

CURRICULUM MAP

SUBJECT: Earth Science #1: Patterns in Nature

GRADE: Kindergarten

MONTH	ESSENTIAL QUESTION	CONTENT (CHAPTER/UNIT DESCRIPTION/ACTIVITIES)	SKILLS (STANDARDS/LEARNING OUTCOMES)	MATERIALS/ RESOURCES	ASSESSMENT (Objective/Subjective)
Ongoing	What patterns and changes do you see in nature?	<p>Morning Meeting Discussions Discuss what clothing is appropriate for the day’s weather. Weather Bear to “dress” for the day’s weather/temperature.</p> <p>When it is Daylight Savings Time, have the children draw the evening outdoors the night before and the night after the change. Compare the differences.</p> <p>Compare early AM temperature to PM temperature; the temperature in the sun and in the shade; the temperature inside and outside.</p> <p>Keep a science journal: Include entries about the weather, view from the windows (you could staple science prompts at the tops of the pages so parents can interpret.)</p> <p>Make and fly kites Temperature graphs Read Alouds Songs, books, poems.</p>	<p><b>Earth and Space MA Frameworks:</b> 2. Understand that wind is moving air. 3. Describe the weather changes from day to day and over the seasons. 4. Recognize that the sun supplies heat and light to earth and is necessary for life. 5. Identify some events around us that have repeating patterns, including the seasons of the year, day and night.</p> <p><b>NAEYC: Children are provided opportunities:</b> 2.G.02 to learn differences between living and non-living things, life cycles or various organisms, earth and sky, structure and property of matter. 2.G.03 that encourage them to use their five senses. 2.G.04 to collect data and represent findings. 2.G.06 that encourage them to think, question, and reason. 2.G.07 that encourage them to discuss scientific concepts in everyday conversation.</p>	<p>Everyday Math Large wall calendar Graphs Journals Thermometer Non-Fiction Literature</p>	<p>Identify the weather Articulate changes in the weather Predicts weather and temperature Discusses appropriate clothing for the weather Names Seasons Sequences seasons Describes typical day/night sky Makes seasonal observation about the trees Journal entries reflect an understanding of seasonal changes.</p>

CURRICULUM MAP

SUBJECT: Earth Science #2: Earth’s Environment

GRADE: Kindergarten

MONTH	ESSENTIAL QUESTION	CONTENT (CHAPTER/UNIT DESCRIPTION/ACTIVITIES)	SKILLS (STANDARDS/LEARNING OUTCOMES)	MATERIALS/ RESOURCES	ASSESSMENT (Objective/Subjective)
April to June	What makes up the Earth’s environment?	<p>Walk Abouts                      Earth Day Activities                      Spring Cleanup Day                      Make windsocks and hang on bush or tree near classroom windows.                      Adopt and observe a tree throughout the year. Discuss seasonal changes.</p> <p>Journal Entries: E.G. What does the wind blow?</p> <p>Read Alouds</p> <p>Friction and Non-Fiction stories with discussions about Earth Day, the wind, kites, etc.</p>	<p><b>Earth and Space MA Frameworks:</b>                      1. Recognize that water, rocks, soil, living organisms are found on the Earth’s surface                      2. Understand that wind is moving air.  <b>NAEYC: Children are provided opportunities:</b>                      2.G.02 to learn differences between living and non-living things, life cycles or various organisms, earth and sky, structure and property of matter.                      2.G.03 that encourage them to use their five senses.                      2.G.04 to collect data and represent findings.                      2.G.06 that encourage them to think, question, and reason.                      2.G.07 that encourage them to discuss scientific concepts in everyday conversation.                      2.G.08 that help them to learn and use scientific vocabulary.</p>	<p>“Community” from Social Studies Curriculum                      Fiction and Non-Fiction Literature</p>	<p>Participates in walk abouts                      Participates in class discussions about read alouds                      Participates in planting activities.                      Participates in spring clean-up days                      Participates in Earth Day discussions.</p>

CURRICULUM MAP

SUBJECT: Life Science

GRADE: Kindergarten

MONTH	ESSENTIAL QUESTION	CONTENT (CHAPTER/UNIT DESCRIPTION/ACTIVITIES)	SKILLS (STANDARDS/LEARNING OUTCOMES)	MATERIALS/ RESOURCES	ASSESSMENT (Objective/Subjective)
April to June	What do living things need to survive in their environment?	<p>Discussions about how things grow.                      Read stories about lifecycles.                      Discussions about the need for food, water, air, etc.                      Journal writings and drawings depicting life cycles                      Planting seeds                      Observing and adopting a class tree                      Building and observing a habitat for ladybugs, ants, caterpillars, etc.                      Field trip to the apple or pumpkin farm                      Outdoor walkabouts                      Compare the growth of a plant that is getting air, food, water, and sun to a plant that is deprived of those needs.                      Measure heights of sprouts and plants with rulers or non-standard measures                      Rigby Read Aloud: <u>Whose Baby?</u></p>	<p><b>MA Frameworks:</b>                      1. Recognize that animals (including humans), plants are living things that grow, reproduce, need food, air, water.                      3. Recognize that plants, animals have life cycles and that cycles vary for different living things.                      4. Describe the ways in which many plants and animals resemble their parents in appearance.                      6. Recognize that people and other animals interact with the environment through the senses.                      7. Recognizes changes in appearance that animals and plants go through as the seasons change.                      8. Identify the ways in which an organism’s habitat provides for its basic needs.  <b>NAEYC: Children are provided opportunities:</b>                      2.G.02 to learn differences between living and non-living things, life cycles or various organisms, earth and sky, structure and property of matter.                      2.G.03 that encourage them to use their five senses.                      2.G.04 to collect data and represent findings.                      2.G.06 that encourage them to think, question, and reason.                      2.G.07 that encourage them to discuss scientific concepts in everyday conversation.                      2.G.08 that help them to learn and use scientific vocabulary.</p>	<p>Non fiction literature                      Rigby Big Book: <u>Whose Baby?</u>                      Soil, seeds, planting pots,                      Insect habitat kits                      Magnifying glasses                      Journals</p>	<p>Drawings and journal entries                      Participation and discussion about read alouds                      Match baby animals to parents from Rigby Big Book                      Participates in discussions about what living things need                      Takes care of class pet or plant                      Sequence a growth/life cycle                      Plants or makes habitat for live creature (fish, ladybug, butterfly, ant)</p>

Kindergarten ***Literacy By Design***  
Science Texts

<b>Level</b>	<b>Title</b>	<b>Author</b>	<b>Item #</b>
A	What Is Wet?	David Bauer	33760
C	Our Gift to the Beach	Margarita Gonzalez-Jensen	33906
C	I Have Five Senses	Katie Sharp	44438
B	How Does a Tree Help?	David Bauer	33821
B	What Needs the Sun	David Bauer	33845
A	What Do I See?	Lisa Trumbauer	33784
C	Animals Go Home	Patricia Brennan	44414
B	All Kinds of Babies	Linda M. Washington	33890
B	What a Cat Can Do	Ellen Catala	33661
BB	Sink or Float	Sheila Sweeny Higginson	30196
BB	My Favorite Star	J. Bynum	03233
BB	See What It Will Be	Teresa Celsi	30271

