

Grade 1	Unit 1: Discovery		Suggested Length: 2-3 Weeks
Essential Questions	<i>Program of Studies</i> and Core Content	Key Terms and Vocabulary	Classroom Instruction and <u>Assessment</u> Student will:
<p>1. How do my body parts and five senses help me discover and learn about the world?</p>	<p><u>Program of Studies</u></p> <ul style="list-style-type: none"> ❑ <i>SI1 Students will ask simple scientific questions that can be answered through observations.</i> ❑ <i>SI2 Students will use simple equipment (e.g., aquarium), tools (e.g., magnifiers, spoons), skills (e.g., observing, pouring), technology (e.g., video discs), and mathematics in scientific investigations</i> ❑ <i>SI3 Students will use evidence (e.g., observations) from simple scientific investigations and scientific knowledge to develop reasonable explanations.</i> ❑ <i>SI4 Students will design and conduct different kinds of simple scientific investigations.</i> ❑ <i>SI5 Students will communicate (e.g., speak, draw) designs, procedures, and results of scientific investigations.</i> ❑ <i>SI6 Students will question scientific investigations and explanations of other students.</i> <p><u>Core Content</u></p> <ul style="list-style-type: none"> ❑ Ask simple scientific questions that can be investigated through observations combined with scientific information. ❑ Use simple equipment in scientific investigations: magnifiers, magnets, use simple tools in scientific investigations, metric rulers, thermometers, skills in scientific investigations (e.g., classifying, predicting), technology (e.g., electronic media, calculators, Web). ❑ Use evidence (e.g., observations, data) from simple scientific investigations and scientific knowledge to develop reasonable explanations. 	<ul style="list-style-type: none"> ❑ Sense ❑ Touch ❑ Taste ❑ Sight ❑ Hear ❑ Smell ❑ Compare ❑ Predict ❑ Observe ❑ Examine 	<ul style="list-style-type: none"> ❑ Participate in scientific observations to identify, and explain how the 5 senses help them learn. DOK 3 ❑ Literature Links: <u><i>My 5 Senses</i></u> ❑ <u><i>National Geographic Learning Kits: The Senses</i></u> ❑ <u><i>It's Science! Hearing Sounds</i></u> by Sally Hewitt ❑ Video: <i>Our 5 Senses</i> and <i>All About Sound</i> ❑ Discovery Lab Activity 1: “Getting Nosy” (predicting, identifying a variety of odors) DOK 2 ❑ Discovery Lab Activity 2: “Guess the Object Touch Boxes” (predicting, note-taking, identifying objects that are soft (cotton), rough (sandpaper), hard (rock), smooth (metal)) DOK 3 ❑ Discovery Lab Activity 3: “Taste This!” (predicting, compare/contrast, identifying different tastes such as sweet, sour, salty, spicy.) DOK 3 ❑ Discovery Lab Activity 4: “Blindfold Role Play” (kinesthetic, predicting) DOK 2 ❑ “What are Sounds” worksheet (investigation) DOK 1 ❑ Discovery Lab Activity 5: “Now Hear This” (compare/contrast, identifying, note taking, analyzing) making a list of inside and outside sounds DOK 3 ❑ “Which Senses Do You Use” worksheet DOK 1 ❑ “Using Your Senses” worksheet (note taking, observing, classifying, application) DOK 3

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	<input type="checkbox"/> Design and conduct different kinds of simple scientific investigations. Communicate (e.g. draw, graph, or write), findings of procedures, observations, and scientific investigations.		

Grade 1	Unit 2: Plant and Animal Life		Suggested Length: 6 weeks
Essential Questions	<i>Program of Studies</i> and Core Content	Key Terms and Vocabulary	Classroom Instruction and <u>Assessment</u> Student will:
1. What are living and nonliving things? 2. How do living things grow and change? 3. What do plants and animals need for survival?	<p><u>Program of Studies</u></p> <input type="checkbox"/> <i>LS4 Students will understand that organisms resemble their parents.</i> <input type="checkbox"/> <i>LS7 Students will understand that all animals depend on plants for food.</i> <input type="checkbox"/> <i>LS6 Students will understand that organisms' patterns of behavior are related to the nature of the organisms' environments. There are any different environments (e.g. deserts, rainforests) on Earth that support different types of organisms.</i> <p><u>Core Content</u></p> <input type="checkbox"/> SC-EP-3.4.1 Students will explain the basic needs of organisms. Organisms have basic needs. For example, animals need air, water and food; plants need air, water, nutrients and light. Organisms can survive only in environments in which their needs can be met. DOK 2 <input type="checkbox"/> SC-EP-3.4.2 Students should understand that things in the environment are classified as living, nonliving, and once living. Living things differ from nonliving things. Organisms are classified into groups by using	<input type="checkbox"/> Living <input type="checkbox"/> Nonliving <input type="checkbox"/> Cocoon <input type="checkbox"/> Resemble	<input type="checkbox"/> Lab Activity- Students will take a nature walk and construct a T-chart where they list living and non-living things. A class discussion will follow where students will identify all the characteristics that living things have in common in comparison to non-living things.

