

**Course Description:**

In First Grade Science, students in this course will complete projects that are designed to allow for exploration and discovery. Students observe their surroundings and through observations of the natural world conduct inquiries into topics related to their healthy development.

**Materials needed:**

- Glue
- Colored pencils or crayons
- Flowers or plants for pressing
- Blotting paper
- Scissors
- Old sheet or towel
- Small dish or container
- Watercolor paints
- Tweezers
- Wax paper
- Iron
- Pre-made calendar or available calendar
- Empty milk carton
- 1 Dowel (5" x 8")
- Straw
- Tape
- 1 small pin or nail
- Pencil with eraser
- Outdoor thermometer
- Compass
- Blue construction paper
- Cotton
- 8 ½" x 11 papers
- String

Module	Lesson Title	Objectives
1	Moon and Seasons	<ul style="list-style-type: none"> <li>• Identify the various moon phases.</li> <li>• Identify the patterns of summer.</li> </ul>
	Season and Daylight Exploration	<ul style="list-style-type: none"> <li>• Set up a Nature corner depicting the four seasons.</li> <li>• Complete a leaf printing.</li> <li>• Draw pictures representing the different seasons.</li> <li>• Continue observing the phases of the moon.</li> </ul>
	Classifying Leaves	<ul style="list-style-type: none"> <li>• Use simple tools to observe nature.</li> <li>• Classify and arrange objects of nature.</li> </ul>

Module	Lesson Title	Objectives
2	Role of Seeds	<ul style="list-style-type: none"> <li>Learn about seeds and the role they play in the life of a plant.</li> <li>Draw a picture of a plant with its root system.</li> <li>Collect and catalog seeds in scrapbook.</li> </ul>
	Observing Animal Tracks	<ul style="list-style-type: none"> <li>Look at animal tracks in nature or in books.</li> <li>Compare track to footprints.</li> <li>Draw and label tracks.</li> </ul>
	Birds in Nature	<ul style="list-style-type: none"> <li>Discover which birds live in the area.</li> <li>Draw pictorial representation of birds.</li> <li>Learn bird behavior during the seasons.</li> </ul>
3	Basic Needs of Animals	<ul style="list-style-type: none"> <li>Consider animals' basic needs of food, water, air and shelter.</li> <li>Observe animals in nature.</li> <li>Draw animals.</li> <li>Build a bird house.</li> </ul>
	Making a Weather Chart	<ul style="list-style-type: none"> <li>Understand the unpredictable nature of weather.</li> <li>Explore the concepts of north, south, east, and west.</li> <li>Make a wind vane and chart weather.</li> </ul>
	Light	<ul style="list-style-type: none"> <li>Describe how light travels.</li> <li>Make observations that objects in darkness can be seen only when illuminated.</li> <li>Conduct investigations to determine the effect of placing objects made with different materials in the path of a beam of light.</li> </ul>
	Cloud Formation	<ul style="list-style-type: none"> <li>Observe cloud formations.</li> <li>Identify different cloud formations.</li> </ul>
4	Animals and Weather Change	<ul style="list-style-type: none"> <li>Observe the sensory experience of animals as they react to changes in the weather.</li> <li>Illustrate how animals prepare for winter months.</li> </ul>

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	Living with Nature	<ul style="list-style-type: none"> <li>• Observe the ways humans and nature support each other.</li> <li>• Illustrate your observations.</li> <li>• Identify ways you can help.</li> </ul>
	Animal Adaptation and Offspring	<ul style="list-style-type: none"> <li>• Identify how local animals adapt to seasonal changes.</li> <li>• Illustrate animal adaptations.</li> </ul>
5	Winter and Snow Formation	<ul style="list-style-type: none"> <li>• Identify various winter activities around the world.</li> <li>• Illustrate winter activities.</li> </ul>
	Comparing Tree Types	<ul style="list-style-type: none"> <li>• Recognize deciduous and evergreen trees.</li> <li>• Compare deciduous and evergreen trees.</li> </ul>
	Wild Animal Responses	<ul style="list-style-type: none"> <li>• Explore wild animals and how they respond to the seasons.</li> <li>• Observe and draw pictures that represent your observations.</li> </ul>
6	Concept of Hibernation	<ul style="list-style-type: none"> <li>• Describe the idea of hibernation.</li> <li>• Draw a picture representing hibernation.</li> <li>• Compare human needs in winter to needs of hibernating animals.</li> </ul>
	Concept of Erosion	<ul style="list-style-type: none"> <li>• Explore the concept of erosion.</li> <li>• Illustrate the concept of erosion.</li> </ul>
	Constellations in the Night Sky	<ul style="list-style-type: none"> <li>• Observe the night sky.</li> <li>• Locate and identify various constellations.</li> <li>• Illustrate constellations in Main Lesson Book.</li> </ul>

