



2023-2024

Quarterly Science Curriculum Overview

Elementary

[Kindergarten](#)

[1st Grade](#)

[2nd Grade](#)

[3rd Grade](#)

[4th Grade](#)

[5th Grade](#)

Middle

[6th Grade](#)

[7th Grade](#)

[8th Grade](#)

High

[Biology](#)

[Earth and Environmental](#)

[Physics](#)

[Chemistry](#)

[Physical Sciences](#)

The purpose of the quarterly curriculum overview is to provide teachers and other stakeholders with quick access to their grade level standards and clarifying objectives. A link to the pacing guide for each grade level can be found below the outline of standards.

FEEDBACK FORM

Kindergarten

1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
<p>PHYSICAL PROPERTIES K.P.2 Understand how objects are described based on their physical properties and how they are used.</p> <p>K.P.2.1 Classify objects by observable physical properties (including size, color, shape, texture, weight, and flexibility).</p> <p>K.P.2.2 Compare the observable physical properties of different kinds of materials (clay, wood, cloth, paper, etc.) from which objects are made and how they are used.</p>	<p>POSITIONS AND MOVEMENT K.P.1 Understand the positions and motions of objects and organisms observed in the environment.</p> <p>K.P.1.1 Compare the relative position of various objects observed in the classroom and outside using position words such as: in front of, behind, between, on top of, under, above, below, and beside.</p> <p>K.P.1.2 Give examples of different ways objects and organisms move (to include falling to the ground when dropped):</p> <ul style="list-style-type: none"> • Straight • Zigzag • Round and round • Back and forth • Fast and slow 	<p>WEATHER K.E.1 Understand change and observable patterns of weather that occur from day to day and throughout the year.</p> <p>K.E.1.1 Infer that change is something that happens to many things in the environment based on observations made using one or more of their senses.</p> <p>K.E.1.2 Summarize daily weather conditions noting changes that occur from day to day and throughout the year.</p> <p>K.E.1.3 Compare weather patterns that occur from season to season.</p>	<p>ANIMALS K.L.1 Compare characteristics of animals that make them alike and different from other animals and nonliving things.</p> <p>K.L.1.1: Compare different types of the same animal (i.e. different types of dogs, different types of cats, etc.) to determine individual differences within a particular type of animal.</p> <p>K.L.1.2: Compare characteristics of living and nonliving things in terms of their:</p> <ul style="list-style-type: none"> • Structure • Growth • Changes • Movement • Basic needs

1st Grade

1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
<p>FORCES AND MOTION</p> <p>1.P.1 Understand how forces (pushes or pulls) affect the motion of an object.</p> <p>1.P.1.1 Explain the importance of a push or pull on changing the motion of an object.</p> <p>1.P.1.2 Explain how some forces (pushes and pulls) can be used to make things move without touching them, such as magnets.</p> <p>1.P.1.3 Predict the effect of a given force on the motion of an object, including balanced forces.</p>	<p>DAY AND NIGHT</p> <p>1.E.1 Recognize the features and patterns of the Earth/moon/sun system as observed from Earth.</p> <p>1.E.1.1 Recognize differences in the features of the day and night sky and apparent movement of objects across the sky as observed from Earth.</p> <p>1.E.1.2 Recognize patterns of observable changes in the Moon's appearance from day to day.</p>	<p>EARTH MATERIALS</p> <p>1.E.2 Understand the physical properties of Earth materials that make them useful in different ways.</p> <p>1.E.2.1 Summarize the physical properties of earth materials, including rocks, minerals, soils, and water that make them useful in different ways.</p> <p>1.E.2.2 Compare the properties of soil samples from different places relating their capacity to retain water, nourish and support the growth of certain plants.</p>	<p>NEEDS OF LIVING THINGS</p> <p>1.L.1 Understand characteristics of various environments and behaviors of humans that enable plants and animals to survive.</p> <p>1.L.1.1 Recognize that plants and animals need air, water, light (plants only), space, food, and shelter and that these may be found in their environment.</p> <p>1.L.1.2 Give examples of how the needs of different plants and animals can be met by their environments in North Carolina or different places throughout the world.</p> <p>1.L.1.3 Summarize ways that humans protect their environment and/or improve conditions for the growth of the plants and animals that live there (e.g., reuse or recycle products to avoid littering).</p> <p>1.L.2 Summarize the needs of living organisms for energy and growth.</p> <p>1.L.2.1 Summarize the basic needs of a variety of different plants (including air, water, nutrients, and light) for energy and growth.</p> <p>1.L.2.2 Summarize the basic needs of a variety of different animals (including air, water, and food) for energy and growth.</p>

2nd Grade

1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
<p>WEATHER</p> <p>2.E.1 Understand patterns of weather and factors that affect weather.</p> <p>2.E.1.1 Summarize how energy from the sun serves as a source of light that warms the land, air and water.</p> <p>2.E.1.2 Summarize weather conditions using qualitative and quantitative measures to describe:</p> <ul style="list-style-type: none">• Temperature• Wind direction• Wind speed• Precipitation <p>2.E.1.3 Compare weather patterns that occur over time and relate observable patterns to time of day and time of year.</p> <p>2.E.1.4 Recognize the tools that scientists use for observing, recording, and predicting weather changes from day to day and during the seasons.</p>	<p>MATTER</p> <p>2.P.2 Understand properties of solids and liquids and the changes they undergo.</p> <p>2.P.2.1 Give examples of matter that change from a solid to a liquid and from a liquid to a solid by heating and cooling.</p> <p>2.P.2.2 Compare the amount (volume and weight) of water in a container before and after freezing.</p> <p>2.P.2.3 Compare what happens to water left in an open container over time as to water left in a closed container.</p>	<p>SOUND</p> <p>2.P.1 Understand the relationship between sound and vibrating objects.</p> <p>2. P.1.1 Illustrate how sound is produced by vibrating objects and columns of air.</p> <p>2. P.1.2 Summarize the relationship between sound and objects of the body that vibrate – eardrum and vocal cords.</p>	<p>LIFE CYCLES AND GENETICS</p> <p>2.L.1 Understand animal life cycles.</p> <p>2.L.1.1 Summarize the life cycle of animals including:</p> <ul style="list-style-type: none">• Birth• Developing into an adult• Reproducing• Aging and death <p>2.L.1.2 Compare life cycles of different animals such as, but not limited to, mealworms, ladybugs, crickets, guppies, or frogs.</p> <p>2.L.2 Remember that organisms differ from or are similar to their parents based on the characteristics of the organism.</p> <p>2.L.2.1 Identify ways in which plants and animals closely resemble their parents in observed appearance and ways they are different.</p> <p>2.L.2.2 Recognize that there is variation among individuals that are related.</p>

