Science Achievement Indicators Grade Span 3-5				
Content Standard **N5A** Students understand that science involves asking and answering questions and comparing the answers to what scientists know about the world.				
Content Benchmarks	Work at the **Emergent/ Developing** level may indicate ability to…	Work at the **Approaches** level may indicate ability to…	Work at the **Meets** level demonstrates ability to…	Work at the **Exceeds** level demonstrates ability to…
N.5.A.1 Students know scientific progress is made by conducting careful investigations, recording data, and communicating the results in an accurate method.	state that observations and measurements are collected in scientific investigations. (N.5.A.1)	describe how observations and measurements are collected in scientific investigations. (N.5.A.1)	support claims in a scientific investigation with evidence gathered through accurate observations and measurements. (N.5.A.1, N.5.A.3)	give examples of how new lines of evidence have progressed our understanding of scientific knowledge. (N.5.A.1)
N.5.A.2 Students know how to compare the results of their experiments to what scientists know about the world.	use limited written language, spoken language, numbers or labeled drawings to describe observed objects and phenomena with assistance. (N.2.A.1, N.5.A.2)	describe objects and phenomena through written and spoken language, numbers and labeled drawings. (N.2.A.1, N.5.A.2)	compare the results of classroom experiments to current scientific knowledge. (N.5.A.2)	critique results of classroom experiments based on current scientific knowledge. (N.5.A.2)
N.5.A.3 Students know how to draw conclusions from scientific evidence.	safely use, with assistance, tools to collect data and explore the natural world. (N.5.A.2, N.5.A.3, N.5.A.5) name, with assistance, observable properties of objects. (N.2.A.3, N.5.A.7) recognize, with assistance, a group sorted by a particular property. (N.2.A.3, N.5.A.7)	safely use tools to collect data and explore the natural world. (N.2.A.2, N.5.A.3, N.5.A.5)	match a scientific conclusion to the evidence from which it was drawn. (N.5.A.3)	create a scientific conclusion based on evidence. (N.5.A.3)

Content Standard **N5A** (continued) Students understand that science involves asking and answering questions and comparing the answers to what scientists know about the world.				
Content Benchmarks	Work at the **Emergent/ Developing** level may indicate ability to…	Work at the **Approaches** level may indicate ability to…	Work at the **Meets** level demonstrates ability to…	Work at the **Exceeds** level demonstrates ability to…
N.5.A.4 Students know graphic representations of recorded data can be used to make predictions.	construct, with assistance, graphs and charts from data collected during their investigations. (N.5.A.4)	construct graphs and charts from data collected during their investigations. (N.5.A.4)	identify a reasonable prediction based on information represented on graphs and charts that they create. (N.5.A.4)	generate a reasonable prediction based on information represented on graphs and charts that they create. (N.5.A.4)
N.5.A.5 Students know how to plan and conduct a safe and simple investigation.			design and conduct a safe and simple investigation to analyze a scientific question. (N.5.A.5)	design and safely conduct a controlled experiment. (N.5.A.5)
N.5.A.6 Students know models are tools for learning about the things they are meant to resemble.	state that models represent real things. (N.5.A.6)	state examples of models used in scientific investigations. (N.5.A.6)	explain that models are tools to learn about the things the model is intended to represent. (N.5.A.6)	develop models to explain scientific phenomenon. (N.5.A.6)
N.5.A.7 Students know observable patterns can be used to organize items and ideas.	record patterns in nature. (N.5.A.7)	predict future events based on a pattern in nature. (N.5.A.3, N.5.A.6, N.5.A.7) sort objects into distinct groups based on observable properties. (N.2.A.1, N.5.A.7)	classify objects or ideas based on one or two observable patterns. (N.5.A.7) identify patterns used in organizing a set of objects or ideas. (N.5.A.7)	organize objects or ideas based on multiple properties in more than one way. (N.5.A.7)