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Essential Questions	<i>Program of Studies</i> and Core Content	Key Terms and Vocabulary	Classroom Instruction and <u>Assessment</u> Student will:
	<p>various characteristics (e.g., body coverings, body structures).</p> <ul style="list-style-type: none"> ❑ SC-EP-3.4.3 Students will describe the basic structures and related functions of plants and animals that contribute to growth, reproduction and survival. Each plant or animal has observable structures that serve different functions in growth, survival and reproduction. For example, humans have distinct body structures for walking, holding, seeing and talking. These observable structures should be explored to sort, classify, compare and describe organisms. DOK 2 ❑ SC-EP-3.4.4 Students will describe a variety of plant and animal life cycles to understand patterns of the growth, development, reproduction and death of an organism. Plants and animals have life cycles that include the beginning of life, growth and development, reproduction and death. The details of a life cycle are different for different organisms. Observations of different life cycles should be made in order to identify patterns and recognize similarities and differences. 	<ul style="list-style-type: none"> ❑ Reproduce ❑ Sprout ❑ Survive ❑ Environment ❑ Depend ❑ Identify ❑ Predict ❑ Observe ❑ Examine ❑ Life cycle ❑ Egg ❑ Larva ❑ Adult ❑ Compare 	<p>Ex.-Living things grow, change, move, eat, etc. DOK 2</p> <ul style="list-style-type: none"> ❑ Video- Living/Non-Living DOK 2 ❑ Assessment- Students search magazines or newspapers to collect at least four examples of living and non-living things placing them under the correct heading. (See attached rubric) DOK 2 ❑ Activities- Students will explore growth changes between young animals\plants and adult animals\plants by comparing. DOK 2 ❑ Literature Links- <i>An Egg Is An Egg</i> <ul style="list-style-type: none"> ❑ <i>Chickens Aren't The Only Ones</i> ❑ <i>The Very Hungry Caterpillar</i> ❑ <i>Scholastic News</i> (informational reading) DOK 2 ❑ Video- <i>Everything Grows</i> <ul style="list-style-type: none"> ❑ <i>Plant or Animal?</i> ❑ <i>Baby Animals</i> ❑ <i>Frogs</i> DOK 2 ❑ Lab Activity 1- Students will observe and compare the life cycle of a butterfly through a classroom butterfly kit. Students will complete a weekly journal entry detailing the stages of the butterfly. DOK 2 ❑ “How Do Animals Grow” skills: comparing baby to adult. DOK 2

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	<p>DOK 2</p> <p>□ SC-EP-4.6.1 Students will describe basic relationships of plants and animals in an ecosystem (food chains). Plants make their own food. All animals depend on plants. Some animals eat plants for food. Other animals eat animals that eat the plants. Basic relationships and connections between organisms in food chains can be used to discover patterns within ecosystems. DOK 2</p>	<p>□ Seedling</p>	<p>□ Lab Activity 2- Students will compare the growth of a seed using light as a variable and its effect on the plants growth. Students will use note-taking skills to record observations. DOK 2</p> <p>□ “How Do Plants Grow?” skills: comparing different plants. DOK 2</p> <p>□ Activity- Students will make a booklet illustrating the life cycle of an apple tree, titled An Apple Story. DOK 2</p> <p>□ Literature Links- <u><i>I Am An Apple</i></u></p> <ul style="list-style-type: none"> □ <u><i>The Tree</i></u> □ <u><i>How New Plants Grow</i></u> □ <u><i>I Am a Seed</i></u> □ <u><i>Pumpkin, Pumpkin DOK 2</i></u> <p>□ <u>Assessment</u>: Students will construct a time-line of themselves from birth to the present and describe their stages of development. Ex. At two years old I couldn’t _____, but now I can _____. DOK 2</p> <p>□ <u>Assessment</u>: Students will bring a picture of a family member and compare themselves to their family member and explain their resemblance. Ex. I look like my mom. I have blue eyes just like mom. DOK 2</p> <p>□ Construct a mobile/paper chain explaining the food chain. DOK2</p>