CURRICULUM MAP

SUBJECT: WEATHER

GRADE: ONE

MONTH	ESSENTIAL QUESTION	CONTENT (CHAPTER/UNIT DESCRIPTION/ACTIVITIES)	SKILLS (STANDARDS/LEARNING OUTCOMES)	MATERIALS/ RESOURCES	ASSESSMENT (Objective/Subjective)
	<p>What makes weather?</p> <p>What types of weather have you observed?</p>	<ol style="list-style-type: none"> <li>1. Students record and discuss daily weather on a chart. Temperature zones, cloud type, wind, and precipitation will be recorded.</li> <li>2. Students will go outside bi-weekly to observe the weather and write in their journals. They will include the elements discussed daily using a teacher/student designed Word Bank.</li> <li>3. Student will draw and write about their favorite season.</li> <li>4. Students will discuss the temperature changes that occur as the seasons change.</li> </ol>	<p><b>Skills of Inquiry:</b></p> <ul style="list-style-type: none"> <li>❖ Record observations with pictures or statements</li> <li>❖ Discuss observations with others</li> </ul> <p><b>Earth and Space Science:</b></p> <p>3 – Describe the weather changes from day to day and over the seasons.</p> <p>4 – Recognize that the sun supplies heat and light to the earth and is necessary for life.</p> <p>5 – Identify some events around us that have repeating patterns, including the seasons of the year, day and night.</p>	<p><u>NSRC/STC</u> <u>Weather</u> – Teacher’s Guide Class Calendar, Student Record Sheets, Precipitation Chart- Student made cloud poster Science Journal Teacher selected literature (see Bibliography that follows Grade One)</p>	<p>Students record their observations, make presentations, and use information to inform decisions.</p> <p>Students will write a weather observation that includes all elements observed.</p> <p>Students will answer Open Ended question, “Tell me what you know about the sun” and include at least 4 facts about the sun that have been discussed.</p> <p>Students will be able to list seasons in order.</p>

CURRICULUM MAP

SUBJECT: **ORGANISMS**

GRADE: **ONE**

MONTH	ESSENTIAL QUESTION	CONTENT (CHAPTER/UNIT DESCRIPTION/ACTIVITIES)	SKILLS (STANDARDS/LEARNING OUTCOMES)	MATERIALS/ RESOURCES	ASSESSMENT (Objective/Subjective)
	<p>How are plants and animals similar and different?</p> <p>What do all living things need?</p>	<p>In this unit, students observe and compare living things to identify their characteristics and resource needs. Students are encouraged to use their own observations to support their ideas about the similarities and differences between plants and animals. The diversity of living things is introduced through readings about interesting and exotic plants and animals. Life cycles and food webs may be explored in response to student questions and observations of animal behavior.</p> <p>Look at a variety of fossils or pictures of fossils, including plants, fish, and extinct species. Guess what living organisms they might be related to.</p> <p>Shared Reading: <u>Fossils</u> (Rigby)</p>	<p><b>Skills of Inquiry:</b></p> <ul style="list-style-type: none"> <li>❖ Ask questions about objects, organisms and events in the environment</li> <li>❖ Make predictions based on observed patterns</li> </ul> <p><b>Life Science:</b></p> <p>1 – Recognize that plants and animals are living things that grow, reproduce and need food, air and water.</p> <p>2 – Differentiate between living and non living things.</p> <p>3 – Recognize that plants and animals have life cycles.</p> <p>4 – Describe ways in which many plants and animals closely resemble their parents.</p> <p>5 – Recognize that fossils provide us with information about living things that inhabited the earth long ago.</p>	<p>See STC Kit Organisms Lessons 1, 6, 8, 10 15-16</p> <p>Rigby Big Books: <u>Our Whale</u> <u>Watching Trip</u> <u>How to Grow a Sunflower</u></p> <p><u>Fossils</u> (Rigby)</p>	<p>Students will answer the prompt, “What are some things that all things need to grow?” in their science journals.</p> <p>Make a fossil print of plant leaves using clay or putty.</p>

CURRICULUM MAP

SUBJECT: **SOLIDS and LIQUIDS**

GRADE: **ONE**

MONTH	ESSENTIAL QUESTION	CONTENT (CHAPTER/UNIT DESCRIPTION/ACTIVITIES)	SKILLS (STANDARDS/LEARNING OUTCOMES)	MATERIALS/ RESOURCES	ASSESSMENT (Objective/Subjective)
	<p>How are solids and liquids similar and different?</p> <p>What are some properties that solids/liquids have?</p>	<p>Solids and liquids have observable properties that can be described. Some properties of solids and liquids are shape, color, magnetism, fluidity, and viscosity. These properties can be used to sort the solids and liquids studied in the classroom and to investigate new materials. In this unit, students investigate the similarities and differences between a variety of common solids and liquids.</p> <p>Write observations in their science journals.</p>	<p><b>Skills of Inquiry:</b></p> <ul style="list-style-type: none"> <li>❖ Tell about why and what would happen if</li> <li>❖ Name and use simple equipment and tools</li> </ul> <p><b>Physical Science:</b></p> <p>1 – Sort objects by observable properties.</p> <p>2 – Identify objects and materials as solid, liquid or gas.</p>	<p>See STC Kit Solids and Liquids Lessons 1-16</p>	<p>Classify solids and liquids on the basis of a number of properties.</p> <p>Record their groups in writing and pictures and then compare and discuss their work with that of their classmates.</p> <p>Write information in their journals.</p>

CURRICULUM MAP

SUBJECT: Materials and Tools

GRADE: ONE

MONTH	ESSENTIAL QUESTION	CONTENT (CHAPTER/UNIT DESCRIPTION/ACTIVITIES)	SKILLS (STANDARDS/LEARNING OUTCOMES)	MATERIALS/ RESOURCES	ASSESSMENT (Objective/Subjective)
		<p>Central Concept: Materials both natural and human –made have specific characteristics that determine how they will be used.</p> <p>Central Concept: Engineering design requires creative thinking and consideration of a variety of ideas to solve problems.</p>	<p><b>Technology /Engineering:</b></p> <p>1.1 Identify and describe characteristics of natural materials (wood, cotton, fur, wool) and human-made materials (e.g. plastic and styrofoam.)</p> <p>1.2 Identify and explain some possible uses for natural materials (wood, cotton, fur, wool, and human-made materials.</p> <p>1.3 – Identify the safe and proper use of tools and materials (e.g. glue, scissors, tape, ruler, paper, toothpicks, straws, spoons) to construct simple structures.</p> <p>2.2 Describe how human beings use parts of the body as tools (e.g. teeth for cutting, hands for grasping and catching) and compare their use with the ways that animals use those parts of their bodies.</p>	<p>STC Kit Solids &amp; Liquids</p> <p>Solar Flair Program Activities #3 and #4</p>	<p>See projects in Solar Flare program.</p>

