St. Raphael the Archangel
Science
2nd Grade 2017-2018

Learning Goals- Students will:

Matter and Energy

1. **Describe and compare the physical properties of objects by using simple tools (i.e., thermometer, magnifier, centimeter ruler, balance, magnet).**
2. **Describe different ways to change the pitch of a sound (i.e., changes in size, such as length or thickness, and in tightness/tension of the source).**
3. **Describe how to change the loudness of a sound (i.e., increase or decrease the force causing vibrations).**

Force and Motion

1. **Describe Earth's gravity as a force that pulls objects on or near the Earth toward the Earth without touching the object.**
2. **Describe and compare the distances traveled by heavier/lighter objects after applying the same amount of force (i.e., push or pull) in the same direction.**
3. **Describe and compare the distances traveled by objects with the same mass after applying different amounts of force (i.e., push or pull) in the same direction.**
4. **Describe magnetism as a force that can push or pull other objects without touching them.**
5. **Identify magnets that attract and repel each other.**

Living Organisms

1. **Identify and relate the similarities and differences among animal parents and their offspring or multiple offspring.**
2. **Identify and sequence life cycles (birth, growth, and development, reproduction and death) of animals (i.e, butterfly, frog, chicken, fish, dog).**
3. **Record observations on the characteristics of different animals (e.g., butterfly, dog, frog, chicken, fish).**
4. **Sequence the flow of energy through a food chain beginning with the Sun.**
5. **Identify the major organs (roots, stems, flowers, leaves) and their functions in vascular plants (e.g., absorption, transport, reproduction).**

Earth's Systems

1. **Observe and describe the physical properties of rocks (e.g., size, shape, color, presence of fossils).**
2. **Observe and describe ways humans use natural resources in daily life.**
3. **Observe and identify examples of slow changes in the Earth's surface and surface materials (e.g., rock, soil layers) due to processes such as decay (rotting), freezing, thawing, breaking, or wearing away by running water or wind.**

Scientific Inquiry

1. **Compare explanations with prior knowledge.**
2. **Make qualitative observations using the five senses.**
3. **Measure length, mass, and temperature using standard and nonstandard units**
4. **Plan and conduct a simple investigation (fair test) to answer a question.**
5. **Pose questions about objects, materials, organisms and events in the environment.**
6. **Use observations as support for reasonable explanations.**

Science, Technology, and Human Activity

1. **Describe how tools have helped scientists make better observations, measurements, or equipment for investigations (e.g., magnifiers, balances, stethoscopes, thermometers).**
2. **Design and construct a musical instrument using materials (e.g., cardboard, wood, plastic, metal) and/or existing objects (e.g., toy wheels, gears, boxes, sticks) that can be used to perform a task.**