Content Standard **N5B** Students understand that many people, from all cultures and levels of ability, contribute to the fields of science and technology.				
Content Benchmark	Work at the **Emergent/ Developing** level may indicate ability to…	Work at the **Approaches** level may indicate ability to…	Work at the **Meets** level demonstrates ability to…	Work at the **Exceeds** level demonstrates ability to…
N.5.B.1 Students know that, throughout history, people of diverse cultures have provided scientific knowledge and technologies.	identify scientists as people. (N.2.B.1, N.5.B.1))	recognize that everybody can be a scientist. (N.2.B.1, N.5.B.1)	explain that scientific contributions are made by individuals of all cultures, genders, ethnicities. (N.5.B.1)	provide examples of scientific contributions made by individuals of all cultures, genders, and ethnicities. (N.5.B.1)
N.5.B.2 Students know technologies impact society, both positively and negatively.	identify, with assistance, examples of technological advances. (N.5.B.2)	identify technological advances. (N.5.B.2)	identify how the impact on society may be positive or negative when given an advance in technology. (N.5.B.2)	provide examples of how technology has impacted society positively and/or negatively. (N.5.B.2)
N.5.B.3 Students know the benefits of working with a team and sharing findings.	explain that scientists work together. (N.2.B.2, N.5.B.3) explain that scientists share what they learn. (N.2.B.2, N.5.B.3)	explain that scientists work together and share what they find out. (N.2.B.2, N.5.B.3)	recognize benefits of working with a team and sharing findings. (N.5.B.3)	apply the benefits of working with a team and sharing findings to evaluate and revise knowledge. (N.5.B.3)

Content Standard **P5A** Students understand properties of objects and materials.				
Content Benchmark	Work at the **Emergent/ Developing** level may indicate ability to…	Work at the **Approaches** level may indicate ability to…	Work at the **Meets** level demonstrates ability to…	Work at the **Exceeds** level demonstrates ability to…
P.5.A.1 Students know matter exists in different states (i.e., solid, liquid, gas) which have distinct physical properties.	identify observable properties (color, size, shape, weight) of solids and liquids. (P.2.A.1, P.2.A.3, P.5.A.1)	compare solids and liquids using observable properties (color, size, shape, weight). (P.2.A.1, P.2.A.3, P.5.A.1)	describe characteristics of solids, liquids, and gases. (P.5.A.1)	compare and contrast different states of matter. (P.5.A.1)
P.5.A.2 Students know heating or cooling can change some common materials, such as water from one state to another.	recognize that properties of materials can be changed. (P.2.A.2, P.5.A.2)	describe how properties of materials can be changed. (P.2.A.2, P.5.A.2)	describe common examples of physical changes that occur when matter changes states. (P.5.A.2)	give examples of changes in matter caused by heating or cooling. (P.5.A.2)
P.5.A.3 Students know materials can be classified by their observable physical and chemical properties (e.g., magnetism, conductivity, density, and solubility).	identify a group that has been sorted according to a property. (P.2.A.3, P.2.A.4)	sort objects according to type of material. (P.2.A.3, P.2.A.4, P.5.A.3)	classify matter based on an observable physical or chemical property. (P.5.A.3)	use multiple observable physical or chemical properties to classify materials. (P.5.A.3)
P.5.A.4 Students know that, by combining two or more materials, the properties of that material can be different from the original materials.		identify that a mixture is made of two or more materials. (P.5.A.4)	describe how a mixture of two or more materials can result in a material that may have different properties than the original materials. (P.5.A.4)	give examples of mixture that have physical properties different from the original materials used to make the mixture. (P.5.A.4) use the properties of matter to physically separate mixtures. (P.5.A.4)
P.5.A.5 Students know the mass of a material remains constant whether it is together, in parts, or in a different state.	state that substances have mass. (P.5.A.5)	state that different substances have specific masses. (P.5.A.5)	explain that the mass of a substance remains constant whether it is together, in parts, or in different states. (P.5.A.5)	verify that the mass of a substance remains constant whether it is together, in parts, or in different states. (P.5.A.5)