[2nd Grade Pacing Guide](#)

3rd Grade

1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
<p>SOLAR SYSTEM AND EARTH'S LANDFORMS</p> <p>3.E.1 Recognize the major components and patterns observed in the Earth/moon/sun system.</p> <p>3.E.1.1 Recognize that the earth is part of a system called the solar system that includes the sun (a star), planets, and many moons and the earth is the third planet from the sun in our solar system.</p> <p>3.E.1.2 Recognize that changes in the length and direction of an object's shadow indicate the apparent changing position of the Sun during the day although the patterns of the stars in the sky, to include the Sun, stay the same.</p> <p>3.E.2 Compare the structures of the Earth's surface using models or three-dimensional diagrams.</p> <p>3.E.2.1 Compare Earth's saltwater and freshwater features (including oceans, seas, rivers, lakes, ponds, streams, and glaciers).</p> <p>3.E.2.2 Compare Earth's land features (including volcanoes, mountains, valleys, canyons, caverns, and islands) by using models, pictures, diagrams, and maps.</p>	<p>HUMAN BODY AND MOTION</p> <p>3.L.1 Understand human body systems and how they are essential for life: protection, movement, and support.</p> <p>3.L.1.1 Compare the different functions of the skeletal and muscular systems.</p> <p>3.L.1.2 Explain why skin is necessary for protection and for the body to remain healthy.</p> <p>3.P.1 Understand motion and factors that affect motion.</p> <p>3.P.1.1 Infer changes in speed or direction resulting from forces acting on an object.</p> <p>3.P.1.2 Compare the relative speeds (faster or slower) of objects that travel the same distance in different amounts of time.</p> <p>3.P.1.3 Explain the effect of Earth's gravity on the motion of any object on or near the Earth.</p>	<p>MATTER AND ENERGY</p> <p>3.P.2 Understand the structure and properties of matter before and after they undergo a change.</p> <p>3.P.2.1 Recognize that air is a substance that surrounds us, takes up space, and has mass.</p> <p>3.P.2.2 Compare solids, liquids, and gases based on their basic properties.</p> <p>3.P.2.3 Summarize changes that occur to the observable properties of materials when different degrees of heat are applied to them, such as melting ice or ice cream, boiling water or an egg, or freezing water.</p> <p>3.P.3 Recognize how energy can be transferred from one object to another.</p> <p>3.P.3.1 Recognize that energy can be transferred from one object to another by rubbing them against each other.</p> <p>3.P.3.2 Recognize that energy can be transferred from a warmer object to a cooler one by contact or at a distance and the cooler object gets warmer.</p>	<p>PLANTS</p> <p>3.L.2 Understand how plants survive in their environments.</p> <p>3.L.2.1 Remember the function of the following plant structures as it relates to the survival of plants in their environments:</p> <ul style="list-style-type: none">• Roots – absorb nutrients• Stems – provide support• Leaves – synthesize food• Flowers – attract pollinators and produce seeds for reproduction. <p>3.L.2.2 Explain how environmental conditions determine how well plants survive and grow.</p> <p>3.L.2.3 Summarize the distinct stages of the life cycle of seed plants.</p> <p>3.L.2.4 Explain how the basic properties (texture and capacity to hold water) and components (sand, clay, and humus) of soil determine the ability of soil to support the growth and survival of many plants.</p>

4th Grade

1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
<p>EARTH HISTORY & MATERIALS</p> <p>4.E.2 Understand the use of fossils and changes in the surface of the earth as evidence of the history of the Earth and its changing life forms.</p> <p>4.E.2.1 Compare fossils (including molds, casts, and preserved parts of plants and animals) to one another and to living organisms.</p> <p>4.E.2.2 Infer ideas about Earth's early environments from fossils of plants and animals that lived long ago.</p> <p>4.E.2.3 Give examples of how the surface of the earth changes due to slow processes such as erosion and weathering, and rapid processes such as landslides, volcanic eruptions, and earthquakes.</p> <p>4.P.2 Understand the composition and properties of matter before and after they undergo a change or interaction.</p> <p>4.P.2.2 Explain how minerals are identified using tests for the physical properties of hardness, color, luster, cleavage, and streak.</p> <p>4.P.2.3 Classify rocks as metamorphic, sedimentary, or igneous based on their composition, how they are formed, and the processes that create them.</p>	<p>ENERGY AND THE EARTH-MOON-SUN RELATIONSHIP</p> <p>4.E.1 Explain the causes of day and night and phases of the moon.</p> <p>4.E.1.1 Explain the cause of day and night based on the rotation of Earth on its axis.</p> <p>4.E.1.2 Explain the monthly changes in the appearance of the moon, based on the moon's orbit around the Earth.</p> <p>4.P.3 Recognize that energy takes various forms that may be grouped based on their interaction with matter.</p> <p>4.P.3.1 Recognize the basic forms of energy (light, sound, heat, electrical, and magnetic) as the ability to cause motion or create change.</p> <p>4.P.3.2 Recognize that light travels in a straight line until it strikes an object or travels from one medium to another, and that light can be reflected, refracted, and absorbed.</p> <p>ONLY FOCUS ON LIGHT AND HEAT</p>	<p>FORCES, MATTER, AND ENERGY</p> <p>4.P.1 Explain how various forces affect the motion of an object.</p> <p>4.P.1.1 Explain how magnets interact with all things made of iron and with other magnets to produce motion without touching them.</p> <p>4.P.1.2 Explain how electrically charged objects push or pull on other electrically charged objects and produce motion.</p> <p>4.P.2 Understand the composition and properties of matter before and after they undergo a change or interaction.</p> <p>4.P.2.1 Compare the physical properties of samples of matter (strength, hardness, flexibility, ability to conduct heat, ability to conduct electricity, ability to be attracted by magnets, reactions to water and fire).</p> <p>4.P.3 Recognize that energy takes various forms that may be grouped based on their interaction with matter.</p> <p>4.P.3.1 Recognize the basic forms of energy (light, sound, heat, electrical, and magnetic) as the ability to cause motion or create change.</p>	<p>HEALTH AND ECOLOGY</p> <p>4.L.1 Understand the effects of environmental changes, adaptations, and behaviors that enable animals (including humans) to survive in changing habitats.</p> <p>4.L.1.1 Give examples of changes in an organism's environment that are beneficial to it and some that are harmful.</p> <p>4.L.1.2 Explain how animals meet their needs by using behaviors in response to information received from the environment.</p> <p>4.L.1.3 Explain how humans can adapt their behavior to live in changing habitats (e.g., recycling wastes, establishing rain gardens, planting trees and shrubs to prevent flooding and erosion).</p> <p>4.L.1.4 Explain how differences among animals of the same population sometimes give individuals an advantage in surviving and reproducing in changing habitats.</p> <p>4.L.2 Understand food and the benefits of vitamins, minerals, and exercise.</p> <p>4.L.2.1 Classify substances as food or non-food items based on their ability to provide energy and materials for survival, growth, and repair of the body.</p> <p>4.L.2.2 Explain the role of vitamins and minerals and exercise in maintaining a healthy body.</p>