First Grade *Literacy By Design*  
Science Texts

<b>Level</b>	<b>Title</b>	<b>Author</b>
B	My Puppy	Lisa Turmbuaer
B	Animals Hide	Patricia Brennan
D	I Am Alive	Debra Lucas
D	Planting and Growing	Gail Blasser Riley
F	In the Clouds	Jane Hearn
BB	How Should I Dress?	Ashley S. Burrell
G	How Do You Sleep?	Ellen Javernick
B	Oh, Baby!	Ellen Catala
E	Corn For Sale	Ellen Catala
I	A Dictionary of Snake Facts	Daniel Jacobs
F	What Do We Need?	Patricia K. Kummer
BB	Dictionary of Animals	Malcolm Higgins

**CURRICULUM MAP**

**SUBJECT: SOILS**

**GRADE: TWO**

MONTH	ESSENTIAL QUESTION	CONTENT (CHAPTER/UNIT DESCRIPTION/ACTIVITIES)	SKILLS (STANDARDS/LEARNING OUTCOMES)	MATERIALS/ RESOURCES	ASSESSMENT (Objective/Subjective)
	<p>What is soil? And what is it good for?</p>	<p>Soils are a complex mix of many materials and different-sized particles. Students investigate some physical properties of three major soil components and then extend their investigations to observations of plant growth in various soil mixtures.</p>	<p><b>Skills of Inquiry:</b></p> <ul style="list-style-type: none"> <li>❖ Ask questions about objects , organisms, and events in the environment</li> <li>❖ Tell about why and what would happen if</li> <li>❖ Record observations with data, numbers or written statements</li> <li>❖ Discuss observations with others</li> </ul> <p><b>Earth Science (3-5):</b> 4 –Explain and give examples of the ways in which soil is formed. 5 – Recognize and discuss the different properties of soil, including color, texture, ability to retain water, and to support plant life.</p> <p><b>Life Science:</b> 1 – Recognize that animals and plants need food, air and water.</p> <p><b>Physical Science:</b> 1 – Sort objects by observable properties such as size, shape, color, weight and texture.</p>	<p>STC Kit Soils</p>	<p>Prior knowledge about soils is assessed through brainstorming. Students learn through a series of investigative activities about the component parts of soils. Their results and data records can be evaluated or observed. Finally, students apply what they have learned in investigating local soils and share their findings.</p>

CURRICULUM MAP

SUBJECT: **BALANCING and WEIGHING** GRADE: **TWO**

MONTH	ESSENTIAL QUESTION	CONTENT (CHAPTER/UNIT DESCRIPTION/ACTIVITIES)	SKILLS (STANDARDS/LEARNING OUTCOMES)	MATERIALS/ RESOURCES	ASSESSMENT (Objective/Subjective)
	How can we tell how much?	Students use an equal-arm balance, mobiles, and fulcrums to investigate amount, distance, and position of various objects. Students explore evidence, models, and explanation through this simple system in order to learn to isolate variables, make predictions, and solve problems. Students build on their knowledge of standard units and amount to use an equal-arm balance to investigate weight, density, and volume. The unit provides students with a variety of experiences and materials that help them build conceptual models for further investigations in the physical sciences.	<p><b>Skills of Inquiry:</b></p> <ul style="list-style-type: none"> <li>❖ Make predictions based on observed patterns</li> <li>❖ Name and use simple equipment</li> <li>❖ Record observations and data with pictures, numbers, or written statements</li> <li>❖ Discuss observation with others</li> </ul> <p><b>Physical Science:</b></p> <p>3. Describe the various ways that objects can move, such as in a straight line, zig-zag, back-and-forth, round-and-round, fast, and slow.</p> <p>4. Demonstrate that a the way to change the motion of an object is to apply force (give it a push or pull). The greater the force, the greater the change in the motions of the object</p> <p>5.– Recognize that under some conditions, objects can be balanced.</p>	<p>STC Kit Balancing and Weighing</p> <p>STC Kit Motion &amp; Design</p>	<p>Using construction paper and glue, design a 3-dimensional object that will roll in a straight line and a three-dimensional object that will roll around in a circle.</p> <p>Design a level, putting unequal weights on the ends of a balance board. Observe. Now find ways to restore the balance by moving the fulcrum, keeping each weight in the same place. Discuss what happens.</p>

CURRICULUM MAP

SUBJECT: The Life Cycle of Butterflies GRADE: TWO

MONTH	ESSENTIAL QUESTION	CONTENT (CHAPTER/UNIT DESCRIPTION/ACTIVITIES)	SKILLS (STANDARDS/LEARNING OUTCOMES)	MATERIALS/ RESOURCES	ASSESSMENT (Objective/Subjective)
	<p>What are the changes that take place in a life cycle?</p>	<p>Characteristics of organisms, the life cycle, and organisms in their environment are the focus of this unit. Students focus, explore, reflect, and communicate about butterflies and their transformations during their life cycle. Resource needs for food and habitat are introduced as students observe the stages in the life of this beautiful insect.</p>	<p><b>Skills of Inquiry:</b></p> <ul style="list-style-type: none"> <li>❖ Ask questions about objects, organisms, and events in the environment</li> <li>❖ Record observations and date with pictures</li> <li>❖ Discuss observations with others</li> </ul> <p><b>Life Science:</b></p> <p>1- Recognize that animals are living things that grow, reproduce and need food, air and water.                  2 – Recognize that plants and animals have life cycles.                  3 – Describe ways in which many plants and animals closely resemble their parents in observed appearance.</p> <p><b>Physical Science:</b></p> <p>1 – Sort objects by observable properties such as size, shape, color weight and texture.</p>	<p>STC Kit Life Cycle of Butterflies</p>	<p>Design and build a habitat for a living organism that can be modified to meet the changing needs of the organism during its life cycle.</p> <p>Design and build a habitat for a living organism that meets its needs for food, air, and water.</p>

Second Grade *Literacy By Design*  
Science Texts

<b>Discipline</b>	<b>Title</b>	<b>Author</b>
Science	Rain Forest Encyclopedia	Stanford Makishi
Science	The Wonderful Water Cycle	Lisa Shulman
Science	Making Butter	M.C. Hall
Science	Splash	Robert Kaufman
Science	An Encyclopedia of Fossils	Andrea Almada
Science	Seeds of Fortune	Brenda Parkes
Science	My Frog Log	Rogelio
Science	The Missing Moon Mystery	Karen Lynn Williams
Science	Living in the Extreme	Lisa Trumbauer
Science	How Living Things Help Each Other	Alice Reardon
Science	Plants We Use	Lisa Shulman
Science /Social Studies	The Land and Water of the United States (dictionary)	Dixie Lee Petrokis
Science/Social Studies	A Breakfast Story	Lorraine Sintetos
Social Studies /Science	Pass It On	Terra Tarango

