

**Course Description:**

Second Grade Science introduces students to the process of observation and how important it is to the study of science. Learners will identify their five senses and why they are critical to observation. Students will use these observation skills throughout the course as they examine many different types of animals and their environments. Students begin by observing ants in their own environments and continue onto learning the different types of birds. Students will come to understand plant and animal rhythms and will perform small experiments with plants. Stories will be used to teach the students about nature and interactions that humans have with nature. They will continue to learn about animals and their characteristics habitats, and needs. Students will learn through video, audio stories, hands-on participation and observation with nature. The teachers will conduct live assessments for the topics that had been covered throughout the week's lessons. Grade 2 Science provides students with the opportunity to expand their minds and see for themselves the way that animals and nature are a part of their everyday lives.

**Materials needed:**

- Colored pencils or crayons
- Large grapefruit or orange
- Birdseed
- Pencil
- Twine
- Leaves (evergreen and/or deciduous)
- Wax paper
- Iron
- Old sheet or towel
- Three small pots
- Potting soil
- Seeds of your choosing
- Plain 3x5 index cards
- Yarn, Scissors
- 2 Popsicle Sticks

Module	Lesson Title	Objectives
1	The Five Senses	<ul style="list-style-type: none"> <li>Learn about the senses.</li> <li>Identify the 5 senses.</li> </ul>
	Behavior of Ants	<ul style="list-style-type: none"> <li>Observe the behavior of ants.</li> <li>Identify the different "jobs" of ants in their colonies.</li> </ul>
	Types of Birds	<ul style="list-style-type: none"> <li>Explore the life of a bird.</li> <li>Study nature observations.</li> </ul>
2	Animal Habitats	<ul style="list-style-type: none"> <li>Observe the eating habits of animals.</li> <li>Identify what animals in the wild eat.</li> </ul>
	Animal Cooperation	<ul style="list-style-type: none"> <li>Learn about animals gathering together to save and help one another.</li> <li>Observe and learn how nature cooperates (or doesn't).</li> </ul>
	Properties of Matter	<ul style="list-style-type: none"> <li>Describe observable properties of matter.</li> </ul>
	Heat and Temperature	<ul style="list-style-type: none"> <li>Describe how heat can be produced.</li> <li>Understand the difference between heat and temperature.</li> <li>Explain how heat can move from one object to another.</li> <li>Observe the change in form of water to ice.</li> </ul>
	States of Matter	<ul style="list-style-type: none"> <li>This week your child will explore various kinds of matter, specifically liquids, solids and gases.</li> <li>Your child will identify objects in nature and determine if they are liquid or solid. Matter can be categorized by observable properties, such as color, size, shape, and weight.</li> <li>We will observe ice (or snow if it's available) melt as heat is applied and work with clay in order to reinforce the concepts that matter can change shape.</li> <li>Your child will draw an example of a gas, a liquid, and a solid in their Science Main Lesson (Scrap) Book.</li> </ul>

Module	Lesson Title	Objectives
3	Animal Rhythms	<ul style="list-style-type: none"> <li>Explore the idea of natural rhythms of human beings.</li> </ul>
	Plant and Animal Rhythm	<ul style="list-style-type: none"> <li>Observe the rhythms of plants and animals.</li> <li>Chart observations of rhythms of plants and animals.</li> </ul>
	Trees and Leaves	<ul style="list-style-type: none"> <li>Identify local trees.</li> <li>Collect leaves of local trees.</li> </ul>
	Experiments with Plants	<ul style="list-style-type: none"> <li>Recognize the primary things plants need to grow.</li> <li>Prepare a first science experiment.</li> </ul>
4	Stories about Nature	<ul style="list-style-type: none"> <li>Relate various nature stories.</li> </ul>
	Stories about Nature and Interactions	<ul style="list-style-type: none"> <li>Recount more stories about nature's interactions.</li> </ul>
	Squirrel Habitats	<ul style="list-style-type: none"> <li>Observe the life of a squirrel.</li> <li>Illustrate the natural habitat of a squirrel.</li> </ul>
5	Animal Characteristics	<ul style="list-style-type: none"> <li>Describe characteristics of several animals.</li> <li>Distinguish between various character traits of animals such as stamina, strength and gentleness.</li> </ul>
	Animal Needs	<ul style="list-style-type: none"> <li>Continue to play the game developed last week.</li> <li>Create an animal booklet.</li> </ul>