5th Grade

1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
<p>ECOSYSTEMS</p> <p>5.L.2 Understand the interdependence of plants and animals with their ecosystem.</p> <p>5.L.2.1 Compare the characteristics of several common ecosystems, including estuaries and salt marshes, oceans, lakes and ponds, forests, and grasslands.</p> <p>5.L.2.2 Classify the organisms within an ecosystem according to the function they serve: producers, consumers, or decomposers (biotic factors).</p> <p>5.L.2.3 Infer the effects that may result from the interconnected relationship of plants and animals to their ecosystem.</p> <p>LIVING ORGANISMS</p> <p>5.L.1 Understand how structures and systems of organisms (to include the human body) perform functions necessary for life.</p> <p>5.L.1.1 Explain why some organisms are capable of surviving as a single cell while others require many cells that are specialized to survive.</p> <p>5.L.1.2 Compare the major systems of the human body (digestive, respiratory, circulatory, muscular, skeletal, and cardiovascular) in terms of their functions necessary for life.</p>	<p>INHERITANCE & ADAPTATION</p> <p>5.L.3 Understand why organisms differ from or are similar to their parents based on the characteristics of the Organism.</p> <p>5.L.3.1 Explain why organisms differ from or are similar to their parents based on the characteristics of the organism.</p> <p>5.L.3.2 Give examples of likenesses that are inherited and some that are not.</p> <p>FORCES, AND MOTION</p> <p>5.P.1 Understand force, motion, and the relationship between them.</p> <p>5.P.1.1 Explain how factors such as gravity, friction, and change in mass affect the motion of objects.</p> <p>5.P.1.2 Infer the motion of objects in terms of how far they travel in a certain amount of time and the direction in which they travel.</p> <p>5.P.1.3 Illustrate the motion of an object using a graph to show a change in position over a period of time.</p> <p>5.P.1.4 Predict the effect of a given force or a change in mass on the motion of an object.</p>	<p>HEATING</p> <p>5.P.3 Explain how the properties of some materials change as a result of heating and cooling.</p> <p>5.P.3.1 Explain the effects of the transfer of heat (either by direct contact or at a distance) that occurs between objects at different temperatures. (conduction, convection or radiation).</p> <p>5.P.3.2 Explain how heating and cooling affect some materials and how this relates to their purpose and practical applications.</p> <p>MATTER</p> <p>5.P.2 Understand the interactions of matter and energy and the changes that occur.</p> <p>5.P.2.2 Compare the weight of an object to the sum of the weight of its parts before and after an interaction.</p> <p>5.P.2.3 Summarize properties of original materials, and the new material(s) formed, to demonstrate that a change has occurred.</p> <p>WATER CYCLE</p> <p>5.P.2 Understand the interactions of matter and energy and the changes that occur.</p> <p>5.P.2.1 Explain how the sun's energy impacts the processes of the water cycle (including, evaporation, transpiration, condensation, precipitation, and runoff).</p>	<p>WEATHER</p> <p>5.E.1 Understand weather patterns and phenomena, making connections to the weather in a particular place and Time.</p> <p>5.E.1.1 Compare daily and seasonal changes in weather conditions (including wind speed and direction, precipitation, and temperature) and patterns.</p> <p>5.E.1.2 Predict upcoming weather events from weather data collected through observation and measurements.</p> <p>5.E.1.3 Explain how global patterns such as the jet stream and water currents influence local weather in measurable terms such as temperature, wind direction and speed, and precipitation.</p>

6th grade

1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
<p>SPACE: EARTH, SUN, MOON</p> <p>6.E.1 Understand the Earth/moon/sun system, and the properties, structures, and predictable motions of celestial bodies in the Universe.</p> <p>6.E.1.1 Explain how the relative motion and relative position of the sun, Earth, and moon affect the seasons, tides, phases of the moon, and eclipses.</p> <p>6.E.1.2 Explain why Earth sustains life while other planets do not based on their properties (including types of surface, atmosphere, and gravitational force) and location to the</p>	<p>EARTH'S STRUCTURE</p> <p>6.E.2 Understand the structure of the Earth and how interactions of constructive and destructive forces have resulted in changes in the surface of the Earth over time and the effects of the lithosphere on humans.</p> <p>6.E.2.1 Summarize the structure of the earth, including the layers, the mantle, and core based on the relative position, composition, and density.</p> <p>6.E.2.2 Explain how crustal plates and ocean basins are formed, move and interact using earthquakes, heat flow, and volcanoes to reflect forces within the earth.</p> <p>6.E.2.3 Explain how the formation of soil is related to the parent rock type and the environment in which it dev</p> <p>6.E.2.4 Conclude that the good health of humans requires: monitoring the lithosphere, maintaining soil quality, and stewardship.</p>	<p>ENERGY & WAVES</p> <p>6.P.1 Understand the properties of waves and the wavelike property of energy in earthquakes, light, and sound waves.</p> <p>6.P.1.1 Compare the properties of waves to the wavelike property of energy in earthquakes, light, and sound.</p> <p>6.P.1.2 Explain the relationship among visible light, the electromagnetic spectrum, and sight.</p> <p>6.P.1.3 Explain the relationship among the rate of vibration, the medium through which vibrations travel, sound and hearing.</p> <p>6.P.2 Understand the structure, classifications, and physical properties of matter.</p> <p>6.P.2.1 Recognize that all matter is made up of atoms and atoms of the same element are all alike, but are different from the atoms of other elements.</p> <p>6.P.2.2 Explain the effect of heat on the motion of atoms through a description of what happens to particles during a change in phase.</p> <p>6.P.2.3 Compare the physical properties of pure substances that are independent of the amount of matter present including density, melting point, boiling point, and solubility to properties that are dependent on the amount of matter present to include volume, mass, and weight.</p>	<p>PLANTS & ECOSYSTEMS</p> <p>6.L.1 Compare characteristics of animals that make them alike and different from other animals and nonliving things.</p> <p>6.L.1.1 Summarize the basic structures and functions of flowering plants required for survival, reproduction, and defense.</p> <p>6.L.1.2 Explain the significance of the processes of photosynthesis, respiration, and transpiration to the survival of green plants and other organisms.</p> <p>6.L.2 Understand the flow of energy through ecosystems and the responses of populations to the biotic and abiotic factors in their environment.</p> <p>6.L.2.1 Explain how plants respond to external stimuli (including dormancy and forms of tropism) to enhance survival in an environment.</p> <p>6.L.1.2 Summarize how the abiotic factors (such as temperature, water, sunlight, and soil quality) of biomes (freshwater, marine, forest, grasslands, desert, Tundra) affect the ability of organisms to grow, survive and/or create their own food through photosynthesis.</p>

