

**Fourth Grade Standards**

**Science**

**Course Overview:** The course is divided into four main units. Life science, where the students will learn about plant structure and function, animal structure and function, energy in ecosystems, and surviving in the environment. Physical science, where the students will learn about measuring matter, force and motion, electricity and magnetism, and light and sound. Earth science, where the students will learn about measuring weather, the makeup up of the Earth, exploring the oceans, and movements in the solar system. Human Body, the students will study the Digestive, Circulatory, and Nervous Systems and keeping your body systems healthy.

**Unit 1 Life Science (45 Days)**

**Description:** Students learn how plants are classified and the parts of a flowering plant. Students learn the characteristics of animals without backbones and animals with backbones. Students describe the living and nonliving parts of an ecosystem and discover how energy is transferred within an ecosystem. Finally, students discover what adaptations and behaviors help animals and plants survive in a changing environment.

**Standards**

1. The students will learn how flowers make seeds and fruits. (F.4.1, F.4.2, F.4.3, F.4.4)
2. The students will learn how plants are grouped. (F.4.1, F.4.2, F.4.3,F.4.4)
3. The students will learn the life cycle of a flowering plant. (F.4.1, F.4.2, F.4.3,F.4.4)
4. The students will learn the parts of a flower. (F.4.1, F.4.2, F.4.3,F.4.4)
5. The students will learn how animals are alike and different. (F.4.1, F.4.2, F.4.3,F.4.4)
6. The students will learn about food chains and food webs. (F.4.1, F.4.2, F.4.3, F.4.4)
7. The students will learn how other living things get energy. (F.4.1, F.4.2, F.4.3, F.4.4)
8. The students will learn how plants get energy. (F.4.1, F.4.2, F.4.3, F.4.4)
9. The students will learn what an ecosystem is. (F.4.1, F.4.2, F.4.3, F.4.4)
10. The students will learn how changes in the environment affect survival. (F.4.1, F.4.2, F.4.3, F.4.4)
11. The students will learn if all animals and plants survive. (F.4.1, F.4.2, F.4.3, F.4.4)
12. The students will learn what behaviors help animals survive. (F.4.1, F.4.2, F.4.3, F.4.4)
13. The students what structures help plants and animals survive. (F.4.1, F.4.2, F.4.3, F.4.4)

**Unit 2 Physical Science (55 days)**

**Description:** In this Unit, students learn what matter is made of and how it can be measured. Students learn how work is defined and about the laws governing motion. Students investigate both electricity and magnetism and study how they affect matter. Finally, students learn how light and sound travel and how the human body sees light and hears sound.

**Standards**

1. The students will learn how length and volume are measured. (D.4.1, D.4.2, D.4.3, D.4.4, D.4.5, D.4.6, D.4.7, D.4.8)
2. The students will learn how to find mass and density. (D.4.1, D.4.2, D.4.3, D.4.4, D.4.5, D.4.6, D.4.7, D.4.8)
3. The students will learn what chemical changes are. (D.4.1, D.4.2, D.4.3, D.4.4, D.4.5, D.4.6, D.4.7, D.4.8)
4. The students will learn what matter is. (D.4.1, D.4.2, D.4.3, D.4.4, D.4.5, D.4.6, D.4.7, D.4.8)
5. The students will learn what physical changes are. (D.4.1, D.4.2, D.4.3, D.4.4, D.4.5, D.4.6, D.4.7, D.4.8)
6. The students will learn how energy affects motion. (D.4.1, D.4.2, D.4.3, D.4.4, D.4.5, D.4.6, D.4.7, D.4.8)
7. The students will learn how forces affect motion. (D.4.1, D.4.2, D.4.3, D.4.4, D.4.5, D.4.6, D.4.7, D.4.8)
8. The students will learn how work and motion are related. (D.4.1, D.4.2, D.4.3, D.4.4, D.4.5, D.4.6, D.4.7, D.4.8)
9. The students will learn how electric circuits work. (D.4.1, D.4.2, D.4.3, D.4.4, D.4.5, D.4.6, D.4.7, D.4.8)
10. The students will learn how electricity and magnetism work together. (D.4.1, D.4.2, D.4.3, D.4.4, D.4.5, D.4.6, D.4.7, D.4.8)
11. The students will learn what electric current is. (D.4.1, D.4.2, D.4.3, D.4.4, D.4.5, D.4.6, D.4.7, D.4.8)
12. The students will learn what magnetism is. (D.4.1, D.4.2, D.4.3, D.4.4, D.4.5, D.4.6, D.4.7, D.4.8)
13. The students will learn how travels. (D.4.1, D.4.2, D.4.3, D.4.4, D.4.5, D.4.6, D.4.7, D.4.8)
14. The students will learn how sounds are heard. (D.4.1, D.4.2, D.4.3, D.4.4, D.4.5, D.4.6, D.4.7, D.4.8)
15. The students will learn how sounds are heard. (D.4.1, D.4.2, D.4.3, D.4.4, D.4.5, D.4.6, D.4.7, D.4.8)
16. The students will learn what happens when light an object. (D.4.1, D.4.2, D.4.3, D.4.4, D.4.5, D.4.6, D.4.7, D.4.8)
17. The students will learn what light is. (D.4.1, D.4.2, D.4.3, D.4.4, D.4.5, D.4.6, D.4.7, D.4.8)