CURRICULUM MAP

SUBJECT: **ROCKS and MINERALS**

GRADE: **THREE**

MONTH	ESSENTIAL QUESTION	CONTENT (CHAPTER/UNIT DESCRIPTION/ACTIVITIES)	SKILLS (STANDARDS/LEARNING OUTCOMES)	MATERIALS/ RESOURCES	ASSESSMENT (Objective/Subjective)
September October	<p>How can a person describe a rock?</p> <p>How are rocks formed?</p> <p>What is a mineral?</p>	<p>Students then explore color, translucence, crystal form, luster, and magnetism of a set of 12 minerals and, on the basis of these tests, identify the minerals by name.</p> <p>Sort rocks by properties.</p> <p>Read selection – “Rocks—Here, There, Everywhere.”</p> <p>Shared reading: <u>Fossils</u>.</p> <p>“Edible Rocks” activity.</p> <p>KWL - Minerals.</p>	<p><b>Skills of Inquiry:</b></p> <ul style="list-style-type: none"> <li>❖ Ask questions and make predictions that can be tested</li> <li>❖ Select the appropriate tool and technology</li> <li>❖ Keep accurate records</li> <li>❖ Record data and communicate findings</li> </ul> <p><b>Earth and Space Science:</b></p> <p>1 – Give a simple explanation of what a mineral is.</p> <p>2 – Identify the physical properties of minerals (hardness, color, luster, cleavage, and streak)/explain how minerals can be tested for these different physical properties.</p> <p>3 – Identify the three categories of rocks (metamorphic, igneous, sedimentary)/explain the natural and physical processes that create these rocks.</p> <p>Life Science (K-2):</p> <p>5 – Recognize that fossils provide us with information about living things that inhabited the earth long ago.</p>	<p>STC Kit Rocks and Minerals</p> <p>Big Book <u>Fossils</u> (Rigby)</p> <p>Big Book <u>Rocks</u></p>	<p>Written Assessment: Difference between a rock and a mineral. What are the three categories of rocks? How were they formed?</p> <p>Backpack Activity: Open Response, What tools will you pack?</p> <p>Describe three tests that you will perform to discover the properties of new minerals you discover in the field.</p> <p>Design a flowchart to demonstrate how silica from sand is used to make glass.</p>

## CURRICULUM MAP

SUBJECT: **STATES OF MATTER**GRADE: **THREE**

MONTH	ESSENTIAL QUESTION	CONTENT (CHAPTER/UNIT DESCRIPTION/ACTIVITIES)	SKILLS (STANDARDS/LEARNING OUTCOMES)	MATERIALS/ RESOURCES	ASSESSMENT (Objective/Subjective)
November-January	<p>What is a chemical? And how can it be used?</p> <p>What are the properties of objects?</p> <p>What is matter?</p>	<p>Observe and describe properties of common classroom objects.</p> <p>Sort materials and objects by properties.</p> <p>Students draw a simple outline of a solid, liquid, and a gas on a large piece of paper. To show that they are made of molecules, use Cheerios to fill the outline. To contrast the states space the Cheerios to show the difference.</p>	<p><b>Skills of Inquiry:</b></p> <ul style="list-style-type: none"> <li>❖ Ask a question and make a prediction</li> <li>❖ Select and use appropriate tool</li> <li>❖ Keep accurate records</li> <li>❖ Conduct multiple trials to test a prediction</li> <li>❖ Record data and communicate findings</li> </ul> <p><b>Physical Science:</b></p> <p>1 –Differentiate between objects and properties of materials.</p> <p>2 –Compare and contrast solids, liquids, and gases based on the basic properties of each of these states of matter.</p>	<p>STC Kit Chemical Tests</p> <p>Big Books: <u>What is matter?</u> (Lisa Trumbauer Newbridge, 1997)</p> <p><u>Matter</u> (Big Science) Scholastic, Inc.</p> <p><u>Science Factory Chemicals and Reaction</u> by Jon Richards (Copper Beach Books, Brookfield, CT.)</p>	<p>Predict from looking at a simple tool or object what actions it might be used for (e.g. pliers, letter opener, paperweight).</p> <p>Student bring in different containers from home. Discuss and demonstrate whether the containers are appropriate to hold solids, and liquids (e.g. a waxed cardboard box vs. a bottle)</p>

CURRICULUM MAP

SUBJECT: **THE EARTH IN THE SOLAR SYSTEM**

GRADE: **THREE**

MONTH	ESSENTIAL QUESTION	CONTENT (CHAPTER/UNIT DESCRIPTION/ACTIVITIES)	SKILLS (STANDARDS/LEARNING OUTCOMES)	MATERIALS/ RESOURCES	ASSESSMENT (Objective/Subjective)
January-February	<p>What is the solar system?</p> <p>Why do we have day/night?</p> <p>Why do we have seasons?</p> <p>Why does the moon appear to change shape in the night sky throughout the month?</p>	<p>K-W-L Solar System</p> <p>Students will keep a planet journal and will gather information about the sun, planets, asteroids, comets, and moons.</p> <p>Students will perform the play, “The Little Lost Astronaut.”</p> <p>Students will compose a letter to a pen pal from a different solar system giving directions to their home on Earth.</p> <p>Student will observe the sky nightly and record their observations for a month, noting changes they see.</p> <p>Moon Phase Cookie Activity</p> <p>Using the elementary planetarium model, demonstrate the rotation of the Earth on its axis and the orbit of the Earth around the sun, expressly noting the tilt of the Earth.</p>	<p><u>Earth and Space Science</u></p> <p>13. Recognize that the earth is a part of a system called the “solar system” that includes the sun (a star), planets and many moons. The earth is the third planet from the sun in our solar system.</p> <p>14. Recognize that the earth revolves around (orbits) the sun in a year’s time and that the earth rotates on its axis once approximately every 24 hours. Make connections between the rotation of the earth and day/night, and the apparent movement of the sun, moon, and stars across the sky.</p> <p>15. Describe changes that occur in the observable shape of the moon over the course of a month.</p>	<p>Internet  <a href="http://www.solarsystem.nasa.gov">www.solarsystem.nasa.gov</a>  <a href="http://www.enchantedlearning.com">www.enchantedlearning.com</a></p> <p>Planetarium Model</p> <p>Science Today:  <u>Plant Earth</u> by Mark Pettigrew, Aladdin Books.  <u>The Superbook of Our Plant</u>, Willowip Press.</p>	<p>Design and build a sundial and use it to determine the time of day. Explore how accurate it is over time. (T/E 1.1, 1.2, 2.3)</p> <p>Design and create a calendar that illustrates the phases of the moon (T/E 2.2, 2.3).</p> <p>Students will make a model of the Earth and the Sun, showing the Earth’s orbit around the sun and its tilt.</p>

