SCIENCE

GRADE 7

Seventh grade continues the theme of energy and energy transformation from sixth grade by examining geologic events such as volcanoes, earthquakes, and mountain building. They spend a portion of the year exploring interdependence among living things, heredity, and reproduction.

Quarter 1	**Nature of Science** ☐ Asking questions and defining problems ☐ Developing and using models ☐ Planning and carrying out investigations ☐ Analyzing and interpreting data ☐ Using mathematics and computational thinking ☐ Constructing explanations and designing solutions ☐ Engaging in scientific argument from evidence ☐ Obtaining, evaluating, and communicating information ☐ Describe the methods in which scientists gather their empirical evidence to support their claim ☐ Understand the impact different variables have on the outcome of an investigation or experiment ☐ Explain how empirical evidence is used to explain science
Quarter 2	**Physical Science** ☐ Explore how the sun's energy emits a wide range of different types of energy such as light ☐ Explore how light can be reflected, refracted, and absorbed and how it moves at different speeds ☐ Investigate the transformation of energy ☐ Cite evidence of the Law of Conservation of Energy ☐ Investigate heat exchange and how it could change the physical nature of an object ☐ Observe and describe how heat moves in predictable ways ☐ Understand the relationship among organisms and how the energy is transferred between organisms

Quarter 3	**Earth Science** ☐ Examine the layers of the Earth by using scientific models ☐ Identify patterns of the rock cycle and relate them to surface events ☐ Explore the theory of plate tectonics ☐ Investigate how movement of materials within the Earth causes earthquakes and volcanic eruptions, and creates mountains and ocean basins ☐ Explore how the age of the Earth is measured ☐ Use evidence to examine how the Earth has evolved over geologic time ☐ Investigate the impact humans have had on the Earth ☐ Explore the different levels of organizations in an environment
Quarter 4	**Life Science** ☐ Investigate how limiting factors impact native populations in an ecosystem ☐ Explore how traits are inherited ☐ Describe how traits are passed on through sexual and asexual reproduction ☐ Explore the impact of biotechnology (cloning, genetic engineering, etc.) ☐ Use evidence to examine how living things evolved from earlier species ☐ Explore how genetic variation and environmental factors contribute to evolution by natural selection and diversity of living things