		<p>6.P.3 Understand characteristics of energy transfer and interactions of matter and energy.</p> <p>6.P.3.1 Illustrate the transfer of heat energy from warmer objects to cooler ones using examples of conduction, radiation and convection and the effects that may result.</p> <p>6.P.3.2 Explain the effects of electromagnetic waves on various materials to include absorption, scattering, and change in temperature.</p> <p>6.P.3.3 Explain the suitability of materials for use in technological design based on a response to heat (to include conduction, expansion, and contraction) and electrical energy (conductors and insulators).</p>	
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7th grade

1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
<p>SYSTEM STRUCTURES AND FUNCTIONS OF LIVING ORGANISMS</p> <p>7.L.1 Understand the processes, structures, and functions of living organisms that enable them to survive, reproduce and carry out the basic functions of life.</p> <p>7.L.1.1 Compare the structures and life functions of single-celled organisms that carry out all of the basic functions of life including:</p> <ul style="list-style-type: none">• Euglena• Amoeba• Paramecium• Volvox <p>7.L.1.2 Compare the structures and functions of plant and animal cells, including major organelles (cell membrane, cell wall, nucleus, chloroplasts, mitochondria, and vacuoles).</p> <p>7.L.1.3 Summarize the hierarchical organization of multicellular organisms from cells to tissues to organs to systems to organisms.</p> <p>7.L.1.4 Summarize the general functions of the major systems of the human body (digestion, respiration, reproduction, circulation, and excretion) and ways that these systems interact with each other to sustain life.</p>	<p>GENETICS</p> <p>7.L.2 Understand the relationship of the mechanisms of cellular reproduction, patterns of inheritance and external factors to potential variation among offspring.</p> <p>7.L.2.1 Explain why offspring that result from sexual reproduction (fertilization and meiosis) have greater variation than offspring that result from asexual reproduction (budding and mitosis).</p> <p>7.L.2.2 Infer patterns of heredity using information from Punnett squares and pedigree analysis.</p> <p>7.L.2.3 Explain the impact of the environment and lifestyle choices on biological inheritance (to include common genetic diseases) and survival.</p>	<p>ATMOSPHERE</p> <p>7.E.1 Understand how the cycling of matter (water and gasses) in and out of the atmosphere relates to Earth's atmosphere, weather and climate, and the effects of the atmosphere on humans.</p> <p>7.E.1.1 Compare the composition, properties, and structure of Earth's atmosphere to include: mixtures of gasses and differences in temperature and pressure within layers</p> <p>7.E.1.2 Explain how the cycling of water in and out of the atmosphere and atmospheric conditions relate to the weather patterns on Earth.</p> <p>7.E.1.3 Explain the relationship between the movement of air masses, high and low pressure systems, and frontal boundaries to storms (including thunderstorms, hurricanes, and tornadoes) and other weather conditions that may result.</p> <p>7.E.1.4 Predict weather conditions and patterns based on information obtained from:</p> <ul style="list-style-type: none">• Weather data collected from direct observations and measurement (wind speed and direction, air temperature, humidity, and air pressure)• Weather maps, satellites, and radar• Cloud shapes and types and associated elevation	<p>PHYSICS</p> <p>7.P.1 Understand motion, the effects of forces on motion, and the graphical representations of motion.</p> <p>7.P.1.1 Explain how the motion of an object can be described by its position, direction of motion, and speed with respect to some other object.</p> <p>7.P.1.2 Explain the effects of balanced and unbalanced forces acting on an object (including friction, gravity and magnets).</p> <p>7.P.1.3 Illustrate the motion of an object using a graph to show a change in position over a period of time.</p> <p>7.P.1.4 Interpret distance versus time graphs for constant speed and variable motion.</p> <p>7.P.2 Understand motion, the effects of forces on motion, and the graphical representations of motion.</p> <p>7.P.2.1 Explain how kinetic and potential energy contribute to the mechanical energy of an object.</p> <p>7.P.2.2 Explain how energy can be transformed from one form to another (specifically potential energy and kinetic energy) using a model or diagram of a moving object (roller coaster, pendulum, or cars on ramps as examples).</p> <p>7.P.2.3 Recognize that energy can be transferred from one system to another when two objects push or pull on each other over a distance (work) and electrical circuits require a complete loop through which an electrical current can pass.</p>

		<p>7.E.1.5 Explain the influence of convection, global winds, and the jet stream on weather and climatic conditions.</p> <p>7.E.1.6 Conclude that the good health of humans requires: monitoring the atmosphere, maintaining air quality, and stewardship.</p>	<p>7.P.2.4 Explain how simple machines such as inclined planes, pulleys, levers, and wheel and axles are used to create mechanical advantage and increase efficiency</p>
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[7th Grade Pacing Guide](#)

