

# 3RD GRADE SCIENCE

Students should be able to:

## Inquiry

- Classify objects by two of their properties (attributes)
- Classify objects or events in sequential order
- Generate questions such as “What if?” or “How?” about objects, organisms, and events in the environment and use those questions to conduct a simple scientific investigation
- Predict the outcome of a simple investigation and compare the result with the prediction
- Use tools (including beakers, meter tapes and sticks, forceps/tweezers, tuning forks, graduated cylinders, and graduated syringes) safely, accurately, and appropriately when gathering specific data
- Infer meaning from data communicated in graphs, tables, and diagrams
- Explain why similar investigations might produce different results
- Use appropriate safety procedures when conducting investigations

## Habitats and Adaptations

- Illustrate the life cycles of seed plants and various animals and summarize how they grow and are adapted to conditions within their habitats
- Explain how physical and behavioral adaptations allow organisms to survive
- Recall the characteristics of an organism’s habitat that allow the organism to survive there
- Explain how changes in the habitats of plants and animals affect their survival
- Summarize the organization of simple food chains

## Earth’s Materials and Changes

- Classify rocks and soils on the basis of their properties
- Identify common minerals on the basis of their properties by using a minerals identification key
- Recognize types of fossils
- Infer ideas about Earth’s early environments from fossils of plants and animals that lived long ago
- Illustrate Earth’s saltwater and freshwater features
- Illustrate Earth’s land features by using models, pictures, diagrams, and maps
- Exemplify Earth materials that are used as fuel, as a resource for building materials, and as a medium for growing plants
- Illustrate changes in Earth’s surface that are due to slow processes and changes that are due to rapid processes

## Heat and Changes in Matter

- Classify different forms of matter according to their observable and measurable properties
- Explain how water and other substances change from one state to another
- Explain how heat moves easily from one object to another through direct contact in some materials (conductors) and not so easily through other materials (insulators)
- Identify sources of heat and exemplify ways that heat can be produced (including rubbing, burning, and using electricity)

## Motion and Sound

- Identify the position of an object relative to a reference point by using position terms such as “above,” “below,” “inside of,” “underneath,” or “on top of” and a distance scale or measurement
- Compare the motion of common objects in terms of speed and direction
- Explain how the motion of an object is affected by the strength of a push or pull and the mass of the object
- Explain the relationship between the motion of an object and the pull of gravity
- Recall that vibrating objects produce sound and that vibrations can be transferred from one material to another
- Compare the pitch and volume of different sounds
- Recognize ways to change the volume of sounds
- Explain how the vibration of an object affects pitch

## Activities:

Have your child:

- Write a letter to the South Carolina Department of Natural Resources to research how habitats are managed and species are monitored in South Carolina
- Fill several glass bottles with different amounts of water, tap the sides of the bottles, and observe the sound. Describe how the pitch varies from one bottle to another
- Identify and classify plants and animals found in the backyard as to their role in a food chain (producer, consumer, and decomposers)
- Classify household objects (such as items in the pantry, leaves, or toys) according to two attributes (such as size, color, or shape)
- Start a rock collection and create a field guide to identify the samples
- Compare soil samples from different areas in a backyard or park. Plant seeds in the different soils and observe and record their growth
- Measure and record temperature changes every 5 minutes of hot water in a paper hot cup and a styrofoam cup

## Books:

- Aiki. *Fossils Tell of Long Ago*
- Cole, Joanna. *The Magic School Bus In The Haunted Museum: A Book About Sound*
- Crossingham, John. *What Is Hibernation?*
- Hewitt, Sally. *All Kinds of Habitats*
- Hewitt, Sally. *Heat*
- Loewer, Peter and Jean. *The Moonflower*
- Pellant, Chris. *Smithsonian Handbooks: Rocks & Minerals*
- Silver, Donald. *One Small Square: Woods*
- Wilkes, Angela. *Animal Homes (Kingfisher Young Knowledge)*

## Web Sites:

- AAAS Science Netlinks - [www.sciencenetlinks.com](http://www.sciencenetlinks.com)
- Bill Nye the Science Guy - [www.billnye.com](http://www.billnye.com)
- Department of Natural Resources - [www.dnr.state.sc.us](http://www.dnr.state.sc.us)
- ENature - [www.eNature.com](http://www.eNature.com)
- Learning Network Parent Channel - [www.familyeducation.com](http://www.familyeducation.com)
- NASA’s Web site for Earth Science - <http://kids.earth.nasa.gov>
- National Wildlife Federation - [www.nwf.org/kids/](http://www.nwf.org/kids/)