

# 1<sup>st</sup> Grade– Science

## **CONTENT: Earth and Space Sciences**

<b>Skills Based on Academic Content Standards</b>
Identify that resources are things that we get from the living (e.g., forests) and nonliving (e.g., minerals, water) environment and that resources are necessary to meet the needs and wants of a population.
Explain that the supply of many resources is limited but the supply can be extended through careful use, decreased use, reusing and/or recycling.
Explain that all organisms cause changes in the environment where they live; the changes can be very noticeable or slightly noticeable, fast or slow (e.g., spread of grass cover slowing soil erosion, tree roots slowly breaking sidewalks).

## **CONTENT: Life Sciences**

<b>Skills Based on Academic Content Standards</b>
Explore that organisms, including people, have basic needs which include air, water, food, living space and shelter.
Explain that food comes from sources other than grocery stores (e.g., farm crops, farm animals, oceans, lakes and forests).
Explore that humans and other animals have body parts that help to seek, find and take in food when they are hungry (e.g., sharp teeth, flat teeth, good nose and sharp vision).
Investigate that animals eat plants and/or other animals for food and may also use plants or other animals for shelter and nesting.
Recognize that seasonal changes can influence the health, survival or activities of organisms.

## **CONTENT: Physical Sciences**

<b>Skills Based on Academic Content Standards</b>
Classify objects according to the materials they are made of and their physical properties.
Investigate that water can change from liquid to solid or solid to liquid.
Explore and observe that things can be done to materials to change their properties (e.g., heating, freezing, mixing, cutting, wetting, dissolving, bending and exposing to light).
Explore changes that greatly change the properties of an object (e.g., burning paper) and changes that leave the properties largely unchanged (e.g., tearing paper).
Explore the effects some objects have on others even when the two objects might not touch (e.g., magnets).
Investigate a variety of ways to make things move and what causes them to change speed, direction and/or stop.
Explore how energy makes things work (e.g., batteries in a toy and electricity turning fan blades).
Recognize that the sun is an energy source that warms the land, air and water.
Describe that energy can be obtained from many sources in many ways (e.g., food, gasoline, electricity or batteries).

## **CONTENT: Science and Technology**

<b>Skills Based on Academic Content Standards</b>
Explore that some kinds of materials are better suited than others for making something new (e.g., the building materials used in the Three Little Pigs).
Explain that when trying to build something or get something to work better, it helps to follow directions and ask someone who has done it before.
Identify some materials that can be saved for community recycling projects (e.g., newspapers, glass and aluminum).
Explore ways people use energy to cook their food and warm their homes (e.g., wood, coal, natural gas and electricity).
Identify how people can save energy by turning things off when they are not using them (e.g., lights and motors).
Investigate that tools are used to help make things and some things cannot be made without tools.
Explore that several steps are usually needed to make things (e.g., building with blocks).
Investigate that when parts are put together they can do things that they could not do by themselves (e.g., blocks, gears and wheels).

## **CONTENT: Scientific Inquiry**

<b>Skills Based on Academic Content Standards</b>
Ask "what happens when" questions.
Explore and pursue student-generated "what happens when" questions.
Use appropriate safety procedures when completing scientific investigations.
Work in a small group to complete an investigation and then share findings with others.
Create individual conclusions about group findings.
Use appropriate tools and simple equipment/instruments to safely gather scientific data (e.g., magnifiers, timers and simple balances and other appropriate tools).
Make estimates to compare familiar lengths, weights and time intervals.
Use oral, written and pictorial representation to communicate work.
Describe things as accurately as possible and compare with the observations of others.

## **CONTENT: Scientific Ways of Knowing**

<b>Skills Based on Academic Content Standards</b>
Discover that when a science investigation is done the same way multiple times, one can expect to get very similar results each time it is performed.
Demonstrate good explanations based on evidence from investigations and observations.
Explain that everybody can do science, invent things and have scientific ideas no matter where they live.

