

Science Curriculum - Grade 3

GRADE THREE ESSENTIAL SKILLS

- **Content Skills-** Students will demonstrate an understanding of the characteristics of vertebrates and their adaptations for survival in various environments. Students will understand the basic characteristics of sound. Students will understand the different properties of rocks and minerals; and how those properties determine their use.
- **Process Skills/Scientific Method** –Children will use the scientific method in our inquiry-based activities in all grade levels and content areas in the science curriculum. Students will use appropriate measurement units, observe, describe, read and create graphs/tables to construct explanations, predict, sort, categorize, record, develop scales, introduce and conduct an experiment isolating one variable
- **Scientific Technology & Tools** – Students will use appropriate tools, technology, and techniques to gather, analyze, interpret, and share data. (computers, rulers, magnifying glasses, microscopes, balance scales, prisms, and safety goggles)
- **Science Safety-** Students will follow safety instructions, directions, and use appropriate safety equipment.

LIFE SCIENCE CONTENT

Vertebrate Study

- Students will list the requirements that all vertebrates have to sustain life (food, water, air and shelter)
- Students will explain the physical characteristics of vertebrates
- Students will be able to list and give examples of five families of vertebrates(fish, reptiles, amphibians, mammals, and birds)
- Students will explain in their own words with or without visuals the difference between vertebrates and invertebrates
- Identify various adaptations and how they affect animal survival

EARTH/SPACE SCIENCE CONTENT

Rocks and Minerals – STC

- Students will explain in their own words, with or without visuals, how the three types of rocks were formed (metamorphic, igneous and sedimentary)
- Students will observe and discuss the cause/effect relationship between the natural forces (weathering, erosion, heat, & pressure) and rocks
- Students will use their senses to observe the different properties of rocks and minerals (such as: color, texture, smell, luster, transparency, hardness, shape and reaction to magnets) and categorize their observations through charting
- By investigating the everyday uses of rocks and minerals, students will explain how their properties determine how they are used (e.g. toothpaste, sandpaper, vitamins, granite foundations)

PHYSICAL SCIENCE CONTENT

Sound - STC

- Students will produce sounds by causing several types of objects to vibrate
- Students will explore and discuss that sound is changed when it travels through different materials
- Through investigations, students will demonstrate that changes in frequency and amplitude of vibration change the pitch and volume of sound.
- Students will explore, discuss, and explain in their own words, with or without visuals, the effects of sound on living objects in the environment
- Students will demonstrate that sound is produced when objects vibrate and cause movement of the nearby environment, in the form of wave motion.