CURRICULUM MAP

SUBJECT: **PLANT GROWTH and DEVELOPMENT** GRADE: **THREE**

MONTH	ESSENTIAL QUESTION	CONTENT (CHAPTER/UNIT DESCRIPTION/ACTIVITIES)	SKILLS (STANDARDS/LEARNING OUTCOMES)	MATERIALS/ RESOURCES	ASSESSMENT (Objective/Subjective)
May/June	<p>How does a plant depend on its environment?</p> <p>What's inside a seed?</p> <p>What is the life cycle of the Brassica Plant?</p>	<p>K-W-L Plants</p> <p>Students will dissect a lima bean seed. Students will label a seed diagram. Suggested activities: Seed collection from home Seed scavenger hunt.</p> <p>Students will plant Brassica seeds, observe, record, measure, graph, not changes, identify parts and describe the function of each structure.</p> <p>Students will use cards that show the Brassica Plant's cycle of growth and development.</p> <p>Students will sequence the correct order of the plants cycle.</p> <p>Dissect the lily flower. Compare to the Brassica Plant. Students will investigate the relationship between the bee and pollination of flowers.</p>	<p><b>Skills of Inquiry:</b></p> <ul style="list-style-type: none"> <li>❖ Ask questions and make predictions</li> <li>❖ Select and use appropriate tool</li> <li>❖ Keep accurate records</li> <li>❖ Record data and communicate findings</li> </ul> <p><b>Life Science:</b></p> <p>1- Classify plants and animals according to their physical characteristics.</p> <p>2 -Identify structures in plants (leaves, roots, flowers, stem, bark, wood) that are responsible for food production, support, water transport, reproduction, growth, and protection.</p> <p>3 – Recognize that plants and animals go through predictable cycles that include birth, growth, development, reproduction, and death.</p> <p>6 – Give examples of how changes in the environment (drought, cold)) have caused some plants and animals to die or move to new locations (migration).</p>	<p>STC Kit Plant Growth and Development</p> <p>Literature: The Reason for a Flower (Ruth Heller)</p> <p>Inside a Seed (Gail Gibbons)</p>	<p>Student notebooks, graphs, and record sheets.</p> <p>Label a blank diagram with the parts of a seed. Explain the function of each part.</p> <p>Students will build large models of the Brassica Plant.</p>

Third Grade ***Literacy By Design***  
Science Texts

<b>Discipline</b>	<b>Title</b>	<b>Author</b>
Science	Sports On Edge	Brian Sargent
Science	Carnivorous Plants	Katie Sharp
Science	People of Action	Raymond Coutu
Science	Growing up Abenaki	Joseph Bruchac
Science	A Dream Comes True	Claire Daniel
Science	Pulleys and Gears	Brad Herzog
Science	What Is Gravity	Eduardo Aparicio
Science	Plant Discoveries	Liz Ray
Science	Planet Watch	Margaret Fetty

CURRICULUM MAP

SUBJECT: ENERGY

GRADE: **FOUR**

MONTH	ESSENTIAL QUESTION	CONTENT (CHAPTER/UNIT DESCRIPTION/ACTIVITIES)	SKILLS (STANDARDS/LEARNING OUTCOMES)	MATERIALS/ RESOURCES	ASSESSMENT (Objective/Subjective)
	<p>What is energy? How it is created?</p> <p>What are some forms of energy?</p>	<p>Build simple circuits</p> <p>Predicting, observing, describing, recording results of experiments with electricity, magnets, sound, and light.</p> <p>Build a simple switch.</p> <p>Apply troubleshooting strategies.</p> <p>Have students test electrical conductivity by testing various materials.</p> <p>Balance ring magnets on a pencil.</p> <p>Test a variety of materials with assorted magnets.</p> <p>Use tuning forks to demonstrate the relationship between vibration and sound.</p> <p>Use a flashlight, mirrors, and water to demonstrate reflection and refraction.</p>	<p><b>Skills of Inquiry:</b></p> <ul style="list-style-type: none"> <li>▪ Ask questions and make predictions that can be tested</li> <li>▪ Select and use the appropriate tool</li> <li>▪ Keep accurate records while conducting investigations</li> <li>▪ Conduct multiple trials to test predictions</li> <li>▪ Record data and communicate findings</li> </ul> <p><b>Physical Science:</b></p> <p>6- Recognize that electricity in circuits requires a complete loop through which an electrical current can pass, and that electricity can produce, light, heat, and sound.</p> <p>7- Identify and classify objects and materials that are insulators of electricity.</p> <p>8- Explain how electromagnets can be made, and give examples of how they can be used.</p> <p>9- Recognize that magnets have poles that repel an attract each other.</p> <p>10- Identify and classify objects and materials that a magnet will attract and objects and materials that a magnet will not attract.</p> <p>11- Recognize that sound is produced by vibrating objects and requires a medium through which to</p>	<p>STC Kit Electric Circuits STC Kit Chemical Tests STC Kit Sound Unit Solar Flair Program</p> <p>Teacher Books: <u>Magnetism and Electricity</u> by Milliken Publishing Co. <u>Magnets and Electricity</u> by TCM <u>Magnets and Electricity</u> by Creative Teaching Press.</p> <p><u>Sciencesaurus</u></p> <p>Videos: <u>All About Magnets</u> by Schlessinger Library</p>	<p>Draw and label a simple electric circuit. Using batteries, bulbs, and wires, build a series circuit.</p> <p>Select materials and test them for effectiveness as an insulator.</p> <p>Design and build a magnetic device to sort steel from aluminum materials for recycling.</p> <p>Design and construct a simple telephone using a variety of materials (paper cups, string, tin cans, wire) Determine which prototype works best and why.</p> <p>Design and build a prototype to inhibit solar heating of a car (e.g. windshield reflector, window tinting).</p>

			<p>travel. Relate the rate of vibration to the pitch of sound.</p> <p>12- Recognize that light travels in a straight line until it strikes an object or travels from one medium to another, and that light can be reflected, refracted, and absorbed.</p>	<p><u>All about Uses of Energy</u></p>	
--	--	--	---	--	--

CURRICULUM MAP

SUBJECT: **STRUCTURES AND FUNCTIONS**

GRADE: **FOUR**

MONTH	ESSENTIAL QUESTION	CONTENT (CHAPTER/UNIT DESCRIPTION/ACTIVITIES)	SKILLS (STANDARDS/LEARNING OUTCOMES)	MATERIALS/ RESOURCES	ASSESSMENT (Objective/Subjective)
	<p>What does an animal need to survive?</p> <p>What is the relationship between an animal and its habitat?</p>	<p>Observe and describe structural characteristics and behaviors of the dwarf African frog, fiddler crab, and land snail.</p> <p>Record observations in journal.</p> <p>Develop questions and answer them through behavioral observations and research.</p> <p>Comparing and contrasting. Collecting, analyzing, drawing conclusions from data.</p> <p>Support conclusions with reasons that are based on observations and experience.</p> <p>Develop techniques to ensure safety of living things.</p> <p>Maintain animals outside natural habitats.</p>	<p><b>Skills of Inquiry:</b></p> <ul style="list-style-type: none"> <li>▪ Keep accurate records while conducting simple experiments</li> <li>▪ Recognize simple patterns in data and use data to create a reasonable explanation</li> <li>▪ Record data and communicate findings</li> </ul> <p><b>Life Science:</b></p> <p>3 – Recognize that animals go through predictable life cycles.</p> <p>4 – Describe the major stages that characterize the life cycle of a frog and butterfly as they go through metamorphosis.</p> <p>5 – Differentiate between observed characteristics that are fully inherited and characteristics that are effected by climate or environment.</p> <p>6 – Give examples of how inherited characteristics may change over time as adaption to changes in the environment.</p> <p>7 – Give examples of how changes in the environment have caused some animals to die or move.</p>	<p>STC Kit Animal Studies</p>	<p>Design and construct a habitat for a small animal (e.g. insect, butterfly, frog) that has adequate space and contains the necessities for survival.</p> <p>Discuss how engineers design things by using their knowledge of the ways that animals move (e.g. birds and wings influence airplane design, tails and fins of aquatic animals influence boat design).</p>