8th grade

1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
<p><i>EARTH HISTORY</i> 8.E.2 Understand the history of Earth and its life forms based on evidence of change recorded in fossil records and landforms. 8.E.2.1 Infer the age of Earth and relative age of rocks and fossils from index fossils and ordering of rock layers (relative dating and radioactive dating).</p> <p>8.E.2.2 Explain the use of fossils, ice cores, composition of sedimentary rocks, faults, and igneous rock formations found in rock layers as evidence of the history of the Earth and its changing life forms.</p> <p><i>ECOSYSTEMS</i> 8.L.3 Understand how organisms interact with and respond to the biotic and abiotic components of their environment.</p> <p>8.L.3.1 Explain how factors such as food, water, shelter, and space affect populations in an ecosystem.</p> <p>8.L.3.2 Summarize the relationships among producers, consumers, and decomposers including the positive and negative consequences of such interactions including: coexistence, cooperation, competition, (predator/prey) parasitism, and mutualism</p> <p>8.L.3.3 Explain how the flow of energy within food webs is interconnected with the cycling of matter (including</p>	<p><i>MOLECULAR BIOLOGY</i> 8.L.5 Understand the composition of various substances as it relates to their ability to serve as a source of energy and building materials for growth and repair of organisms. 8.L.5.1 Summarize how food provides the energy and the molecules required for building materials, growth, and survival of all organisms (to include plants).</p> <p>8.L.5.2 Explain the relationship among a healthy diet, exercise, and the general health of the body (emphasis on the relationship between respiration and digestion).</p> <p><i>STRUCTURES & FUNCTIONS OF LIVING ORGANISMS</i> 8.L.1 Understand the structure and hazards caused by agents of disease that affect living organisms.</p> <p>8.L.1.1 Summarize the basic characteristics of viruses, bacteria, fungi and parasites relating to the spread, treatment and prevention of disease.</p> <p>8.L.1.2 Explain the difference between epidemic and pandemic as it relates to the spread, treatment, and prevention of disease.</p> <p><i>Biotechnology</i> 8.L.2 Understand how biotechnology is used to affect living organisms.</p>	<p><i>EARTH SYSTEMS, STRUCTURES, AND PROCESSES</i> 8.E.1 Understand the hydrosphere and the impact of humans on local systems and the effects of the hydrosphere on humans. 8.E.1.1 Explain the structure of the hydrosphere including: Water distribution on earth Local river basin and water availability</p> <p>8.E.1.2 Summarize evidence that Earth's oceans are a reservoir of nutrients, minerals, dissolved gasses, and life forms: Estuaries Marine ecosystems Upwelling Behavior of gasses in the marine environment Value and sustainability of marine resources Deep ocean technology and understandings gained</p> <p>8.E.1.3 Predict the safety and potability of water supplies in North Carolina based on physical and biological factors, including: Temperature Dissolved oxygen pH Nitrates and phosphates Turbidity Bio-indicators</p> <p>8.E.1.4 Conclude that the good health of humans requires: Monitoring of the hydrosphere Water quality standards Methods of water treatment Maintaining safe water quality Stewardship</p> <p><i>Energy Conservation & Transfer</i> 8.P.2 Explain the environmental implications associated with the various methods of obtaining, managing and using energy resources. 8.P.2.1 Explain the environmental</p>	<p><i>MATTER: PROPERTIES & CHANGE</i> 8.P.1 Understand the properties of matter and changes that occur when matter interacts in an open and closed container. 8.P.1.1 Classify matter as elements, compounds, or mixtures based on how the atoms are packed together in arrangements.</p> <p>8.P.1.2 Explain how the physical properties of elements and their reactivity have been used to produce the current model of the Periodic Table of elements.</p> <p>8.P.1.3 Compare physical changes such as size, shape, and state to chemical changes that are the result of a chemical reaction to include changes in temperature, color, and formation of a gas or precipitate.</p> <p>8.P.1.4 Explain how the idea of atoms and a balanced chemical equation support the law of conservation of mass.</p>

<p>water, nitrogen, carbon dioxide, and oxygen).</p> <p><i>Evolution & Genetics</i></p> <p>8.L.4 Understand the evolution of organisms and landforms based on evidence, theories, and processes that impact the Earth over time.</p> <p>8.L.4.1 Summarize the use of evidence drawn from geology, fossils, and comparative anatomy to form the basis for biological classification systems and the theory of evolution.</p> <p>8.L.4.2 Explain the relationship between genetic variation and an organism's ability to adapt to its environment.</p>	<p>8.L.2.1 Summarize aspects of biotechnology including: Specific genetic information available Careers Economic benefits to North Carolina Ethical issues Implications for agriculture</p>	<p>consequences of the various methods of obtaining, transforming, and distributing energy.</p> <p>8.P.2.2 Explain the implications of the depletion of renewable and nonrenewable energy resources and the importance of conservation.</p>	
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[8th Grade Pacing Guide](#)