Module	Lesson Title	Objectives
	Behavior of Bees	<ul style="list-style-type: none"> <li>• Explore the life of bees and how they develop the honeycomb.</li> <li>• Read the story, "The Flight of the Worker Bee".</li> <li>• Use beeswax to design a honeycomb.</li> </ul>
6	Animal Habitats and Weather	<ul style="list-style-type: none"> <li>• Explore the homes that various animals form.</li> <li>• Make a termite castle.</li> </ul>
	Spider Webs	<ul style="list-style-type: none"> <li>• Observe a spider's home.</li> <li>• Identify characteristics of a spider web.</li> <li>• Make a "God's Eye" craft.</li> </ul>
	Different Nests for Different Birds	<ul style="list-style-type: none"> <li>• Learn about the nests birds make.</li> </ul>

**Course Description:**

Semester B of Second Grade Science begins with the students learning the characteristics of the Weaverbird and Swiftlet bird. Learners will come to understand the different groupings of animals including those with vertebrates, invertebrates and warm and cold blooded animals, carnivores, herbivores and omnivores. Learners will be asked to recall the five senses that they discussed at the beginning of the course and compare them to the senses of animals. They will also learn how animals communicate and the relationship between animals and humans. The course ends with the students taking a closer look at the characteristics of reptiles, insects, birds of prey, and fish. At the close of the course students will have a deeper understanding and appreciation of animals and their habitats.

**Materials needed:**

- Colored pencils or crayons
- Gum
- Globe
- Multi-colored construction paper
- Scissors

Module	Lesson Title	Objectives
1	Events on Earth	<ul style="list-style-type: none"> <li>• Examine characteristics and causes of earthquakes.</li> <li>• Examine characteristics and causes of volcanoes.</li> <li>• Explore the concept of erosion.</li> </ul>
	Characteristics of the Weaverbird	<ul style="list-style-type: none"> <li>• Go bird watching.</li> <li>• Learn about the weaverbird that is found primarily in Africa.</li> </ul>
	Characteristics of the Swiftlet Bird	<ul style="list-style-type: none"> <li>• Learn about the Swiftlet bird of Southeastern Asia.</li> </ul>

	Large Habitats	<ul style="list-style-type: none"> <li>Explore the concept of habitat.</li> </ul>
2	Animals: Vertebrates and Invertebrates	<ul style="list-style-type: none"> <li>Study the two major animal groups: the vertebrates and invertebrates.</li> </ul>
	Warm- and Cold-Blooded Animals	<ul style="list-style-type: none"> <li>Study warm versus cold blooded animals.</li> </ul>
	Tracks Animals Make	<ul style="list-style-type: none"> <li>Study animal tracks.</li> </ul>
3	Animal Food Chains	<ul style="list-style-type: none"> <li>Learn about the food chain.</li> <li>Explore the interdependent relationships in nature.</li> </ul>
	Relationships Between Humans and Animals	<ul style="list-style-type: none"> <li>Explore ways in which animals and human beings help each other.</li> </ul>
	Carnivores, Herbivores and Omnivores	<ul style="list-style-type: none"> <li>Learn about carnivores, herbivores, and omnivores.</li> </ul>
4	The Five Senses and Animal Communication	<ul style="list-style-type: none"> <li>Learn about the various ways animals communicate.</li> <li>Be introduced to the five animal senses.</li> </ul>

	Animal Communication and Signals	<ul style="list-style-type: none"> <li>Explore ways animals communicate.</li> </ul>
	Biomes	<ul style="list-style-type: none"> <li>Identify the desert, forests, aquatic, tundra and grasslands biomes.</li> <li>Indicate the different animals that live in these biomes.</li> <li>Examine the adaptations the animals made to their environments.</li> </ul>
5	The Dolphin and the Field Mouse	<ul style="list-style-type: none"> <li>Identify characteristics of the dolphin.</li> <li>Identify characteristics of the field mouse.</li> </ul>
	Characteristics of Reptiles	<ul style="list-style-type: none"> <li>Identify different reptiles.</li> <li>Match the reptile to its natural habitat.</li> </ul>
	Tadpoles to Frogs	<ul style="list-style-type: none"> <li>Learn about the frog's transformation from the egg into a full-grown frog.</li> </ul>
6	Characteristics of Insects	<ul style="list-style-type: none"> <li>You will learn about insects.</li> </ul>
	Characteristics of Birds of Prey	<ul style="list-style-type: none"> <li>Identify large birds of prey.</li> </ul>
	Characteristics of Fish	<ul style="list-style-type: none"> <li>Learn about fish.</li> </ul>