Content Standard **P5A** (continued) Students understand properties of objects and materials.				
Content Benchmark	Work at the **Emergent/ Developing** level may indicate ability to…	Work at the **Approaches** level may indicate ability to…	Work at the **Meets** level demonstrates ability to…	Work at the **Exceeds** level demonstrates ability to…
P.5.A.6 Students know materials are composed of parts that are too small to be seen without magnification.		explore how all materials are made up of smaller parts. (P.5.A.6)	explain how all materials are made up of smaller parts. (P.5.A.6)	identify parts of a material that can only be seen with magnification. (P.5.A.6) explain that all matter is made of tiny particles called atoms. (P.5.A.6)

Content Standard **P5B** Students understand that forces can change the positions and motion of an object.				
Content Benchmarks	Work at the **Emergent/ Developing** level may indicate ability to…	Work at the **Approaches** level may indicate ability to…	Work at the **Meets** level demonstrates ability to…	Work at the **Exceeds** level demonstrates ability to…
P.5.B.1 Students know that, when an unbalanced force is applied to an object, the object either speeds up, slows down, or goes in a different direction.	explore the ways an object's position and motion can be changed. (P.2.B.1, P.5.B.1, P.5.B.2)	demonstrate how an object's position and motion is changed when a push or pull is applied to the object. (P.2.B.1, P.5.B.1, P.5.B.2)	identify that unbalanced forces cause changes in an object's motion. (P.5.B.1)	predict the change in direction and speed of an object when force is applied. (P.5.B.1, P.5.B.2)
P.5.B.2 Students know how the strength of a force and mass of an object influence the amount of change in ad object's motion.	explore how objects move in different ways (e.g., straight line, zigzag, vibration, circular motion, fast/slow). (P.2.B.2, P.5.B.2)	describe how objects move in different ways (e.g., straight line, zigzag, vibration, circular motion, fast/slow). (P.2.B.2, P.5.B.2)	demonstrate that changes in an object's motion are dependent on its mass and the strength of the unbalanced force applied. (P.5.B.2)	
P.5.B.3 Students know a magnetic force causes certain kinds of objects to attract and repel each other.	explore magnets. (P.2.B.3, P.5.B.3)	use magnets to move some objects without touching them. (P.2.B.3, P.5.B.3)	identify materials and objects that can be attracted by magnetic forces. (P.5.B.3)	explain why some materials and objects are attracted by magnetic forces. (P.5.B.3)
P.5.B.4 Students know electrically charged particles can attract or repel other electrically charged material (e.g., static electricity).	explore how electrically charged materials can affect the position of some objects without touching them. (P.5.B.4)	use electrically charged materials to move some objects without touching them. (P.5.B.4)	predict what will happen when two electrically charged materials are moved together. (P.5.B.4)	explain how to determine whether electrically charged particles will repel or attract each other. (P.5.B.4)
P.5.B.5 Students know Earth's gravity pulls any object toward it without touching it.	demonstrate that things fall to the ground unless something holds them up. (P.2.B.4, P.5.B.5)	explain that things fall to the ground unless something holds them up. (P.2.B.4, P.5.B.5)	explain that gravity is the force that pulls any object toward Earth without touching that object. (P.5.B.5)	explain that gravitational force depends on the objects' masses and the distance between them. (P.5.B.5)