Earth/Environmental

Unit 1	Unit 2	Unit 3	Unit 4	Unit 5
<p>ASTRONOMY</p> <p>EEn.1.1 Explain the Earth’s role as a body in space. EEn.1.1.1 Explain the Earth’s motion through space, including precession, nutation, the barycenter, and its path about the galaxy.</p> <p>EEn.1.1.2 Explain how the Earth’s rotation and revolution about the Sun affect its shape and is related to seasons and tides.</p> <p>EEn.1.1.3 Explain how the sun produces energy which is transferred to the Earth by radiation.</p> <p>EEn.1.1.4 Explain how incoming solar energy makes life possible on Earth.</p>	<p>LITHOSPHERE</p> <p>EEn.2.1 Explain how processes and forces affect the lithosphere. EEn.2.1.1 Explain how the rock cycle, plate tectonics, volcanoes, and earthquakes impact the lithosphere.</p> <p>EEn.2.1.2 Predict the locations of volcanoes, earthquakes, and faults based on information contained in a variety of maps.</p> <p>EEn.2.1.3 Explain how natural actions such as weathering, erosion (wind, water, and gravity), and soil formation affect Earth’s surface.</p> <p>EEn.2.1.4 Explain the probability of and preparation for geohazards such as landslides, avalanches, earthquakes, and volcanoes in a particular area based on available data</p> <p>EEn.2.2 Understand how human influences impact the lithosphere. EEn.2.2.1 Explain the consequences of human activities on the lithosphere (such as mining, deforestation, agriculture, overgrazing, urbanization, and land use) past and present.</p>	<p>HYDROLOGY</p> <p>EEn.2.3 Explain the structure and processes within the hydrosphere. EEn.2.3.1 Explain how water is an energy agent (currents and heat transfer).</p> <p>EEn.2.3.2 Explain how groundwater and surface water interact.</p> <p>EEn.2.4 Evaluate how humans use water. EEn.2.4.1 Evaluate human influences on freshwater availability.</p> <p>EEn.2.4.2 Evaluate human influences on water quality in North Carolina’s river basins, wetlands, and tidal environments.</p>	<p>WEATHER & CLIMATE</p> <p>EEn.2.5 Understand the structure of and processes within our atmosphere. EEn.2.5.1 Summarize the structure and composition of our atmosphere.</p> <p>EEn.2.5.2 Explain the formation of typical air masses and the weather systems that result from air mass interactions.</p> <p>EEn.2.5.3 Explain how cyclonic storms form based on the interaction of air masses.</p> <p>EEn.2.5.4 Predict the weather using available weather maps and data (including surface, upper atmospheric winds, and satellite imagery).</p> <p>EEn.2.5.5 Explain how human activities affect air quality.</p> <p>EEn.2.6 Analyze patterns of global climate change over time. EEn.2.6.1 Differentiate between weather and climate.</p> <p>EEn.2.6.2 Explain changes in global climate due to natural processes.</p> <p>EEn.2.6.3 Analyze the impacts that human activities have on global climate change (such as burning hydrocarbons, greenhouse effect, and deforestation).</p>	<p>ENVIRONMENTAL STUDIES</p> <p>EEn.2.7 Explain how the lithosphere, hydrosphere, and atmosphere individually and collectively affect the biosphere.</p> <p>EEn.2.7 Explain how the lithosphere, hydrosphere, and atmosphere individually and collectively affect the biosphere. EEn.2.7.1 Explain how abiotic and biotic factors interact to create the various biomes in North Carolina.</p> <p>EEn.2.7.2 Explain why biodiversity is important to the biosphere.</p> <p>EEn.2.7.3 Explain how human activities impact the biosphere.</p> <p>EEn.2.8 Evaluate human behaviors in terms of how likely they are to ensure the ability to live sustainably on Earth. EEn.2.8.1 Evaluate alternative energy technologies for use in North Carolina.</p> <p>EEn.2.8.2 Critique conventional and sustainable agriculture and aquaculture practices in terms of their environmental impacts.</p> <p>EEn.2.8.3 Explain the effects of uncontrolled population growth on the Earth’s resources.</p>

	EEn.2.2.2 Compare the various methods humans use to acquire traditional energy sources (such as peat, coal, oil, natural gas, nuclear fission, and wood).		EEn.2.6.4 Attribute changes to Earth's systems to global climate change (temperature change, changes in pH of ocean, sea level changes, etc.).	EEn.2.8.4 Evaluate the concept of "reduce, reuse, recycle" in terms of impact on natural resources.
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[Earth and Environmental Pacing Guide](#)

Biology

Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7
<p>BIOCHEMISTRY Bio 4.1 Understand how biological molecules are essential to the survival of living organisms. Bio.4.1.1 Compare the structures and functions of the major biological molecules (carbohydrates, proteins, lipids, and nucleic acids) as related to the survival of living organisms.</p> <p>Bio.4.1.2 Summarize the relationship among DNA, proteins and amino acids in carrying out the work of cells and how this is similar in all organisms.</p> <p>Bio.4.1.3 Explain how enzymes act as catalysts for biological reactions.</p>	<p>CELLS Bio 1.1 Understand the relationship between the structures and functions of cells and their organelles. Bio.1.1.1 Summarize the structure and function of organelles in eukaryotic cells (including the nucleus, plasma membrane, cell wall, mitochondria, vacuoles, chloroplasts, and ribosomes) and ways that these organelles interact with each other to perform the function of the cell.</p> <p>Bio.1.1.2 Compare prokaryotic and eukaryotic cells in terms of their general structures (plasma membrane and genetic material) and degree of complexity.</p> <p>Bio.1.1.3 Explain how instructions in DNA</p>	<p>CELL PROCESSES Bio 1.2 Analyze the cell as a living system. Bio 1.2.1 Explain how homeostasis is maintained in a cell and within an organism in various environments (including temperature and pH).</p> <p>Bio.1.2.2 Analyze how cells grow and reproduce in terms of interphase, mitosis, and cytokinesis.</p> <p>Bio.1.2.3 Explain how specific cell adaptations help cells survive in particular environments (focus on unicellular organisms).</p> <p>Bio 4.2 Analyze the relationships between biochemical processes and energy use in the cell. Bio.4.2.1 Analyze photosynthesis and cellular respiration in terms of how energy is</p>	<p>MOLECULAR GENETICS Bio 3.1 Explain how traits are determined by the structure and function of DNA. Bio.3.1.1 Explain the double-stranded, complementary nature of DNA as related to its function in the cell.</p> <p>Bio.3.1.2 Explain how DNA and RNA code for proteins and determine traits.</p> <p>Bio.3.1.3 Explain how mutations in DNA that result from interactions with the environment (i.e. radiation and chemicals) or new combinations in existing genes lead to changes in function and phenotype.</p> <p>Bio 4.1 Understand how biological molecules are essential to the survival of living organisms.</p>	<p>INHERITANCE GENETICS Bio 3.2 Understand how the environment, and/or the interaction of alleles, influences the expression of genetic traits. Bio.3.2.1 Explain the role of meiosis in sexual reproduction and genetic variation.</p> <p>Bio.3.2.2 Predict offspring ratios based on a variety of inheritance patterns (including dominance, co-dominance, incomplete dominance, multiple alleles, and sex-linked traits).</p> <p>Bio.3.2.3 Explain how the environment can influence the expression of genetic traits.</p> <p>Bio 3.3 Understand the application of DNA technology. Bio.3.3.1 Interpret how DNA is used for comparison and identification of organisms.</p>	<p>EVOLUTION & ADAPTATIONS Bio 3.4 Explain the theory of evolution by natural selection as a mechanism for how species change over time. Bio.3.4.1 Explain how fossil, biochemical, and anatomical evidence support the theory of evolution.</p> <p>Bio.3.4.2 Explain how natural selection influences the changes in species over time.</p> <p>Bio.3.4.3 Explain how various disease agents (bacteria, viruses, chemicals) can influence natural selection.</p> <p>Bio 3.5 Analyze how classification systems are developed upon speciation. Bio.3.5.1 Explain the historical development and changing nature of classification systems.</p>	<p>ECOLOGY Bio 2.1 Analyze the interdependence of living organisms within their environments. Bio.2.1.1 Analyze the flow of energy and cycling of matter (such as water, carbon, nitrogen, and oxygen) through ecosystems relating the significance of each to maintaining the health and sustainability of an ecosystem.</p> <p>Bio.2.1.2 Analyze the survival and reproductive success of organisms in terms of behavioral, structural, and reproductive adaptations.</p> <p>Bio 2.1.3 Explain various ways organisms interact with each other (including predation, competition, parasitism, mutualism) and with their environments resulting in stability within ecosystems.</p> <p>Bio.2.1.4 Explain why ecosystems can be</p>