**Unit 3 Earth Science (50 days)**

**Description:** Students discover how to measure and predict weather and identify landforms. They learn how volcanoes, earthquakes, weathering, and erosion affect earth's features. Students investigate the characteristics of the ocean and learn about plants and animals that live in aquatic environments. Finally, students compare Earth with other planets of the solar system.

**Standards**

1. The students will learn how meteorologists predict weather. (E.4.1, E.4.2, E.4.3, E.4.5)
2. The students will learn how sunlight affects air temperature. (E.4.1, E.4.2, E.4.3, E.4.5)
3. The students will learn how temperature affects air movement. (E.4.1, E.4.2, E.4.3, E.4.5)
4. The students will learn what causes clouds and precipitation. (E.4.1, E.4.2, E.4.3, E.4.5)
5. The students will learn how weathering and erosion affect the Earth’s features. (E.4.1, E.4.2, E.4.3)
6. The students will learn what materials make up the Earth’s features. (E.4.1, E.4.2, E.4.3)
7. The students will learn what resources are found on the Earth. (E.4.1, E.4.2, E.4.3)
8. The students will learn what the Earth’s surface is like. (E.4.1, E.4.2, E.4.3)
9. The students will learn how ocean water moves. (E.4.1, E.4.2, E.4.3)
10. The students will learn how people map the ocean floor. (E.4.1, E.4.2, E.4.3)
11. The students will learn how scientists can explore the ocean depths. (E.4.1, E.4.2, E.4.3)
12. The students will learn where organisms live in the ocean. (E.4.1, E.4.2, E.4.3)
13. The students will learn how Earth compares with other planets. (E.4.4, E.4.6)
14. The students will learn the effects of Earth’s movements. (E.4.4, E.4.6)
15. The students will learn the effects of the moon’s movements. (E.4.4, E.4.6)
16. The students will learn what other objects are seen in the solar system. (E.4.4, E.4.6)
17. The students will learn what scientists have learned about distant planets. (E.4.4, E.4.6)

**Unit 4 Human Body (45 days)**

**Description:** In this unit, students learn about the structure and function of the digestive, circulatory, and nervous systems. They also discover how to keep the digestive system, the circulatory system, and nervous system healthy.

**Standards**

1. The students will learn how the circulatory system works. (F.8.1)
2. The students will learn how the digestive system works. (F.8.1)
3. The students will learn how the nervous system works. (F.8.1)
4. The students will learn how to keep their circulatory system healthy. (F.8.1)
5. The students will learn how to keep their digestive system healthy. (F.8.1)
6. The students will learn how to keep their nervous system healthy. (F.8.1)
7. The students will be aware of the effects of alcohol. (F.8.1)
8. The students will be aware of the effects of tobacco. (F.8.1)
9. The students will learn how to read food labels. (F.8.1)
10. The students will learn the benefits of exercise. (F.8.1)