

FIFTH GRADE SCIENCE

Science and Engineering Practices

- Asking Questions or 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 Argument from Evidence
- Obtaining, Evaluating, and Communicating Information

Characteristics and Interaction of Earth's Systems: Analyze and interpret data about Earth's major systems and how they interact.

- Analyze and interpret data to describe patterns of Earth's features
- Use mathematics and computational thinking to compare the quantity of saltwater and freshwater in various reservoirs to provide evidence for the distribution of water on Earth
- Ask questions to plan and carry out investigations that provide evidence for the effects of weathering and the rate of erosion on the geosphere
- Develop a model to describe interactions between Earth's systems including the geosphere, biosphere, hydrosphere, and/or atmosphere
- Design solutions to reduce the effects of naturally occurring events that impact humans

Properties and Changes of Matter: Plan and carry out investigations to explain the properties of matter and to determine if new substances form when matter is combined.

- Develop and use a model to describe that matter is made of particles on a scale that is too small to be seen
- Ask questions to plan and carry out investigations to identify substances based on patterns of their properties
- Plan and carry out investigations to determine the effect of combining two or more substances
- Use mathematics and computational thinking to provide evidence that regardless of the type of change that occurs when heating, cooling, or combining substances, the total weight of matter is conserved

Cycling of Matter in Ecosystems: Construct explanations for how matter cycles and energy flows through environments and Earth's systems.

- Construct an explanation that plants use air, water, and energy from sunlight to produce plant matter needed for growth
- Obtain, evaluate, and communicate information that animals obtain energy and matter from the food they eat for body repair, growth, and motion and to maintain body warmth
- Develop and use a model to describe the movement of matter among plants, animals, decomposers, and the environment
- Evaluate design solutions whose primary function is to conserve Earth's environments and resources