CURRICULUM MAP

SUBJECT: **LAND and WATER**

GRADE: **FOUR**

MONTH	ESSENTIAL QUESTION	CONTENT (CHAPTER/UNIT DESCRIPTION/ACTIVITIES)	SKILLS (STANDARDS/LEARNING OUTCOMES)	MATERIALS/ RESOURCES	ASSESSMENT (Objective/Subjective)
	<p>How does water change the shape of the land?</p> <p>Does land affect the shape of water?</p>	<p>Use stream table to investigate the interaction between land and water.</p> <p>Analyze the materials that make up land and describe these on the basis of their properties.</p> <p>Test the porous and adhesive properties of earth materials.</p> <p>Compare changes in land created by water flowing over and through soil on a stream table.</p> <p>Relate stream table results to natural processes.</p>	<p><b>Skills of Inquiry:</b></p> <ul style="list-style-type: none"> <li>▪ Ask questions and make predictions</li> <li>▪ Select the appropriate tool</li> <li>▪ Keep accurate records</li> <li>▪ Conduct multiple trials</li> <li>▪ Recognize simple patterns</li> <li>▪ Record data and communicate results</li> </ul> <p><b>Earth and Space Science:</b></p> <p>4 – Explain and give examples of the ways in which soil is formed.</p> <p>5 – Recognize and discuss the different properties of soil.</p> <p>10 – Describe how water on the earth cycles in different forms and in different locations on the earth.</p> <p>11 – Give an example of how the water cycle effects climate.</p> <p>12- Give examples of how the surface of the earth changes due to erosion and weathering processes.</p>	<p>STC Kit Land and Water</p>	<p>Design and construct a composting bin.</p> <p>Design and build a terrarium to demonstrate the water cycle.</p> <p>Identify one man-made attribute that slows the erosion process and one attribute that accelerates it. Relate these to natural systems.</p>

**BEVERLY – GRADE 4 – “SOLAR FLAIR” – INTEGRATED ARTS PROGRAM**

#	Class Lesson	Class Activity	Art/Music
#1	Intro to technology/engineering design process- Marshmallow catapult	Design/build catapult	Simple Machines Collage Art Book
#2	Intro to simple machines – The Whatzit? Simple and complex machines, unknown object	Whatzit? Draw/Label	
#3	Animals: Simply Perfect Natural systems v. simple machines	Draw/Label Animal parts	Ana-Machine Sculptures
#4	Simple Machines Make Work Easier – Lab Activity	Compare force needed to lift	
#5	Forms of Energy – “Slow Ball” Marble Run – atoms, photons, electrons	“Slow Ball” computer lab	Energy Dances (non-renewable and renewable) energy source +energy + force + work
#6	Generating Electricity for Our Homes – dynamos, magnetism, electricity	Build a model of a dynamo	
#7	What Energy Sources do we use? Graphing data, data analysis	Pie and bar graph analysis	
#8	Make a “Work Wheel” fuel, energy, force, work, measurements	Make a “Work Wheel”	
#9	Conservation I – A commercial introduction- how to make a difference	Write/perform a commercial	Perform Commercials
#10	Conservation II- How long to disappear? –properties of materials, estimation	Make a flip chart	Conservation songs
#11	Conservation III- Awareness through poetry – research impact on an animal	Research and write a poem	Poetry Animal Masks
#12	Solar Energy I – What is light? – circuits, conductors, insulators, silica, photons	Solar Rap Song	Closed Circuit Dance Jive
#13	Solar Energy II – Build a Solar Sandwich –silica molecule model	Make a model of a solar cell	Sun Art Prints
#14	Shelter Design – Environmental Expedition Mission – research environmental problem	Questionnaire research	Shelter Pop-ups Expedition Mission
#15	Solar Array Field Trip –map scavenger hunt, solar cookers	Install tiles Cookers	Class Solar Array Tile Mosaics

CURRICULUM MAP

SUBJECT: **INVENTIONS/SIMPLE MACHINES**

GRADE: **FIVE**

MONTH	ESSENTIAL QUESTION	CONTENT (CHAPTER/UNIT DESCRIPTION/ACTIVITIES)	SKILLS (STANDARDS/LEARNING OUTCOMES)	MATERIALS/ RESOURCES	ASSESSMENT (Objective/Subjective)
Sept-Dec	<p>How has the development of simple machines contributed to the creation of more complex inventions?</p> <p>How does the process of creating an invention involve the scientific method?</p>	<p>Simple machines                      Scientific method                      Energy                      Force/Motion                      Friction                      Properties of materials                      Cost considerations                      Design requirements</p>	<p>Technology and Engineering:                      1.2 Identify and explain the appropriate materials and tools (e.g. hammer, screwdriver, pliers, tape measure, screws, nails, and other mechanical fasteners) to construct a given prototype safely.                      1.3 Identify and explain the difference between simple and complex machines (e.g. hand can opener that includes multiple gears, wheel, wedge, gear, and level.                      2.1 Identify a problem that reflects the need for shelter, storage, or convenience.                      2.2 Describe different ways in which a problem can be represented (e.g. sketches, diagrams, graphic organizers, and lists)                      2.3 Identify relevant design features (e.g. size, shape, weight) for building a prototype of a solution to a given problem.                      2.4 Natural and mechanical systems are designed to serve similar purposes.</p>	<p>Solar Flair Program                      Integrated Arts</p> <p>Teacher Books:  <u>Inventions</u> by TCM.  <u>Inventions</u> by Carson-Dellosa PC  <u>How to be an Inventor</u> by Evan-Moor.</p> <p>Student Books:  <u>Inventive Thinking Toolkit</u>.  <u>Sciencesaurus</u></p> <p>Videos:  <u>All About Simple Machines</u> by Schlessinger Library.  <u>Meet the Great Inventors</u>                      Thomas Edison                      Albert Einstein  <u>Alistars Time Machine</u></p>	<p>Students will create a working invention/prototype of something that they created to help them with a problem.</p> <p>Tests/Quizzes</p> <p>Inventor’s Log</p> <p>Invention Packet Project:                      Students will create a Rube Goldberg invention with a small group and be able to explain how it works.</p> <p>Make predictions and then experiment to prove or disprove those predictions, while keeping records of experiments with objects.</p>

