

SCIENCE – Second Grade

Scientific Investigation, Reasoning, and Logic

- 2.1 The student will demonstrate an understanding of scientific reasoning, logic, and the nature of science by planning and conducting investigations in which
- observations and predictions are made and questions are formed;
 - observations are differentiated from personal interpretation;
 - observations are repeated to ensure accuracy;
 - two or more characteristics or properties are used to classify items;
 - length, volume, mass, and temperature are measured in metric units and standard English units using the proper tools;
 - time is measured using the proper tools;
 - conditions that influence a change are identified and inferences are made;
 - data are collected and recorded, and bar graphs are constructed using numbered axes;
 - data are analyzed, and unexpected or unusual quantitative data are recognized;
 - conclusions are drawn;
 - observations and data are communicated;
 - simple physical models are designed and constructed to clarify explanations and show relationships; and
 - current applications are used to reinforce science concepts.

Force, Motion, and Energy

- 2.2 The student will investigate and understand that natural and artificial magnets have certain characteristics and attract specific types of metals. Key concepts include
- magnetism, iron, magnetic/nonmagnetic, poles, attract/repel; and
 - important applications of magnetism.

Matter

- 2.3 The student will investigate and understand basic properties of solids, liquids, and gases. Key concepts include
- identification of distinguishing characteristics of solids, liquids, and gases;
 - measurement of the mass and volume of solids and liquids; and
 - changes in phases of matter with the addition or removal of energy.

Life Processes

- 2.4 The student will investigate and understand that plants and animals undergo a series of orderly

changes as they mature and grow. Key concepts include

- animal life cycles; and
- plant life cycles.

Living Systems

- 2.5 The student will investigate and understand that living things are part of a system. Key concepts include
- living organisms are interdependent with their living and nonliving surroundings;
 - an animal's habitat includes adequate food, water, shelter or cover, and space;
 - habitats change over time due to many influences; and
 - fossils provide information about living systems that were on Earth years ago.

Interrelationships in Earth/Space Systems

- 2.6 The student will investigate and understand basic types, changes, and patterns of weather. Key concepts include
- identification of common storms and other weather phenomena;
 - the uses and importance of measuring, recording, and interpreting weather data; and
 - the uses and importance of tracking weather data over time.

Earth Patterns, Cycles, and Change

- 2.7 The student will investigate and understand that weather and seasonal changes affect plants, animals, and their surroundings. Key concepts include
- effects of weather and seasonal changes on the growth and behavior of living things; and
 - weathering and erosion of land surfaces.

Earth Resources

- 2.8 The student will investigate and understand that plants produce oxygen and food, are a source of useful products, and provide benefits in nature. Key concepts include
- important plant products are identified and classified;
 - the availability of plant products affects the development of a geographic area;
 - plants provide oxygen, homes, and food for many animals; and
 - plants can help reduce erosion.