



Elementary School Teaching and Learning

2022-2023 Scope and Sequence

Science – Grade 4

LIFE SCIENCE

Units are not taught in the order listed. They are based on the Science Kit Rotation Schedule.

OVERVIEW

In this unit, students will learn ways environmental changes can be harmful or beneficial to an organism. They will learn how organisms adapt in order to survive. Students will also learn the importance of vitamins, minerals, and why exercise is essential to the body.

UNIT	UNIT DURATION	PARENT/FAMILY RESOURCES	NORTH CAROLINA STANDARDS
Ecosystems	Approximately 25 days	Habitat and Adaptation	<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>
Molecular Biology	Approximately 20 days	<p>Vitamins and Minerals</p> <p>My Plate</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. 4.L.2.2 Explain the role of vitamins and minerals, and exercise in maintaining a healthy body.</p>



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PHYSICAL SCIENCE Units are not taught in the order listed. They are based on the Science Kit Rotation Schedule.	OVERVIEW
	In Physical Science, students will use their learning to describe how forces affect an object, to classify rocks based on their formation, composition, and properties, and to identify the basic forms of energy and explain how they interact with matter.

UNIT	UNIT DURATION	PARENT/FAMILY RESOURCES	NORTH CAROLINA STANDARDS
Forces and Motion	Approximately 15 days	Magnetism Electricity	4.P.1 Explain how various forces affect the motion of an object. 4.P.1.1 Explain how magnets interact with all things made of iron and with other magnets to produce motion without touching them. 4.P.1.2 Explain how electrically charged objects push or pull on other electrically charged objects and produce motion.
Matter: Properties and Change	Approximately 15 days	Properties of Matter Minerals Rock Identification	4.P.2 Understand the composition and properties of matter before and after they undergo a change or interaction. 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). 4.P.2.2 Explain how minerals are identified using tests for the physical properties of hardness, color, luster, cleavage, and streak. 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.
Energy: Conservation and Transfer	Approximately 15 days	Light	4.P.3 Recognize that energy takes various forms that may be grouped based on their interaction with matter. 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. 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.



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Science – Grade 4

OVERVIEW

EARTH SCIENCE

Units are not taught in the order listed. They are based on the Science Kit Rotation Schedule.

In Earth Science, students will use their knowledge to explain how the rotation of the Earth causes day and night and to describe the phases of the moon. Students will also compare fossils and living organisms and explain changes in Earth over time.

UNIT	UNIT DURATION	PARENT/FAMILY RESOURCES	NORTH CAROLINA STANDARDS
Earth in the Universe	Approximately 20 days	A Day on Earth	<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>
Earth History	Approximately 25 days	<p>Fossils</p> <p>Weathering and Erosion</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. 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>