CURRICULUM MAP

SUBJECT: **ADAPTATIONS OF LIVING THINGS**

GRADE: **FIVE**

MONTH	ESSENTIAL QUESTION	CONTENT (CHAPTER/UNIT DESCRIPTION/ACTIVITIES)	SKILLS (STANDARDS/LEARNING OUTCOMES)	MATERIALS/ RESOURCES	ASSESSMENT (Objective/Subjective)
Jan-March	<p>How do plants and animals depend on each other?</p> <p>How have species adapted to their environment?</p> <p>How is energy produced and transferred between living things?</p>	<p>Ecology/Environment Ecosystems/Biomes Food Chains/Food Webs Habitats/Communities Soil important/Erosion Photosynthesis Producer, Consumer, Decomposer Symbiosis/Commensalism Herbivore, Carnivore, Omnivore Adaptations plants and animals Predators/Prey</p>	<p><b>Skills of Inquiry:</b></p> <ul style="list-style-type: none"> <li>▪ Ask questions and make predictions that can be tested</li> <li>▪ Select the appropriate tool or technology</li> <li>▪ Keep accurate records while conducting investigations</li> <li>▪ Recognize simple patterns in data</li> <li>▪ Record data and communicate findings</li> </ul> <p><b>Life Science:</b></p> <p>8 – Describe how plants and animals meet their need in an environment using behaviors in response to information from the environment. Recognize that some behaviors are instinctive and others are learned.</p> <p>9 – Recognize plant behaviors and recognize how plants and animals survive harsh environments with seasonal changes.</p> <p>10 – Give an example of how organisms can cause change in their environment to ensure survival. Explain how some of these changes may affect the ecosystem.</p> <p>11 – Describe how energy derived from the sun is used by plants to produce sugars (photosynthesis) and is transferred within a food chain from producers (plants) to consumers and decomposers.</p>	STC Kit Ecosystems	<p>Tests/Quizzes</p> <p>Journal assignments/observations</p> <p>Project: Create a “step book” of all the biomes.</p> <p>Brainstorm and sketch items found in the home that do help or could help humans survive.</p> <p>Design and build a compost bin. Use a thermometer to measure the temperature rise during composting. Discuss where heat comes from.</p>

CURRICULUM MAP

SUBJECT: WEATHER

GRADE: FIVE

MONTH	ESSENTIAL QUESTION	CONTENT (CHAPTER/UNIT DESCRIPTION/ACTIVITIES)	SKILLS (STANDARDS/LEARNING OUTCOMES)	MATERIALS/ RESOURCES	ASSESSMENT (Objective/Subjective)
Apr-June	How do geographical features effect weather and global patterns (climate) in different parts of the world?	Weather/climate Clouds Reasons for Seasons Weather instruments Air Movement Earth’s Atmosphere Energy from the Sun Air pressure Natural Disasters Fronts Meterology	Earth and Space: 6. Explain how air temperature, moisture, wind speed and direction, and precipitation make up the weather in a particular place and time.  7. Distinguish among the various forms of precipitation (rain, snow, sleet, hail), making connections to the weather in a particular place and time.  8. Describe how global patterns such as the jet stream and water currents influence local weather in measureable terms such as temperature, wind direction and speed, and precipitation. 9. Differentiate between climate and weather.	<i>Teacher Books:</i> <u>Weather</u> (Milliken) Weather <u>Overheads</u> (Milliken) <u>The Weather Report</u> (Makemaster)  <i>Student Books:</i> <u>Sciencesaurus</u>  <i>Videos:</i> All About Meterology Climate and Seasons Clouds Tornados and Hurricanes Water and Weather All About Sleet, Snow, Hail, and Rain WBZ WeatherNet Video Weather Instrument Models Visit from Meterologist.	Design and construct a variety of simple instruments that could be used to measure weather.  Construct various weather station instruments (e.g. wind gauge, barometer, anemometer) record data from them and make conclusions.  Make a mode of an ocean current. Fill a jar halfway with warm water. Sprinkle some pepper into the water to represent particles in the ocean. Put a colored ice cube into the jar. Draw and describe observations.

Appendix

## **Books for Teaching About Weather**

### **Books for Teaching About Weather**

by Tracey Roudex

**From Unit Plan:** Air and Weather

The following books are helpful for teaching weather terminology as well as the changes that occur from season to season.

**A Busy Year** by Leo Lionni □ Students can experience the change of the seasons as charming twin mice care for a special talking tree.

**Classroom Tip:** Add this book to your classroom library for independent reading.

**The Big Book of Reproducible Graphic Organizers** by Jennifer Jacobson & Dottie Raymer; illustrated by Amy Redmond □ 50 Great Templates to help kids get more out of Reading, Writing, Social Studies, and Science.

**Classroom Tip:** Use the Weather Watcher Chart for recording temperature and weather conditions.

**Cloudy With a Chance of Meatballs** by Judi Barrett □ Check out what kind of weather is on the menu in the town of Chewandswallow!

**Classroom Tip:** Share this humorous book to motivate students to explore the weather.

**Night Fighter: The Ultimate Book of Paper Planes** by Adam Elliot □ Fascinating chapters touch on everything from night fighting tactics to paper airplane folding techniques.

**Classroom Tip:** This book is a terrific reference tool, providing students with clear folding instructions for creating 20 different gliders.

**Thematic Poetry: Whatever the Weather – More than 30 Perfect Poems with Instant Activities to Enrich Your Lessons, Build Literacy, and Celebrate the Joy of Poetry** by Betsy Franco □ Add pizzazz to thematic units, daily lessons, and shared-reading time with this irresistible collection of easy-to-read poems.

**Classroom Tip:** Choose any weather-related poem from this resource to enrich your lessons.

**Weather Words and What They Mean** by Gail Gibbons □ Bright, attractive illustrations make the explanation of weather fun!

**Classroom Tip:** Use this book to introduce a variety of weather vocabulary.

**Wild About Weather: 50 Wet, Windy and Wonderful Activities** by Edward Brotak □ A fun humorous approach to weather!

## **2. Books About Weather**

**Classroom Tip:** This book is a fun addition to your classroom weather center and will serve as an introduction to the wacky world of weather.

**The Wind Blew** by Pat Hutchins □ The mischievous wind snatches away the possessions of unsuspecting townspeople.

**Classroom Tip:** Although this is a book for preschoolers, it can be used as a Read-Aloud to humorously highlight the effects of wind.

**101 Science Poems and Songs For Young Learners: Includes Hands On Activities** by Meish Goldish □ Reinforce basic science concepts through poetry and song.

**Classroom Tip:** Use these resources to extend weather lessons.

These resources are available from the [Teacher Store](#) at Scholastic.

**Can it Rain Cats and Dogs? Questions and Answers About Weather** by Gilda Berger and Melvin Berger; illustrated by Robert Sullivan □ This is a fun book to use for a trivia game.

**Can You Believe? Hurricanes** by Sandra Markle □ This is a wonderful resource book to teach about hurricanes.

**The Cloud Book** by Tomie dePaola □ Have students make a poster of a type of cloud after reading this interesting book.

**Cloudy With a Chance of Meatballs** by Judi Barrett, illustrated by Ron Barrett □ Children love to be silly with this story.

