

SCIENCE – First Grade

Scientific Investigation, Reasoning, and Logic

- 1.1 The student will demonstrate an understanding of scientific reasoning, logic, and the nature of science by planning and conducting investigations in which
- the senses are used to observe differences in physical properties;
 - observations are made from multiple positions to achieve a variety of perspectives and are repeated to ensure accuracy;
 - objects or events are classified and arranged according to characteristics or properties;
 - simple tools are used to enhance observations;
 - length, mass, volume, and temperature are measured using nonstandard units;
 - inferences are made and conclusions are drawn about familiar objects and events;
 - a question is developed from one or more observations;
 - predictions are made based on patterns of observations;
 - observations and data are recorded, analyzed, and communicated orally and with simple graphs, pictures, written statements, and numbers; and
 - simple investigations and experiments are conducted to answer questions.

Force, Motion, and Energy

- 1.2 The student will investigate and understand that moving objects exhibit different kinds of motion. Key concepts include
- objects may have straight, circular, and back-and-forth motions;
 - objects may vibrate and produce sound; and
 - pushes or pulls can change the movement of an object.

Matter

- 1.3 The student will investigate and understand how different common materials interact with water. Key concepts include
- some liquids will separate when mixed with water, but others will not;
 - some solids will dissolve in water, but others will not; and
 - some substances will dissolve more readily in hot water than in cold water.

Life Processes

- 1.4 The student will investigate and understand that plants have basic life needs and functional parts and can be classified according to certain characteristics. Key concepts include
- plants need nutrients, air, water, light, and a place to grow;
 - basic parts of plants; and
 - plants can be classified based on a variety of characteristics.
- 1.5 The student will investigate and understand that animals, including humans, have basic needs and certain distinguishing characteristics. Key concepts include
- basic needs include adequate air, food, water, shelter, and space (habitat);
 - animals, including humans, have many different physical characteristics; and
 - animals can be classified according to a variety of characteristics.

Interrelationships in Earth/Space Systems

- 1.6 The student will investigate and understand the basic relationships between the sun and Earth. Key concepts include
- the sun is the source of energy and light that warms the land, air, and water; and
 - the sun's relative position in the morning is east and in the late afternoon is west.

Earth Patterns, Cycles, and Change

- 1.7 The student will investigate and understand weather and seasonal changes. Key concepts include
- changes in temperature, light, and precipitation affect plants and animals, including humans;
 - there are relationships between daily and seasonal changes; and
 - changes in temperature, light, and precipitation can be observed and recorded over time.

Earth Resources

- 1.8 The student will investigate and understand that natural resources are limited. Key concepts include
- identification of natural resources;
 - factors that affect air and water quality; and
 - recycling, reusing, and reducing consumption of natural resources.