Content Standard **P5C** Students understand that energy exists in different forms.				
Content Benchmarks	Work at the **Emergent/ Developing** level may indicate ability to…	Work at the **Approaches** level may indicate ability to…	Work at the **Meets** level demonstrates ability to…	Work at the **Exceeds** level demonstrates ability to…
P.5.C.1 Students know light can be described in terms of simple properties (e.g., color, brightness, reflection). P.5.C.2 Students know the wave characteristics of sound.		explore different sources of light. (P.5.C.1)	identify simple properties of light (e.g., color, brightness, reflection). (P.5.C.1)	sequence the colors of light. (P.5.C.1) describe light in terms of its properties (e.g., color, brightness, reflection). (P.5.C.1)
	make sounds with objects. (P.2.C.1, P.5.C.2)	demonstrate that sound is produced by vibrating objects. (P.2.C.1, P.5.C.2)	explain that pitch and volume are characteristic of sound waves. (P.5.C.2) describe that sound travels through solids, liquids, and gases. (P.5.C.2)	describe how changing the medium affects the characteristics of a traveling sound wave. (P.5.C.2)
P.5.C.3 Students know heat is often produced as a byproduct when one form of energy is converted to another form (e.g., when machines and living organisms convert stored energy to motion).	identify that an object is either hot or cold. (P.2.C.2, P.5.C.3, P.5.C.4)	describe that an object is hot or cold compared to other objects. (P.2.C.2, P.5.C.3, P.5.C.4)	identify examples where heat is produced as a byproduct of energy conversion from one form to another. (P.5.C.3)	explain how heat is produced as a byproduct of energy conversions. (P.5.C.3)
P.5.C.4 Students know heat can move from one object to another by conduction, and some materials conduct heat better than others.		explore examples of heat moving from one object to another by conduction. (P.5.C.4)	describe examples of heat moving from one object to another by conduction. (P.5.C.4)	describe examples of heat moving from one object to another by conduction, convection, and radiation. (P.5.C.4)

Content Standard **P5C** (continued) Students understand that energy exists in different forms.				
Content Benchmarks	Work at the **Emergent/ Developing** level may indicate ability to…	Work at the **Approaches** level may indicate ability to…	Work at the **Meets** level demonstrates ability to…	Work at the **Exceeds** level demonstrates ability to…
P.5.C.5 Students know the organization of a simple electrical circuit (i.e., battery or generator, wire, a complete loop through which the electrical current can pass).	explore the organization of the components of an electrical circuit (i.e., battery or generator, wire, an electrical load, and a complete loop through which the electrical current can pass). (P.5.C.5)	identify complete electrical circuits (i.e., battery or generator, wire, an electrical load, and a complete loop through which the electrical current can pass). (P.5.C.5)	draw/label or construct a simple electrical circuit containing a battery or generator, wire, an electrical load (e.g., bulb), and a complete loop through which the electrical current can pass. (P.5.C.5)	demonstrate the use of an electrical circuit. (P.5.C.5)

Content Standard **L5A** Students understand that some characteristics are inherited and some are not.				
Content Benchmark	Work at the **Emergent/ Developing** level may indicate ability to…	Work at the **Approaches** level may indicate ability to…	Work at the **Meets** level demonstrates ability to…	Work at the **Exceeds** level demonstrates ability to…
L.5.A.1 Students know some physical characteristics and behaviors that are inherited in animals and plants.	recognize that animals and plants look like their parents. (L.2.A.1, L.5.A.1, L.5.A.2)	explain that animals and plants look like their parents, but can have some differences. (L.2.A.1, L.5.A.1, L.5.A.2)	identify inherited physical characteristics and behaviors in animals and plants. (L.5.A.1)	give examples of inherited physical characteristics and behaviors in animals and plants. (L.5.A.1)
L.5.A.2 students know reproduction is an essential characteristic for the continuation of every species.	describe differences among animals and plants. (L.2.A.2, L.5.A.3)	describe differences among individuals of the same kind of animal or plant. (L.2.A.2, L.5.A.3)	describe that reproduction is an essential characteristic for the continuation of every species. (L.5.A.2)	describe that there are different reproductive strategies employed by different organisms. (L.5.A.2)
L.5.A.3 Students know that, while offspring resemble their parents and each other, they also exhibit differences in characteristics.			explain that, while offspring resemble their parents and each other, they also exhibit differences in characteristics. (L.5.A.3)	give examples of how, while offspring resemble their parents and each other, they also exhibit differences in characteristics. (L.5.A.3)
L.5.A.4 Students know how to observe and describe variations among individuals within the human population.	recognize that individual humans are different from one another. (L.5.A.4)	identify variations among individuals within the human population. (L.5.A.4)	collect data to describe variations among individuals within the human population. (L.5.A.4)	quantify variations among individuals within the human population. (L.5.A.4)
L.5.A.5 Students know some animals behaviors are learned.	give examples of animal behaviors. (L.5.A.5)	recognize that some behaviors in animals are learned. (L.5.A.5)	identify examples of learned behaviors in animals. (L.5.A.5)	explain the difference between learned and inherited behaviors in animals. (L.5.A.5)