**Do Tornadoes Really Twist? Questions and Answers About Tornadoes and Hurricanes** by Gilda Berger and Melvin Berger; illustrated by Higgins Bond □ Children have many questions about tornadoes and hurricanes. Use this book to find the answers to their questions.

**It's too Windy!** by Hans Wilhelm □ Hello Reader! ® Level 1 □ Add this book to the reading center to encourage young readers.

**Scholastic Book Guides: Weather Words and What They Mean**

**Scholastic Book Guides: Cloudy with a Chance of Meatballs**

**Tornadoes! Fascinating Eyewitness Accounts, Facts, and Photos!** by Sally Rose □ This intriguing book is a wonderful resource for future weather forecasters.

### 3. (Books About Weather)

**Weather Words and What They Mean** by Gail Gibbons □ Use this book to explain weather words and concepts.

**The Wind Blew** by Pat Hutchins □ This is a fun book. Add it to the drama center.

Here are some additional books I use. Look for them at your local library.

**Hurricanes Have Eyes But Can't See and Other Amazing Facts About Wild Weather** by Melvin and Gilda Berger □ This is a fascinating read-aloud.

**Scholastic's The Magic School Bus Kicks Up a Storm** by Joanna Cole, illustrated by Bruce Degen □ Students love the Magic School Bus books. They are great discussion starters.

**Scholastic's the Magic School Bus Lost in the Snow** by Joanna Cole □ Scholastic Reader Level 2 □ This is a fun book about snow that the students can read to themselves.

**Storms** by Susan Canizares and Betsey Chessen □ Easy to read and informative, students really enjoy this one.

**What's the Weather Today?** by Allan Fowler □ Rookie Read-About Science □ Add this easy-to-read book to the reading center.

**Who Cares About the Weather?** by Melvin Berger, Natalie Lunhis □ Use this book as a story starter for writing about the weather.

**Seasons:**

**Caps, Hats, Socks, and Mittens: A Book About the Four Seasons: Big Book Unit**

**What Will the Weather Be Like Today?: Big Book Unit** by Paul Rogers

#### **4. Books for Teaching About Plants**

These resources are available from the [Teacher Store](#).

**The Tiny Seed** by Eric Carle □ Use this book to teach about the life cycle of a flower.

**How Are You Peeling?** by Joost Elffers and Saxton Freyman □ After reading this book, the children want to take their own photographs of fruits and vegetables.

**From Seed to Plant** by Gail Gibbons □ This is a wonderful book to introduce plants.

**The Carrot Seed** by Ruth Krauss; illustrated by Crockett Johnson □ the children love acting out this story.

**Hello Reader! I'm a Seed** by Jean Marzollo, illustrated by Judith Moffatt □ Add this easy-to-read book to your reading center.

**Red Leaf, Yellow Leaf: Big Book & Teaching Guide** by Lois Ehlert □ After reading this book, the children draw the life cycle of a tree.

**Carlos and the Squash Plant/Carlos y la planta de calabaza** by Jan Romero Stevens; illustrated by Jeanne Arnold □ The children love the side-by-side English and Spanish in this fun book.

**Let's Find Out's Big Box of Science** □ This is a great kit to teach about the parts of a plant.

**Learn About Earth Science: Plants Academic Version** □ The students love this interesting software program.

Look for these resources in your library:

**Welcome Books** by Jan Kottke

**From Seed to Dandelion**

**From Seed to Pumpkin**

**From Acorn to Oak Tree**

These easy-to-read books are perfect for the reading center.

**Rookie Read-About Science** by Allan Fowler

**From Seed to Plant**

**It Could Still Be a Flower**

These easy-to-read books are perfect for the reading center.

**Growing Things** by Carolyn Scrace □ This is an intriguing book about growing plants with special split pages.

**Scholastic's The Magic School Bus: Goes to Seed** □ This is a fun video to show when teaching about seeds.

## 5. Books for Teaching About Animals

by Steven Hicks

**From Unit Plan:** Animals Are Everywhere!

Most children have a limited conceptual understanding of animals. While they may know the names of some of their favorites, they know little about what distinguishes one group of animals from another. These books help children to see similarities and differences between animals and introduce their habits and habitats.

**Actual Size** by Steve Jenkins □ This book shows animals or parts of animals in their true size.

**Classroom Tip:** Children can compare their eye to the eye of a squid or their hand to the hand of a gorilla.

**Animal Tracks** by Arthur Dorros □ Children explore the animals that live in the forest through a guessing game of animal tracks.

**Classroom Tip:** I copied many sets of animal tracks and each day taped a different one on the wall for students to identify.

**Biggest, Strongest, Fastest** by Steve Jenkins □ Fourteen amazing animals are depicted in this colorful assortment of world records from the animal kingdom.

**Classroom Tip:** While exploring the amazing feats of these animals, I ask students to categorize them into groups: birds, mammals, reptiles, fish, amphibians, or insects and invertebrates.

**From Head to Toe** by Eric Carle □ These pictures invite children to wiggle, stomp, bend, and thump in the same way animals do.

**Classroom Tip:** I make cards with animal pictures for the dramatic play center and encourage students to move the way each animal does.

**Guided Reading Set: Level A – The Things Birds Eat: 6 Book Set** □ Simple text shows the variety of things that birds eat.

**Classroom Tip:** These science readers are a great way to expose children to nonfiction and let them practice reading skills.

**Mr. Seahorse** by Eric Carle □ Sea-life fathers and their roles as caregivers are depicted in this story.

**Classroom Tip:** A great book that encourages children to talk, write, and draw about how their father cares for them.

## 6. Animals

**Nature Up Close: A Salamander’s Life** by John Himmelman □ One of many books in a series, this tells the journey a salamander takes through its life cycle through simple text and beautiful watercolor illustrations.

**Classroom Tip:** I have the children draw pictures of the life cycle and compare it to another amphibian, the frog.

**Once There Was a Bull...(frog)** by Rick Walton; illustrated by Greg Nally □ A frog follows another frog as he searches for his hop.

**Classroom Tip:** Children listen to and practice compound words.

**Rookie Read-About Science: Shellfish Aren’t Fish** by Allan Fowler □ Beautiful photographs show animals that live in shells: oysters, clams, scallops, and mussels.

**Classroom Tip:** When classifying animals, students often ask if shellfish are fish. This book helps children learn about invertebrates and helps classify animals without a skeleton.

**Watch Them Grow** □ With an organized table of contents, this book shows the ways that various animals and plants grow.

**Classroom Tip:** I like to read one section at a time to stimulate discussion and sharing.

**What Do You Do With a Tail Like This?** by Steve Jenkins and Robin Page □ This book compares and contrasts the different body parts animals have and tells how they use them.

**Classroom Tip:** Children can guess the animals that have the illustrated body part and compare how they use their own.

Notes:

Resources for Light Energy, Solar System and Simple Machines are weak. Joe will investigate. Do we have others being used by teachers that can be added to the list?

Present at next two grade level meetings. Science funding is available this year to purchase resources. Additional funds may be available as well. What is the capacity of building budgets?

Joe will provide PD for elementary teachers in the fall on any areas that they feel are weak for them. Use the rest of this year to identify them.