	<p>lead to cell differentiation and result in cells specialized to perform specific functions in multicellular organisms.</p>	<p>stored, released, and transferred within and between these systems.</p> <p>Bio 4.2.2 Explain ways that organisms use released energy for maintaining homeostasis (active transport).</p>	<p>Bio.4.1.1 Compare the structures and functions of the major biological molecules (carbohydrates, proteins, lipids, and nucleic acids) as related to the survival of living organisms.</p> <p>Bio.4.1.2 Summarize the relationship among DNA, proteins, and amino acids in carrying out the work of cells and how this is similar in all organisms.</p> <p>Bio.4.1.3 Explain how enzymes act as catalysts for biological reactions.</p>	<p>Bio.3.3.2 Summarize how transgenic organisms are engineered to benefit society.</p> <p>Bio.3.3.3 Evaluate some of the ethical issues surrounding the use of DNA technology (including cloning, genetically modified organisms, stem cell research, and Human Genome Project).</p>	<p>Bio.3.5.2 Analyze the classification of organisms according to their evolutionary relationships (including dichotomous keys and phylogenetic trees).</p>	<p>relatively stable over hundreds or thousands of years, even though populations may fluctuate (emphasizing availability of food, availability of shelter, number of predators, and disease).</p> <p>Bio 2.2 Understand the impact of human activities on the environment (one generation affects the next).</p> <p>Bio.2.2.1 Infer how human activities (including population growth, pollution, global warming, burning of fossil fuels, habitat destruction, and introduction of nonnative species) may impact the environment.</p> <p>Bio.2.2.2 Explain how the use, protection, and conservation of natural resources by humans impact the environment from one generation to the next.</p>
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Physics

Unit 1	Unit 2	Unit 3	Unit 4	Unit 5
See Pacing Guide for details				

[Physics Pacing Guide](#)

Chemistry

Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8
<p>ATOM & NUCLEAR Chm 1.1 Analyze the structure of atoms and ions.</p> <p>Chm.1.1.1 Analyze the structure of atoms, isotopes, and ions.</p> <p>Chm.1.1.2 Analyze an atom in terms of the location of electrons.</p> <p>Chm.1.1.3 Explain the emission of electromagnetic radiation in spectral form in terms of the Bohr model.</p> <p>Chm.1.1.4 Explain the process of radioactive decay using nuclear equations and half-life.</p>	<p>PERIODIC TABLE Chm 1.3 Understand the physical and chemical properties of atoms based on their position on the Periodic Table.</p> <p>Chm.1.3.1 Classify the components of a periodic table (period, group, metal, metalloid, nonmetal, transition).</p> <p>Chm.1.3.2 Infer the physical properties (atomic radius, metallic and nonmetallic characteristics) of an element based on its position on the Periodic Table.</p> <p>Chm.1.3.3 Infer the atomic size, reactivity, electronegativity, and ionization energy of an</p>	<p>CHEMICAL COMPOUNDS Chm 1.2 Understand the bonding that occurs in simple compounds in terms of bond type, strength, and properties.</p> <p>Chm.1.2.1 Compare (qualitatively) the relative strengths of ionic, covalent, and metallic bonds.</p> <p>Chm.1.2.2 Infer the type of bond and chemical formula formed between atoms.</p> <p>Chm.1.2.3 Compare inter- and intra- particle forces.</p> <p>Chm.1.2.4 Interpret the name and formula of compounds using IUPAC convention.</p>	<p>TYPES & RATES OF REACTIONS Chm 2.2 Analyze chemical reactions in terms of quantities, product formation, and energy.</p> <p>Chm.2.2.1 Explain the energy content of a chemical reaction.</p> <p>Chm.2.2.2 Analyze the evidence of chemical change.</p> <p>Chm.2.2.3 Analyze the law of conservation of matter and how it applies to various types of chemical equations (synthesis, decomposition, single replacement, double replacement, and combustion).</p>	<p>MOLE & STOICHIOMETRY Chm 2.2 Analyze chemical reactions in terms of quantities, product formation, and energy.</p> <p>Chm.2.2.1 Explain the energy content of a chemical reaction.</p> <p>Chm.2.2.2 Analyze the evidence of chemical change.</p> <p>Chm.2.2.3 Analyze the law of conservation of matter and how it applies to various types of chemical equations (synthesis, decomposition, single replacement, double replacement, and combustion).</p>	<p>THERMODYNAMICS & PHASE CHANGES Chm 2.1 Understand the relationship among pressure, temperature, volume, and phase.</p> <p>Chm.2.1.1 Explain the energetic nature of phase changes.</p> <p>Chm.2.1.2 Explain heating and cooling curves (heat of fusion, heat of vaporization, specific heat, melting point, and boiling point).</p> <p>Chm.2.1.3 Interpret the data presented in phase diagrams.</p> <p>Chm.2.1.4 Infer simple calorimetric calculations based on the concepts of heat lost equals heat gained and specific heat.</p>	<p>ACIDS, BASES, AND SOLUTIONS Chm 3.2 Understand solutions and the solution process.</p> <p>Chm.3.2.1 Classify substances using the hydronium and hydroxide concentrations.</p> <p>Chm.3.2.2 Summarize the properties of acids and bases.</p> <p>Chm.3.2.3 Infer the quantitative nature of a solution (molarity, dilution, and titration with a 1:1 molar ratio).</p> <p>Chm.3.2.4 Summarize the properties of solutions.</p> <p>Chm.3.2.5 Interpret solubility diagrams.</p> <p>Chm.3.2.6 Explain the solution process.</p>	<p>GASSES Chm 2.1 Understand the relationship among pressure, temperature, volume, and phase.</p> <p>Chm.2.1.5 Explain the relationships among pressure, temperature, volume, and quantity of gas, both qualitative and quantitative.</p>