Grade 1	Unit 3	Suggested Length: 4 –6 Weeks	
Essential Questions	<i>Program of Studies</i> and Core Content	Key Terms and Vocabulary	Classroom Instruction and <u>Assessment</u>
<p>1. How does the changing seasons affect my life and my surroundings?</p> <p>2. What makes day and night?</p>	<p><u>Core Content</u></p> <p><input type="checkbox"/> SC-EP-2.3.2 Students will describe patterns in weather and weather data in order to make simple predictions based on those patterns discovered. Weather changes from day to day and over seasons. Weather can be described using observations and measurable quantities such as temperature, wind direction, wind speed and precipitation. Simple predictions can be made by analyzing collected data for patterns. DOK 2</p> <p><input type="checkbox"/> SC-EP-2.3.3 Students will describe the properties, locations and real or apparent movements of objects in the sky (Sun, moon). Objects in the sky have properties, locations and real or apparent movements that can be observed and described. Observational data, patterns, and models should be used to describe real or apparent movements. DOK 2</p> <p><input type="checkbox"/> SC-EP-2.3.4 Students will describe the movement of the sun in the sky using evidence of interactions of the sun with the earth (e.g., shadows, position of sun relative to horizon) to identify patterns of movement. Changes in movement of objects in the sky have patterns that can be observed and described. The Sun appears to move across the sky in the same way every day, but the Sun’s apparent path changes slowly over</p>	<p><input type="checkbox"/> Precipitation</p> <p><input type="checkbox"/> Seasons</p> <p><input type="checkbox"/> Autumn/Fall</p> <p><input type="checkbox"/> Spring</p> <p><input type="checkbox"/> Summer</p> <p><input type="checkbox"/> Winter</p> <p><input type="checkbox"/> Fog</p> <p><input type="checkbox"/> Cloud</p> <p><input type="checkbox"/> Matter (solid, liquid, gas)</p> <p><input type="checkbox"/> Sun</p> <p><input type="checkbox"/> Moon</p> <p><input type="checkbox"/> Rotate</p> <p><input type="checkbox"/> Tilts</p> <p><input type="checkbox"/> Axis</p> <p><input type="checkbox"/> Evening</p>	<p>Student will:</p> <p><input type="checkbox"/> Read the story <u>the Seasons of Arnold’s Apple Tree</u>. Construct a booklet to explain the changing process of an apple tree through each season. DOK 2</p> <p><input type="checkbox"/> <u>Pre-Assessment</u>: “Spin A Season” (Teacher asks questions related to each seasons. Students decide which season corresponds to the question. DOK 3</p> <p><input type="checkbox"/> <u>Assessment</u>: (Graphic Organizer Writing Model) “How Do Seasons Affect My Daily Life” Example: In the winter I can go sleigh riding. In the spring I can plant flowers. In the summer we can go swimming. In the fall we can pick apples. Seasons affect daily life in many ways. DOK 2</p> <p><input type="checkbox"/> <u>Discovery Lab Activity 2</u>: “What Makes the Seasons” DOK 2</p> <p><input type="checkbox"/> <u>Discovery Lab Activity 1</u>: “What Makes Day and Night” DOK 2</p> <p><input type="checkbox"/> Using a flashlight and the globe students will demonstrate how the earth revolves around the sun causing day and night. DOK 2</p> <p><input type="checkbox"/> Demonstrate with the flashlight how Earth changes positions (tilts on its axis) causing the four seasons. DOK 2</p> <p><input type="checkbox"/> <u>Daily Weather Chart Activity</u>: On-going throughout the year. Students chart and graph the weather daily and discuss key elements of the recorded data. DOK 2</p> <p><input type="checkbox"/> <u>Oral Assessment</u>: Using the globe, flashlight and a paper doll students will explain the position of the sun during the day and night. DOK 2</p>