Content Standard **L5B** Students understand that living things have specialized structures that perform a variety of life functions.				
Content Benchmarks	Work at the **Emergent/ Developing** level may indicate ability to…	Work at the **Approaches** level may indicate ability to…	Work at the **Meets** level demonstrates ability to…	Work at the **Exceeds** level demonstrates ability to…
L.5.B.1 Students know plants and animals have structures that enable them to grow, reproduce, and survive.	examine plant and animal structures. (L.5.B.1)	draw and label plant and animal structures. (L.5.B.1)	match structures in plants and animals to their functions. (L.5.B.1)	compare and contrast structures in plants and animals that perform the same functions. (L.5.B.1)
L.5.B.2 Students know living things have predictable life cycles.	observe and record the life cycle stages of plants or animals (i.e., germination/birth; growth, adulthood, reproduction, and death). (L.5.B.2)	identify the life cycle stages of plants or animals (i.e., germination/birth; growth, adulthood, reproduction, and death). (L.5.B.2)	sequence the life cycle stages of plants or animals (i.e., germination/birth; growth, adulthood, reproduction, and death). (L.5.B.2)	compare the life cycles of different plants or animals. (L.5.B.2)

Content Standard **L5C** Students understand that there are a variety of ecosystems on Earth and organisms interact within their ecosystems.				
Content Benchmarks	Work at the **Emergent/ Developing** level may indicate ability to…	Work at the **Approaches** level may indicate ability to…	Work at the **Meets** level demonstrates ability to…	Work at the **Exceeds** level demonstrates ability to…
L.5.C.1 Students know the organization of simple food webs.	explain that plants and animals have needs. (L.2.C.1, L.5.C.1, L.5.C.3)	explain that plants and animals need certain resources for energy and growth. (L.2.C.1, L.5.C.1, L.5.C.2)	draw and label a simple food web containing a producer, first level consumers, second level consumers, and multiple pathways. (L.5.C.1)	create a diagram illustrating the transfer of matter and energy in a food web. (L.5.C.1)
	define a food web. (L.5.C.1)	identify components in a simple food web (i.e., producers, consumers, and pathways). (L.5.C.1)		describe the relationships among producers, consumers, and decomposers. (L.5.C.1, L.5.C.2)
L.5.C.2 Students know organisms interact with each other and with the non-living parts of their ecosystem.	recognize some of the characteristics of a habitat. (L.2.C.2, L.5.C.2, L.5.C.3)	describe the characteristics of a habitat (food, water, shelter, and space). (L.2.C.2, L.5.C.2, L.5.C.3)	explain how a given organism interacts with other organisms and the non-living parts of its ecosystem. (L.5.C.2)	give examples of how two or more different organisms interact with each other and within an ecosystem. (L.5.C.2)
L.5.C.3 Students know changes to an environment can be beneficial or detrimental to different organisms.	state that different plants and animals live in different places. (L.2.C.3, L.5.C.2, L.5.C.3, L.5.C.5)	name examples of changes in the environment. (L.5.C.3, L.5.C.4)	identify changes in the environment that are beneficial or detrimental. (L.5.C.3)	predict the beneficial and harmful results of a given change in the environment. (L.5.C.3)
L.5.C.4 Students know all organisms, including humans, can cause changes in their environments.	recognize that environments change. (L.5.C.3, L.5.C.4)		give examples of an organism causing change in the environment. (L.5.C.4)	predict environmental changes given the introduction or removal of a given organism. (L.5.C.4)

