of some stars. • Students describe the cause of seasonal patterns in the appearance of stars. • Students predict future locations of stars in the sky based on patterns. • Students define domain-specific vocabulary related to the stars.
What Are Galaxies?	<ul style="list-style-type: none"> • Students identify the parts of a galaxy. • Students explain how gravity affects the motion of a galaxy and its parts. • Students identify the Milky Way as our home galaxy.. • Students compare and contrast different galaxies. • Students define domain-specific vocabulary related to galaxies.
Earth's Systems and Resources	
Lesson	Lesson Objectives
What Is Weather?	<ul style="list-style-type: none"> • Students describe the components of weather. • Students analyze information about seasons. • Students explain how weather data is collected and organized. • Students analyze weather information. • Students define domain-specific vocabulary related to weather.
Weather Data	<ul style="list-style-type: none"> • Students identify types of weather data. • Students explain how weather data is collected. • Students analyze graphs of weather data. • Students compare weather data. • Students define domain-specific vocabulary related to weather data.

<p>Seasons and Weather</p>	<ul style="list-style-type: none"> • Students explain the cause of Earth's seasons. • Students describe the relationship between seasons and weather. • Students analyze tables and graphs describing weather during particular seasons. • Students define domain-specific vocabulary related to weather and seasons.
<p>Weather-Related Hazards</p>	<ul style="list-style-type: none"> • Students identify types of severe weather. • Students analyze effects of severe weather. • Students evaluate solutions for weather hazards. • Students define domain-specific vocabulary related to weather hazards.
<p>What Is Climate?</p>	<ul style="list-style-type: none"> • Students describe climate. • Students differentiate weather and climate. • Students identify factors that affect climate. • Students distinguish climate zones. • Students define domain-specific vocabulary related to climate.
<p>Weathering and Erosion</p>	<ul style="list-style-type: none"> • Students describe the processes of weathering and erosion. • Students identify examples of weathering and erosion. • Students identify factors that affect the rate of weathering and erosion. • Students define domain-specific vocabulary related to weathering and erosion.
<p>Patterns of Earth's Features</p>	<ul style="list-style-type: none"> • Students relate plate tectonics and Earth's features. • Students analyze maps to find patterns of Earth's features. • Students define domain-specific vocabulary related to Earth's features.
<p>Earth's Land Features</p>	<ul style="list-style-type: none"> • Students describe Earth's land features. • Students compare and contrast land features. • Students use models to compare Earth's features. • Students define domain-specific vocabulary related to Earth's features.
<p>Natural Hazards</p>	<ul style="list-style-type: none"> • Students describe natural hazards and natural disasters. • Students identify causes and effects of natural hazards. • Students compare solutions for keeping people safe from natural hazards. • Students define domain-specific vocabulary related to natural hazards.
<p>Earth's Spheres</p>	<ul style="list-style-type: none"> • Students describe Earth's spheres. • Students describe how Earth's spheres interact. • Students define domain-specific vocabulary related to Earth's spheres.
<p>Interactions of Earth's Spheres</p>	<ul style="list-style-type: none"> • Students identify Earth's spheres. • Students analyze examples of interactions of Earth's spheres. • Students define domain-specific vocabulary related to interactions of Earth's spheres.

<p>Understanding the Water Cycle</p>	<ul style="list-style-type: none"> • Students identify the states in which water exists. • Students describe processes by which water changes state. • Students analyze models of the water cycle. • Students identify the source of energy for the water cycle. • Students define domain-specific vocabulary related to the water cycle.
<p>Where Is Earth’s Water Found?</p>	<ul style="list-style-type: none"> • Students contrast fresh water and salt water. • Students explain the importance of fresh water for living things. • Students analyze graphs of the distribution of Earth’s water. • Students define domain-specific vocabulary related to Earth’s water and its distribution.
<p>Soil, Rocks, Air, and Water</p>	<ul style="list-style-type: none"> • Students identify soil, rocks, air, and water as natural resources. • Students describe the characteristics of soil, rocks, air, and water. • Students analyze graphs of the distribution of Earth’s resources. • Students define domain-specific vocabulary related to soil, rocks, air, and water.
<p>Soil and How It Is Formed</p>	<ul style="list-style-type: none"> • Students describe soil. • Students describe the formation of soil. • Students describe properties of soil. • Students compare and contrast different soils. • Students define domain-specific vocabulary related to soil.
<p>What Is the Rock Cycle?</p>	<ul style="list-style-type: none"> • Students identify characteristics of sedimentary, igneous, and metamorphic rocks. • Students describe the formation of sedimentary, igneous, and metamorphic rocks. • Students analyze models of the rock cycle. • Students define domain-specific vocabulary related to the rock cycle.
<p>What Are Minerals?</p>	<ul style="list-style-type: none"> • Students identify the properties of minerals. • Students distinguish rocks and minerals. • Students identify and classify minerals based on their properties. • Students define domain-specific vocabulary related to minerals.
<p>Earth and Human Activity</p>	
<p>Lesson</p>	<p>Lesson Objectives</p>
<p>How Humans Change the Environment</p>	<ul style="list-style-type: none"> • Students identify ways that humans cause change in environments. • Students predict the effects of human-caused changes in the environment. • Students evaluate possible solutions to a problem caused by a change in an environment. • Students define domain-specific vocabulary related to changes in environments.

<p>Renewable Energy Resources</p>	<ul style="list-style-type: none"> • Students identify renewable energy resources. • Students contrast the impacts of renewable and non-renewable resources on the environment. • Students analyze positive and negative impacts of the use of renewable energy resources. • Students define domain-specific vocabulary related to renewable energy resources.
<p>Nonrenewable Energy Resources</p>	<ul style="list-style-type: none"> • Students identify non-renewable energy resources. • Students explain how non-renewable energy resources form. • Students identify effects of obtaining and using non-renewable resources. • Students analyze data related to the use of non-renewable resources. • Students explain the importance of conservation of non-renewable resources. • Students define domain-specific vocabulary related to non-renewable resources.
<p>How Do Fossil Fuels Form?</p>	<ul style="list-style-type: none"> • Students describe the processes that lead to the formation of sedimentary rocks. • Students describe the processes that lead to the formation of fossil fuels. • Students model processes that lead to the formation of sedimentary rocks and fossil fuels. • Students identify the properties of rocks that allow Earth's natural resources to be stored there. • Students define domain-specific words related to the formation of sedimentary rock and fossil fuels.
<p>Conservation of Energy Resources</p>	<ul style="list-style-type: none"> • Students describe ways in which humans use energy resources. • Students analyze effects of obtaining and using energy resources. • Students explain how technology can help conserve energy resources. • Students define domain-specific vocabulary related to conservation of energy resources.
<p>Protecting Earth</p>	<ul style="list-style-type: none"> • Students explain that human use of resources can affect Earth. • Students identify problems and solutions related to resource use. • Students apply information about ways that communities can protect Earth. • Students define domain-specific vocabulary related to protecting Earth.
<p>What Is Recycling?</p>	<ul style="list-style-type: none"> • Students describe what it means to reduce, reuse, and recycle. • Students describe the process and impacts of recycling. • Students analyze benefits and challenges of recycling. • Students define domain-specific vocabulary related to recycling.

ENGINEERING DESIGN

Engineering Design

Lesson	Lesson Objectives
What Is the Design Process?	<ul style="list-style-type: none">• Students describe engineering.• Students identify steps in the design process.• Students evaluate design solutions to optimize solutions.• Students relate everyday examples of the design process.• Students define domain-specific vocabulary related to the design process.