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**Materials needed:**

- 2 Ziploc bags
- 1 cup of Crisco or shortening
- Bowl
- Drinking glass
- Watercolor paints
- Tomato seeds
- Small pot
- Water
- Soil
- Colored pencils or crayons Plate
- Large pot
- Thermometer (°C and °F)
- Vegetable seeds

Module	Lesson Title	Objectives
1	Animals in the Arctic	<ul style="list-style-type: none"> <li>• This week we explore what life is like in the coldest parts of the world, namely the Arctic and Antarctic regions of the North and South Pole.</li> <li>• Your child will be encouraged to study animals indigenous to these regions, and perform an experiment to discover the insulating effect of blubber.</li> </ul>
	Nocturnal and Diurnal Animals	<ul style="list-style-type: none"> <li>• Learn the difference between diurnal and nocturnal animals.</li> <li>• Examine characteristics of an owl.</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.</li> </ul>

Module	Lesson Title	Objectives
2	Dolphins and Sea Life	<ul style="list-style-type: none"> <li>Recognize dolphins and other sea life.</li> <li>Complete a wet painting that illustrates sea life.</li> </ul>
	Planting a Tomato	<ul style="list-style-type: none"> <li>Learn how to plant a tomato.</li> <li>Nourish your plant and grow the tomato.</li> </ul>
	Scientific Inquiry	<ul style="list-style-type: none"> <li>This week your child will engage in scientific inquiry!</li> <li>Your child will set up an experiment and make a hypothesis about why different objects responded — did they sink or float? Your child will complete a chart that reflects their experience.</li> </ul>
3	Reading a Thermometer	<ul style="list-style-type: none"> <li>This week your child will learn to read a thermometer and see the difference between degrees Celsius and Fahrenheit.</li> <li>Your child will begin to chart the daily temperature on a calendar.</li> </ul>
	Life in a Pond	<ul style="list-style-type: none"> <li>Explore pond life.</li> </ul>
	Life in the Forest	<ul style="list-style-type: none"> <li>Explore life in the forest.</li> <li>Record observations.</li> </ul>
4	Characteristics of the Maple Leaf	<ul style="list-style-type: none"> <li>Follow the travels of a maple leaf.</li> <li>Observe and record bird activity.</li> </ul>
	Thunder and Lightning	<ul style="list-style-type: none"> <li>Observe thunder and lightening.</li> <li>Calculate lightning distance.</li> </ul>
	Sounds in Nature	<ul style="list-style-type: none"> <li>Record sensory observations of nature.</li> <li>Illustrate an animal heard this week.</li> </ul>

Module	Lesson Title	Objectives
		<ul style="list-style-type: none"> <li>Understand that vibrating materials can make sound and that sound can make materials vibrate.</li> </ul>
	Sound	<ul style="list-style-type: none"> <li>Describe how vibrating objects produce sound.</li> </ul>
5	Birdhouses and Nesting Behavior	<ul style="list-style-type: none"> <li>This week we will continue our focus on birds with a look at the kinds of homes birds build for their families. If possible, your child will go on a nature walk to observe nesting behavior in local birds</li> <li>Your child will explore other kinds of homes as well and enter a picture into their Main Lesson Book.</li> </ul>
	Deciduous Trees	<ul style="list-style-type: none"> <li>This week your child will learn about budding deciduous trees.</li> <li>Your child will hear a story about Johnny Appleseed, and make a weather chart to record wind direction and temperature twice daily.</li> <li>Your child will compare these charts to earlier ones that they have made and discuss possible reasons for the many differences they see.</li> </ul>
	Cycle of the Sunflower	<ul style="list-style-type: none"> <li>Explore the life of a sunflower.</li> </ul>
6	Bees and Pollination II	<ul style="list-style-type: none"> <li>Observe bee behavior.</li> <li>Explore the process of pollination.</li> </ul>
	Comparing Butterflies	<ul style="list-style-type: none"> <li>Compare characteristics of swallowtail and monarch butterflies.</li> <li>Explore caterpillar cocoons.</li> </ul>
	Planting a Garden	<ul style="list-style-type: none"> <li>This final week your child will hear a story of a boy and his vegetable garden.</li> <li>Your child will be encouraged to plant a "garden" of your own, no matter how small, in order to help your child connect with the earth and to build a stronger sense of our interdependent relationship with nature.</li> </ul>