

**Shenandoah Community School District**  
**Science**  
Grade - 1

**1.1 Earth and Space**

**1.1.1 (SCSD) Understand and apply knowledge of properties of earth materials (I, D)**

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

**1.1.2 (SCSD) Understand and apply knowledge of observable information about daily and seasonal weather conditions (D)**

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

**1.1.3 (SCSD) Understand and apply knowledge of events that have repeating patterns (D)**

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

## **1.2 Life Science**

### **1.2.1 (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 (D)**

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

### **1.2.2 (SCSD) Understand and apply knowledge of life cycles of plants and animals (D)**

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

### **1.2.3 (SCSD) Understand and apply knowledge of the basic needs of plants and animals and how they interact with each other and their physical environment (D, 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 (D)
- Know that organisms survive only in environments in which their needs can be met (D)
- Know that the world has many different environments (D)
  - Distinct environments support the life of different types of organisms (D)

### **1.2.4 (SCSD) Understand and apply knowledge of ways to help take care of the environment (D)**

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

### **1.2.5 (SCSD) Understand and apply knowledge of basic human body structures (D)**

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

### **1.2.6 (SCSD) Understand and apply knowledge of good health habits (D)**

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

## **1.3 Physical Science**

### **1.3.1 (SCSD) Understand and apply knowledge of observable and measurable properties of objects (D, M)**

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

### **1.3.2 (SCSD) Understand and apply knowledge of characteristics of liquids and solids (D)**

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

### **1.3.3 (SCSD) Understand and apply knowledge of the positions and motions of objects (D)**

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

- Wheels/pulley (D)
- Magnets (D)
- Float/sink (D)

## **1.4 (SCSD) Science as Inquiry**

### **1.4.1 (SCSD) Ask questions about objects, organisms, and events in the environment (D)**

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

### **1.4.2 (SCSD) Plan and conduct simple investigations (D)**

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

### **1.4.3 (SCSD) Use tools to gather data and extend the senses (I, D)**

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

### **1.4.4 (SCSD) Use mathematics in scientific inquiry (D)**

- Know how to use mathematics (D)
  - Gather simple data (D)
  - Organize simple data (D)
  - Present simple data (D)
  - Develop simple explanation (D)s

### **1.4.5 (SCSD) Use data to construct reasonable explanations (D)**

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

### **1.4.6 (SCSD) Communicate investigation and explanations (D)**

- Know that scientific information can be gathered and shared with others (D)
- Develop the abilities with their work or others (D)
  - To communicate (D)
    - Orally (D)
    - Writing (D)
    - Drawing (D)
  - To judge (D)
  - To study relationships (D)

### **1.4.7(SCSD) Know how to follow appropriate safety procedures when conducting investigations (D)**