 

**5th Grade Standards**

**Science**

**Course Overview:** Students will be engaged in learning of four main areas of science. These units include: Life Science (the study of living things such as plants and animals), Physical Science (the study of elements, the properties of matter, mixtures, and reactions), Earth Science (the study of the Earth and how weathering, erosion, and deposition change the earth), Human Body (the study of the structure and function of the different systems of the body and how to achieve a healthy lifestyle through nutrition, exercise).

# Unit 1 Life Science (11 weeks)

**Description:** In this unit, students learn the characteristics of living things and how animals and plants are classified. Student discovers how organisms grow and reproduce and how traits are passed from one generation to the next.

Students also explore adaptations and discover adaptations that allow plants and animals to live in water and on land. Finally, students discover what makes up an ecosystem and describe how energy moves through an ecosystem.

# Standards

1. The students will learn how scientists classify living things into five kingdoms, how scientists divide the kingdoms into smaller groups, and why scientists sometimes change their ideas about classifying organisms. (A.8.1, F.8.2, F.8.3)
2. The students will learn how offspring inherit traits from their parents. (F.8.4, F.8.5)
3. The students will learn about adaptations that enable plants and animals to survive in water or on land. (F.8.7)
4. The students will learn how the living and nonliving parts of an ecosystem interact and how habitats, niches, populations, and communities are related. (F.8.7)

# Unit 2 Physical Science (10 weeks)

**Description:** In this unit, students learn about elements, molecules, compounds, mixtures and solutions, and the characteristics of physical and chemical changes of matter. Students discover how motion is measured and inertia, gravity, and friction affect motion. Students learn how kinetic and potential energy are related and explore the forms of energy used, including radiant energy and sound. Finally, students investigate how electricity moves and how it is used in the home.

# Standards

1. The students will explain that elements are the building blocks of matter and learn the structure of an atom. (D.8.1)
2. The students will describe how to measure the speed at which an object moves and explain the forces that effect motion. (D.8.5, D.8.6)
3. The students will identify how energy is classified into various forms and the ways that energy changes form when it is used. (D.8.8, D.8.9)
4. The students will analyze the movement of electrons. (D.8.8)

# Unit 3 Earth Science (11 weeks)

**Description:** In this unit, students explore the layers that make up the earth and discover how weathering, erosion, and deposition change the earth. Students identify water, land, and air as important resources of the earth. Students also learn about the water cycle and how land and water together affect and change climate. Finally, students discover that stars, planets, and other objects make up the solar system and investigate how scientists study the planets and stars.

# Standards

1. The students will explore the earth’s atmosphere, hydrosphere, and

lithosphere. (E.8.1, E.8.2, E.8.3, E.8.4)

1. The students will analyze the different resources present on the earth. (E.8.3, E.8.4, E.8.5, E.8.6)
2. The students will describe the different climates on planet earth. (E.8.1, E.8.3)
3. The students will explore the vast parts our solar system. (E.8.7, E.8.8)

# Unit 4 Human Body (4 weeks)

**Description:** In this unit, students learn about the structure and function of the respiratory system and excretory system. Students also learn about the causes, spread, and prevention of communicable diseases and how they can be treated. Finally, students learn how to achieve a healthy lifestyle through nutrition, exercise, and not using alcohol, tobacco, and drugs.

# Standards

1. The students will investigate the respiratory system. (F.8.1)
2. The students will construct what makes up a healthy lifestyle. (F.8.1)