Grade 1	Unit 3		Suggested Length: 4 –6 Weeks
Essential Questions	<i>Program of Studies</i> and Core Content	Key Terms and Vocabulary	Classroom Instruction and <u>Assessment</u> Student will:
	<p>seasons. Recognizing relationships between movements of objects and resulting phenomena, such as shadows, provides information that can be used to make predictions and draw conclusions about those movements. DOK 2</p> <p><input type="checkbox"/> SC-EP-4.6.2 Students will describe evidence of the sun providing light and heat to the Earth. Simple observations and investigations begin to reveal that the Sun provides the light and heat necessary to maintain the temperature of Earth. Based on those experiences, the conclusion can be drawn that the Sun’s light and heat are necessary to sustain life on Earth. DOK 2</p>	<p><input type="checkbox"/> Meteorologist <input type="checkbox"/> Thermometer <input type="checkbox"/> Planet Earth</p>	<p><input type="checkbox"/> <u>Adopt a tree</u>: Document the changes over the seasons by illustrating and writing how their tree has changed. (observing, note-taking, comparing) DOK 3</p> <p><input type="checkbox"/> Literature Links: <u>The Seasons of Arnold’s Apple Tree</u>, <u>A Tree for All Seasons</u>, <u>National Geographic Learning Kits: What is Spring? What is Autumn? What is Winter? What is Summer?</u></p> <p><input type="checkbox"/> Video: <u>Doobie’s Four Seasons</u> <u>What Makes Day and Night</u> <u>National Geographic Learning Kit: The Sun, The Moon</u></p>

Grade 1	Unit 4: Earth and Sky		Suggested Length: 4-6 Weeks
Essential Questions	<i>Program of Studies</i> and Core Content	Key Terms and Vocabulary	Classroom Instruction and <u>Assessment</u> Student will:
<p>1. What materials does the Earth include and what are their properties?</p> <p>2. How are the Earth’s materials used as resources?</p>	<p><u>Core Content</u></p> <p><input type="checkbox"/> SC-EP-2.3.1 Students will describe earth materials (solid rocks, soils, water and gases of the atmosphere) using their properties. Earth materials include solid rocks and soils, water and the gases of the atmosphere. Minerals that make up rocks have properties of color, luster and hardness. Soils have properties of color, texture, the capacity to retain water and the ability to support plant growth. Water on Earth and in the atmosphere can be a solid, liquid or gas. DOK 2</p>	<p><input type="checkbox"/> Earth <input type="checkbox"/> Natural resources <input type="checkbox"/> Soil <input type="checkbox"/> Gas <input type="checkbox"/> Atmosphere</p>	<p><input type="checkbox"/> Activity: Discuss with students that the globe is a model/representation of the Earth showing where land and water is located. DOK 1</p> <p><input type="checkbox"/> Literature Link: Earth , Destinations In Science: Rocks, Sand, Soil</p> <p><input type="checkbox"/> Lab Activity: “A Close-Up on Soil” Using science tools students will examine soil samples and sort the things they find in the soil. Class discussion will follow about the many uses of soil. DOK 2</p> <p><input type="checkbox"/> Lab Activity: “ A Closer Look a Soil” Students will discover that there is water and air in soil by putting soil in a cup and packing it down with their fingers. They will determine that soil contains air and by</p>

Grade 1	Unit 4: Earth and Sky		Suggested Length: 4-6 Weeks
Essential Questions	<i>Program of Studies</i> and Core Content	Key Terms and Vocabulary	Classroom Instruction and <u>Assessment</u> Student will:
	<ul style="list-style-type: none"> ❑ SC-EP-3.5.1 Students will describe fossils as evidence of organisms that lived long ago, some of which may be similar to others that are alive today. Fossils found in Earth materials provide evidence about organisms that lived long ago and the nature of the environment at that time. Representations of fossils provide the basis for describing and drawing conclusions about the organisms and basic environments represented by them. DOK 3 	<ul style="list-style-type: none"> ❑ Fossil ❑ Compare ❑ Globe 	<p>adding water that soil holds water. DOK 2</p> <ul style="list-style-type: none"> ❑ Activity: Brainstorm places where water is found on earth. DOK 1 ❑ Lab Activity: Demonstrate the three forms of water by using a hot plate, teakettle and ice. DOK 1 ❑ <u>Assessment:</u> Student will classify the three forms of water by deciding where to place pictures in the correct category. Students will be given a choice of extending their knowledge by drawing their own picture to represent each form of water. DOK 2 ❑ Observation Activity: Students will take a nature walk around school to discover how our natural resources are used in everyday life. (e.g. rocks are used in concrete, stone driveways, retaining walls, etc., water is used for bathing, drinking, cooking, recreation, and soil is used to grow plants and building. DOK 1 ❑ <u>Assessment:</u> Students will show how natural resources are used in their everyday lives by drawing a picture and attempting to label each resource and how it is used. DOK 2 ❑ Lab Activity: “Study Rocks” Student will use science tools to examine rocks telling about its size, color, shape and how it feels. Using a T-chart, students will sort the rocks into groups according to their properties. (Teacher will add fossils to encourage discussion from students.) DOK 3