Content Standard **L5C** (continued) Students understand that there are a variety of ecosystems on Earth and organisms interact within their ecosystems.				
Content Benchmarks	Work at the **Emergent/ Developing** level may indicate ability to…	Work at the **Approaches** level may indicate ability to…	Work at the **Meets** level demonstrates ability to…	Work at the **Exceeds** level demonstrates ability to…
L.5.C.5 Students know plants and animals have adaptations allowing them to survive in specific ecosystems.		explain that plants and animals live everywhere in the world. (L.2.C.3, L.5.C.5)	identify common adaptations that allow organisms to survive in specific ecosystems. (L.5.C.5)	explain how an adaptation allows a given organism to survive in an ecosystem. (L.5.C.5)

Content Standard **L5D** Students understand that living things can be classified according to physical characteristics, behaviors, and habitats.				
Content Benchmarks	Work at the **Emergent/ Developing** level may indicate ability to…	Work at the **Approaches** level may indicate ability to…	Work at the **Meets** level demonstrates ability to…	Work at the **Exceeds** level demonstrates ability to…
L.5.D.1 Students know animals and plants can be classified according to their observable characteristics.	identify characteristics of plants and animals. (L.2.D.1, L.5.D.1)	sort plants and animals by observable characteristics and behaviors. (L.2.D.1, L.5.D.1)	classify animals and plants based on observable characteristics. (L.5.D.1)	classify organisms into species based upon their characteristics. (L.5.D.1)
L.5.D.2 Students know fossils are evidence of past life.	recognize that plants and animals die. (L.2.D.2, L.5.D.2)	explain that some plants and animals no longer live on Earth, and are never coming back. (L.2.D.2, L.5.D.2)	explain how fossils are evidence of past life. (L.5.D.2)	explain how fossils are evidence of extinct species. (L.5.D.2)
L.5.D.3 Students know differences among individuals within a species give them advantages and/or disadvantages in surviving and reproducing.	describe differences among animals and plants. (L.5.D.3)	identify differences among individuals within a species. (L.5.D.3)	contrast the differences among individuals within a species that give them advantages and/or disadvantages in surviving and reproducing. (L.5.D.3)	predict how differences among individuals within a species give them advantages and/or disadvantages in surviving and reproducing. (L.5.D.3)

Content Standard **E5A** Students understand the water cycle's relationship to weather.				
Content Benchmarks	Work at the **Emergent/ Developing** level may indicate ability to…	Work at the **Approaches** level may indicate ability to…	Work at the **Meets** level demonstrates ability to…	Work at the **Exceeds** level demonstrates ability to…
E.5.A.1 Students know that the Sun is the main source of energy for planet Earth.	state that the Sun provides light for Earth. (E.2.A.1, E.5.A.1) state that the Sun warms the land on Earth. (E.2.A.1, E.5.A.1) state that the Sun warms the water on Earth. (E.2.A.1, E.5.A.1)	explain that the Sun provides light and warms the land and water on Earth. (E.2.A.1, E.5.A.1)	explain that the Sun is the major source of energy for Earth. (E.5.A.1)	explain the seasons are caused by the variations in the Sun's energy reaching Earth due to the planet's axial tilt. (E.5.A.1)
E.5.A.2 Students know the processes of the water cycle, including the role of the Sun.	give an example of liquid water on Earth (rain, rivers, lakes, or oceans). (E.2.A.2, E.5.A.3) give an example of solid water on Earth (snow or ice). (E.2.A.2)	describe water on Earth as liquid (rain, rivers, lakes, oceans), or solid (snow and ice). (E.2.A.2, E.5.A.2, E.5.A.3) explain that ice can melt into water, and water can freeze into ice. (E.2.A.2, E.5.A.2) explore the processes of evaporation, condensation, and precipitation. (E.5.A.2)	draw and label the water cycle. (E.5.A.2) explain the processes (evaporation, condensation, and precipitation), including the role of the Sun, in the water cycle. (E.5.A.2)	evaluate the interactions between processes (evaporation, condensation, and precipitation) in the water cycle. (E.5.A.2)
E.5.A.3 Students know most of Earth's surface is covered with fresh or salt water.	explore the differences between fresh and salt water. (E.5.A.3) identify changes in daily weather. (E.2.A.3, E.2.A.4)	give an example of fresh water on Earth's surface. (E.5.A.3) give an example of salt water on Earth's surface. (E.5.A.3)	explain that most of Earth's surface is covered in fresh and salt water. (E.5.A.3)	

