

Shenandoah Community School District
Science
Grade - 2

2.1 Earth and Space

2.1.1 (SCSD) Understand and apply knowledge of properties of earth materials (D, M)

- Know earth materials (have different physical and chemical properties) (M)
 - Solid rocks (M)
 - Soils (M)
 - Water (M)
 - Gases of the atmosphere (M)
- Know that soils have properties (M)
 - Color (M)
 - Texture (M)
 - Capacity to retain water (M)
 - Ability to support the growth of many kinds of plants (M)
- Know that Earth has a variety of landforms (M)
 - Rivers (M)
 - Oceans (M)
 - Mountains (M)
 - Valleys (M)
- Know the meaning of a natural resource (M)
- Know that Earth has natural resources that are important for life, but are limited (M)
 - Soil (M)
 - Water (M)
 - Air (M)
 - Plants (M)
 - Animals (M)
- Know the ways to take care of Earth's natural resources (D,M)
- Know the ways that people use rocks and minerals (D,M)
 - There are a wide variety of rocks/minerals with different properties (D, M)

2.1.2 (SCSD) Understand and apply knowledge of observable information about daily and seasonal weather conditions (M)

- Know that Earth has a variety of weather conditions (M)
 - Weather changes from day to day and over the seasons (M)
- Know that the sun provides the light and heat necessary to maintain the temperature of the earth (M)

2.1.3 (SCSD) Understand and apply knowledge of events that have repeating patterns (M)

- Know that the seasons of the year, day and night are events that are repeated in regular patterns (M)
- Know that the sun's position in the sky can be observed and described (M)
- Know that the sun can only be seen during our daylight hours (M)
 - We cannot see the sun at night because of the rotation of the earth (M)

2.2 Life Science

2.2.1 (SCSD) Understand and apply knowledge of the characteristics of living things and how living things are both similar to and different from each other and from non-living things (M)

- Know that living things share some common characteristics (M)
 - Identify living/nonliving things (M)
 - Identify what living things need (M)
 - Observe characteristics of living things (M)
- Know that different species of plants and animals have different observable characteristics by which they can be classified (M)
 - Plants (M)
 - Identify and observe plants/ and parts of plants (M)
 - Animals (M)
 - Identify and observe animals (M)
- Knows that all things are classified as living or non-living (M)

2.2.2 (SCSD) Understand and apply knowledge of life cycles of plants and animals (M)

- Know that plants and animals have life cycles (M)
 - Being born (M)
 - Developing into adults (M)
 - Reproducing (M)
 - Dying (M)
- Know that plants and animals closely resemble their parents (M)

2.2.3 (SCSD) Understand and apply knowledge of the basic needs of plants and animals and how they interact with each other and their physical environment (M)

- Know that organisms have basic needs (M)
 - Air (M)
 - Water (M)
 - Food (nutrients)(M)
 - Light(M)
- Know that organisms interact with each other and their physical environment (M)
- Know that organisms survive only in environments in which their needs can be met (M)
- Know that the world has many different environments (M)
 - Distinct environments support the life of different types of organisms (M)

2.2.4 (SCSD) Understand and apply knowledge of ways to help take care of the environment. (M)

- Know that humans depend on their natural and constructed environments (M)
- Know that humans change environments in ways that can be either beneficial or detrimental to themselves or other organisms (M)

2.2.5 (SCSD) Understand and apply knowledge of basic human body structures (M)

- Know that humans have distinct body structures for functions (M)
 - Thinking (M)
 - Walking (M)
 - Holding (M)
 - Seeing (M)
 - Talking (M)

2.2.6 (SCSD) Understand and apply knowledge of good health habits (M)

- Know and demonstrate good health practices (M)

- Know and demonstrate good social skills (M)
- Know and demonstrate good decision making skills (M)
- Know and identify positive safety procedures (M)
- Know and practice healthy behaviors and physical activities (M)

2.3 Physical Science

2.3.1 (SCSD) Understand and apply knowledge of observable and measurable properties of objects (M)

- Know that the five senses are used to gather information about the world (M)
- Know that objects have many observable properties (M)
 - Size (M)
 - Weight (mass) (M)
 - Shape (M)
 - Color (M)
 - Temperature (M)
 - Ability to react with other substances (M)
- Know that properties can be measured by using tools (M)
 - Rulers (M)
 - Balances (M)
 - Thermometers (M)
- Know that objects are made of one or more materials (matter) (M)
- Know that objects can be described by the properties from which they are made (M)
 - Properties can be used to
 - Separate (M)
 - Sort (M)

2.3.2 (SCSD) Understand and apply knowledge of characteristics of liquids and solids (M)

- Know that materials can exist in different states (M)
 - Solid (M)
 - Liquid (M)
 - Gas (M)
- Know that some common materials can be changed from one state to another by heating and cooling (M)
 - Water (M)

2.3.3 (SCSD) Understand and apply knowledge of the positions and motions of objects (M)

- Know that the position of an object can be described by location it relative to its background (M)
 - Identify positions (M)
- Know that non-living things, objects, can not move without an outside force (M)
- Know that forces move objects in various ways (M)
- Know that an object's motion can be described by observing and measuring its position over time (M)
 - Identify types of motion
 - Rotary-around and around (circular) (M)
 - Linear-moving in one direction (M)
 - Vibratory-back and forth (oscillating)(M)
- Know that an object's position or movement can change (M)
 - Identify things that move and their types of motions (M)
- Know that non-living things, objects, can not move without an outside force (M)

- Pushing and pulling (M)
- Slide and roll (M)
- Wheels/pulley (M)
- Magnets (M)
- Float/sink (M)

2.4 (SCSD) Science as Inquiry

2.4.1 (SCSD) Ask questions about objects, organisms, and events in the environment (M)

- Know that they should answer their questions by seeking information (M)
 - Observations (M)
 - Investigations (M)
 - Reliable sources of scientific information (M)

2.4.2 (SCSD) Plan and conduct simple investigations (M)

- Know how to observe and conduct simple investigations to questions (M)
- Know how to follow safety procedures when conducting investigations (M)

2.4.3 (SCSD) Uses tools to gather data and extend the senses (D, M)

- Know how to use tools (M)
 - Rulers (M)
 - Thermometers (M)
 - Watches (M)
 - Balances (M)
 - Spring scales (M)
 - Magnifiers (M)
 - Microscopes ((D,M)

2.4.4 (SCSD) Use mathematics in scientific inquiry (M)

- Know how to use mathematics (M)
 - Gather simple data (M)
 - Organize simple data (M)
 - Present simple data (M)
 - Develop simple explanations (M)

2.4.5 (SCSD) Use data to construct reasonable explanations (M)

- Know what is evidence (M)
- Know how to explain the evidence they have obtained(M)

2.4.6 (SCSD) Communicate investigation and explanations (M)

- Know that scientific information can be gathered and shared with others (M)
- Develop the abilities with their work or others (M)
 - To communicate (M)
 - Orally (M)
 - Writing (M)
 - Drawing (M)
 - To judge (M)(Student does an observation, experiment, or investigation and determines the results).
 - To study relationships (M)

2.4.7(SCSD) Know how to follow appropriate safety procedures when conducting investigations (M)