	<p>element from its position on the Periodic Table.</p>	<p>Chm.1.2.5 Compare the properties of ionic, covalent, metallic, and network compounds.</p>	<p>Chm 3.1 Understand the factors affecting rate of reaction and chemical equilibrium.</p> <p>Chm.3.1.1 Explain the factors that affect the rate of a reaction (temperature, concentration, particle size, and presence of a catalyst).</p> <p>Chm.3.1.2 Explain the conditions of a system at equilibrium.</p> <p>Chm.3.1.3 Infer the shift in equilibrium when a stress is applied to a chemical system (Le Chatelier's Principle).</p>	<p>Chm 3.1 Understand the factors affecting rate of reaction and chemical equilibrium.</p> <p>Chm.3.1.1 Explain the factors that affect the rate of a reaction (temperature, concentration, particle size, and presence of a catalyst).</p> <p>Chm.3.1.2 Explain the conditions of a system at equilibrium.</p> <p>Chm.3.1.3 Infer the shift in equilibrium when a stress is applied to a chemical system (Le Chatelier's Principle).</p>			
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Physical Science

Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9
<p>INTRO TO CHEMISTRY PSc 2.1 Understand the relationship between forces and motion.</p> <p>PSc.2.1.1 Classify matter as homogeneous or heterogeneous; pure substance or mixture; element or compound; metals, nonmetals, or metalloids; solution, colloid, or suspension.</p> <p>PSc.2.1.2 Explain the phases of matter and the physical changes that matter undergoes.</p> <p>PSc.2.1.3 Compare physical and chemical</p>	<p>PERIODIC TABLE PSc 2.1 Understand the relationship between forces and motion.</p> <p>PSc2.1.1 Classify matter as homogeneous or heterogeneous; pure substance or mixture; element or compound; metals, nonmetals, or metalloids; solution, colloid, or suspension.</p> <p>PSc2.1.3 Compare physical and chemical properties of various types of matter.</p> <p>PSc.2.1.4 Interpret the</p>	<p>COMPOUNDS PSc 2.2 Understand chemical bonding and chemical interactions.</p> <p>PSc.2.2.1 Infer valence electrons, oxidation number, and reactivity of an element based on its location in the Periodic Table.</p> <p>PSc.2.2.2 Infer the type of chemical bond that occurs, whether covalent, ionic, or metallic, in a given substance.</p> <p>PSc.2.2.3 Predict chemical formulas and names for simple compounds based on knowledge of bond formation</p>	<p>CHEMICAL REACTIONS PSc 2.2 Understand chemical bonding and chemical interactions.</p> <p>PSc.2.2.4 Exemplify the law of conservation of mass by balancing chemical equations.</p> <p>PSc.2.2.5 Classify types of reactions such as synthesis, decomposition, single replacement, or double replacement.</p> <p>PSc.2.2.6 Summarize the characteristics and interactions of acids and bases.</p>	<p>MOTIONS & MOMENTUM PSc 1.1 Understand motion in terms of speed, velocity, acceleration, and momentum.</p> <p>PSc.1.1.1 Explain motion in terms of frame of reference, distance, and displacement.</p> <p>PSc.1.1.2 Compare speed, velocity, acceleration, and momentum using investigations, graphing, scalar quantities, and vector quantities.</p>	<p>FORCES PSc 1.2 Understand the relationship between forces and motion.</p> <p>PSc.1.2.1 Explain how gravitational force affects the weight of an object and the velocity of an object in freefall.</p> <p>PSc.1.2.2 Classify frictional forces into one of four types: static, sliding, rolling, and fluid.</p> <p>PSc.1.2.3 Explain forces using Newton's three laws of motion.</p>	<p>ENERGY PSc 3.1 Understand types of energy, conservation of energy and energy transfer.</p> <p>PSc.3.1.1 Explain thermal energy and its transfer.</p> <p>PSc.3.1.2 Explain the law of conservation of energy in a mechanical system in terms of kinetic energy, potential energy, and heat.</p> <p>PSc.3.1.3 Explain work in terms of the relationship among the applied force to an object, the resulting displacement of the object, and the energy transferred to an object.</p>	<p>ELECTRICITY & MAGNETISM PSc 3.3 Understand electricity and magnetism and their relationship.</p> <p>PSc.3.3.1 Summarize static and current electricity.</p> <p>PSc.3.3.2 Explain simple series and parallel DC circuits in terms of Ohm's law.</p> <p>PSc.3.3.3 Explain how current is affected by changes in composition, length, temperature, and diameter of wire.</p> <p>PSc.3.3.4 Explain magnetism in terms of domains, interactions of poles, and magnetic fields.</p>	<p>WAVES PSc 3.2 Understand the nature of waves.</p> <p>PSc.3.2.1 Explain the relationships among wave frequency, wave period, wave velocity, amplitude, and wavelength through calculation and investigation.</p> <p>PSc.3.2.2 Compare waves (mechanical, electromagnetic, and surface) using their characteristics.</p> <p>PSc.3.2.3 Classify waves as transverse or compressional (longitudinal).</p> <p>PSc.3.2.4 Illustrate the wave interactions of reflection, refraction, diffraction, and interference.</p>

<p>properties of various types of matter.</p>	<p>data presented in the Bohr model diagrams and dot diagrams for atoms and ions of elements 1 through 18.</p> <p>PSc 2.2 Understand chemical bonding and chemical interactions. PSc.2.2.1 Infer valence electrons, oxidation number, and reactivity of an element based on its location in the Periodic Table.</p> <p>PSc 2.3 Understand the role of the nucleus in radiation and radioactivity.</p> <p>PSc.2.3.1 Compare</p>	<p>and naming conventions.</p>				<p>PSc.3.1.4 Explain the relationship among work, power, and simple machines both qualitatively and quantitatively.</p>		
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	<p>nuclear reactions including: alpha decay, beta decay, and gamma decay; nuclear fusion and nuclear fission.</p> <p>PSc.2.3.2</p> <p>Exemplify the radioactive decay of unstable nuclei using the concept of half-life.</p>							
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[Physical Science Pacing Guide](#)