Content Standard **E5A** (continued) Students understand the water cycle's relationship to weather.				
Content Benchmarks	Work at the **Emergent/ Developing** level may indicate ability to…	Work at the **Approaches** level may indicate ability to…	Work at the **Meets** level demonstrates ability to…	Work at the **Exceeds** level demonstrates ability to…
E.5.A.4 Students know the role of water in many phenomena related to weather (e.g., thunderstorms, snowstorms, flooding, drought).	identify and list seasonal weather changes. (E.2.A.3, E.2.A.4)	name weather-related phenomena. (E.5.A.4, E.5.A.5)	describe water's role in many weather phenomena (e.g., thunderstorms, snowstorms, flooding, and drought). (E.5.A.4)	
E.5.A.5 Students know air is a substance that surrounds us, takes up space, and moves around us as wind.	explore properties of air. (E.5.A.5)	state that air is a substance that surrounds us, takes up space, and moves around us as wind. (E.5.A.5)	provide evidence to explain that air is a substance that surrounds us, takes up space, and moves around us as wind. (E.5.A.5)	describe that the Earth's atmosphere contains gases and particulate matter, and is mostly composed of nitrogen and oxygen. (E.5.A.5)

Content Standard **E5B** Students understand that there are many components in the solar system including Earth.				
E.5.B.1 Students know there are more stars than anyone can easily count, but they are not scattered evenly, and they are not all the same in brightness or color.	list objects in the sky. (E.2.B.1, E.5.B.1, E.5.B.2, E.5.B.3)	distinguish between various objects in the sky. (E.2.B.1, E.5.B.1, E.5.B.2, E.5.B.3)	describe that there are many more stars than can be seen by the unaided eye. (E.5.B.1) describe that stars have different colors and brightness. (E.5.B.1)	explain that the Milky Way galaxy contains billions of stars. (E.5.B.1) compare the brightness and color of the Sun to other stars. (E.5.B.1)
E.5.B.1 Students know the solar system included the Sun, planets, and moons.		identify Earth as one of several planets in the Solar System. (E.5.B.2)	explain that the Sun is the center of a system that contains planets and moons, which move around the Sun. (E.5.B.2, E.5.B.4)	create a scale model of our Solar System. (E.5.B.2)
E.5.B.3 Students know stars are like the Sun, but they are so far away that they look like points of light.		identify the Sun as a star. (E.5.B.3)	explain that stars other than the Sun are so far away that they appear as points of light. (E.5.B.3)	compare the characteristics of the Sun to those of other stars. (E.5.B.3) describe that our Solar System is a part of the Milky Way Galaxy, which can be seen as a glowing band of light spanning the clear night sky. (E.5.B.3)
E.5.B.4 Students know there are cyclical patterns of observable objects in the solar system.	state that the Sun appears to move across the sky every day. (E.2.B.2, E.5.B.4) state that the Moon appears to move across the sky. (E.2.B.2, E.5.B.4)	describe how the Sun and Moon appear to move across the sky. (E.2.B.3, E.5.B.4) record the cyclical pattern in the appearance of the Moon. (E.2.B.1, E.2.B.4, E.5.B.4)	record the cyclical patterns of the Sun and Moon (e.g., changes in the appearance of the Moon, changes in sunrise and sunset locations). (E.5.B.4)	explain how days, years, and phases of the moon occur. (E.5.B.4)

Content Standard **E5B** (continued) Students understand that there are many components in the solar system including Earth.				
Content Benchmarks	Work at the **Emergent/ Developing** level may indicate ability to…	Work at the **Approaches** level may indicate ability to…	Work at the **Meets** level demonstrates ability to…	Work at the **Exceeds** level demonstrates ability to…
E.5.B.5 Students know the patterns of stars in the sky stay the same (e.g., the constellations), although, they appear to move across the sky nightly, and different stars can be seen in different seasons.	observe patterns of stars. (E.5.B.5)	identify patterns of stars. (E.5.B.5) observe and record a pattern of stars over time. (E.5.B.5)	recognize how a given pattern of stars does not change, although it may appear in different parts of the sky in different seasons. (E.5.B.5)	explain why a given pattern of stars does not change, although it may appear in different parts of the sky in different seasons. (E.5.B.5)

Content Standard **E5C** Students understand that features on Earth's surface are constantly changed by a combination of slow and rapid processes.				
Content Benchmarks	Work at the **Emergent/ Developing** level may indicate ability to…	Work at the **Approaches** level may indicate ability to…	Work at the **Meets** level demonstrates ability to…	Work at the **Exceeds** level demonstrates ability to…
E.5.C.1 students know fossils are evidence of past life.	explore fossil formation. (E.5.C.1)	identify fossils in various Earth materials. (E.5.C.1)	describe how fossils are evidence of past life. (E.5.C.1)	compare and contrast fossils from different time periods. (E.5.C.1)
E.5.C.2 Students know water, wind, and ice constantly change the Earth's land surface by eroding rock and soil in some places and depositing them in other areas.	explore the different materials (rocks, soil, water) from which the Earth is made. (E.2.C.1, E.5.C.2)	explore how Earth's materials (rocks, soil, water) can be changed by water, wind, or ice. (E.2.C.1, E.5.C.2)	describe how water, wind, and ice constantly change the Earth's land surface by eroding rock and soil and depositing them in other places. (E.5.C.2)	create a diagram or model of how water, wind, and ice constantly change the Earth's land surface by eroding rock and soil and depositing them in other places. (E.5.C.2)
E.5.C.3 Students know landforms may result from slow processes (e.g., erosion, and deposition) and fast processes (e.g., volcanoes, earthquakes, landslides, flood, and human activity).	identify different landforms. (E.5.C.3)	explore changes in landforms. (E.5.C.3)	describe changes in landforms that result from both slow and fast geologic processes. (E.5.C.3)	create a diagram or model of different land forms that result from slow and fast geological processes. (E.5.C.3)
E.5.C.4 Students know rock is composed of different combinations of minerals. E.5.C.5 Students know soil varies from place to place and has both biological and mineral components.	identify properties of rocks and soils. (E.2.C.2, E.2.C.3, E.5.C.4, E.5.C.5)	sort rocks and soils according to size, shape, texture, and color. (E.2.C.2, E.2.C.3, E.5.C.4, E.5.C.5)	explain that rock is composed of different combinations of minerals. (E.5.C.4) describe the components of soil and how it varies from place to place. (E.5.C.5)	classify rocks and minerals according to their properties. (E.5.C.4) compare the properties of soils from different locations. (E.5.C.5) explain how soils are formed through weathering and decomposition. (E.5.C.5)