

GENERAL CHURCH OFFICE OF EDUCATION RESOURCE CENTER

SCIENCE UNIT BOXES

Title	Grade	Contents	Description
Dinosaurs	K	Teaching ideas and books, including: <i>Patrick's Dinosaurs</i> , <i>Dinosaur Babies</i> , <i>I Am a Big Dinosaur</i> , <i>Dinosaur's Everywhere</i> , and <i>How Big Were the Dinosaurs?</i>	Teaching ideas include making a dinosaur diorama, creating "dinosaur fossils," have students dig for plastic dinosaurs in sand, action poem by Nancy Klein, and more.
The Five Senses <i>3 copies, enclosed books may vary</i>	K	Unit plan, New Church background, kaleidoscope, sample projects, Aliko's <i>My Five Senses</i> , <i>Forest of Dreams</i> , <i>Discovering Little Things</i> , <i>The Listening Walk</i> , books by Maria Ruis on the five senses, <i>Through Grandpa's Eyes</i> , <i>If at First You Do Not See</i> , and <i>Have You Seen My Duckling?</i>	Great suggestions for literature and activities for exploring the five senses. Activities include texture rubbings, listening game, and a tasting party. One project is making individual books called <i>Let Your Light Shine</i> that illustrate ways the children can use their five senses to be the best they can be.
New Life from the Lord <i>(science unit integrated with literature)</i> <i>2 copies, enclosed books may vary</i>	K	Lesson plans, N.C. background, songs, and activities. Books include: <i>The Tiny Seed</i> , <i>The Honeybee and Robber</i> , <i>Miss Rumphius</i> , <i>The Reason for a Flower</i> , <i>The Golden Egg Book</i> , <i>The Story of the Root Children</i> , <i>Wilfred Gordon McDonald Partridge</i> , and <i>Giving</i> .	A springtime unit surveying the new life from the Lord: seeds, wildflowers, butterflies, birds, baby animals, and infants. This is a wonderful unit with songs, poems, art projects, and ways to integrate this unit throughout the day.
Rocks and Fossils <i>(science unit integrated with literature)</i> <i>2 copies, enclosed books may vary</i>	K	Teaching ideas, N.C. background, photos, Rocky Bingo, and books. These include: <i>Stone Soup</i> , <i>Sylvester and the Magic Pebble</i> , <i>The Magic School Bus Inside the Earth</i> , <i>Rock Collecting</i> , <i>Everybody Needs a Rock</i> , <i>Fossils of Long Ago</i> , and <i>Rocks and Minerals</i> .	Many activities to introduce young students to the mineral kingdom. Suggestions include a special worship on "Rock Day," a song and game called "Rhythm of the Rocks," playing mancala with polished stones, and Rocky Bingo.
The Sun and Solar System <i>(science unit integrated with literature)</i> <i>2 copies, enclosed books may vary</i>	K	Lesson plans, N.C. background, science experiments, songs, poems, blessings, and art projects. Books include: <i>Sun Song</i> , <i>My Shadow</i> , <i>The Sun</i> , <i>Wake Up Jeremiah</i> , <i>What Makes a Shadow?</i> <i>The Midnight Farm</i> , <i>Sun Up</i> , <i>The Planets</i> , and <i>What Makes Day and Night</i> .	A wonderful unit to help children appreciate the heat and light from the sun. Activities include making a sun book, sequencing paper planets, telling time with sundials, making solar prints, painting a sunrise, making a paper mache solar system, and playing shadow tag.
Mother Earth and Root Children <i>(integrated)</i>	K-1	<i>The Root Children</i> book, Mother Earth Doll, and tiny root children. complete with colorful silk gowns.	Use in conjunction with New Life from the Lord or Springtime. Wake the children up and put on the silk gowns in the spring.

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<p>Arctic Animals (enclosed with the Inuit unit) 4 copies</p>	<p>1</p>	<p>Includes unit overview, N.C. background, information sheets for students to read about various arctic animals (written by a first grade teacher), sample of a class book, and suggested literature activities.</p>	<p>Students choose an Arctic animal, research it, make it out of beeswax or clay, and write a report to combine with the others into a class book. Students illustrate all of the animal reports for their copy of the class book.</p>
<p>Ecology: The Earth as Home (introductory science unit, integrated with literature) 3 copies</p>	<p>1</p>	<p>Books include: <i>A House Is a House for Me</i>, <i>Animals at Home</i>, <i>The Great Kapok Tree</i>, <i>Over in the Meadow</i>, <i>All in the Woodland Early</i>, <i>One on a Web</i>, <i>Whose House Is This?</i>, <i>Wonders of the Forest</i>, <i>One Small Square: Backyard</i>, and <i>In the Tall, Tall Grass</i>.</p>	<p>Literature and teaching ideas for introducing the earth as home for people and animals. This unit looks at habitats within their own community. Through other units, such as the Inuit, students may be introduced to additional habitats.</p>
<p>Four Seasons: Autumn (science unit integrated with literature) 5 copies, enclosed books may vary</p>	<p>1</p>	<p>Includes teaching ideas, N.C. background, and several books: <i>In the Forest</i>, <i>One Small Square: Backyard</i>, <i>Frederick</i>, <i>Mousekin's Family</i>, <i>Look What I Did with a Leaf</i>, <i>All in the Woodland Family</i>, <i>The Dandelion Seed</i>, <i>Every Autumn Comes the Bear</i>, <i>Shadows of the Night</i>, <i>In the Forest</i>, <i>Frog and Toad All Year</i>, <i>Wonders of the Forest</i>, <i>Chipmunk at Hollow Tree Lane</i>, <i>One Small Square: Backyard</i>, <i>The Adventures of Chatterer the Red Squirrel</i>, and <i>Apple Picking Time</i>.</p>	<p>Looks at weather, plant life, animals, and activities of people in the autumn. Also looks at seeds, apple trees, and local woodland mammals. Suggestions include math activities with pumpkin seeds, categorizing seeds by how they travel, milkweed races, making acorn elves, etc.</p>
<p>Four Seasons: Spring (science unit integrated with literature) 4 copies, enclosed books may vary</p>	<p>1</p>	<p>Teaching ideas, N.C. and other background materials, and activities. Books include: <i>Spring</i>, <i>The Rose in My Garden</i>, <i>This Year's Garden</i>, <i>Did You Hear the Wind Sing Your Name?</i>, <i>Spring Song</i>, <i>The Caterpillar and the Polliwog</i>, and <i>Pond Year</i>.</p>	<p>Follows suggestions of the proposed Science Curriculum to look at weather, plant life, gardens, and animals. Includes some resources relating to pond life and polliwogs.</p>
<p>Four Seasons: Summer (science unit integrated with literature) 5 copies, enclosed books may vary</p>	<p>1</p>	<p>Teaching ideas, background material, and books including <i>The Very Hungry Caterpillar</i>, <i>The Grouchy Ladybug</i>, <i>Ten Flashing Fireflies</i>, and <i>Be Nice to Spiders</i></p>	<p>A short unit looking at summer weather, activities of people, plant life, animals in the summer, and the sun. Includes a mini-unit on helpful insects that are associated with summer.</p>

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<p>Four Seasons: Winter <i>(science unit integrated with literature)</i></p> <p>5 copies, enclosed books may vary</p>	<p>1</p>	<p>Teaching ideas, N.C. background, animal track stamps, and books such as: <i>Anno's Counting Book, Animals in Winter, Around the Year, Snow Is Falling, The Big Snow, Winter, The Snowy Day, The Tomten, A Busy Year, Whose Tracks Are These? Winter Poems, Chicken Soup with Rice, and The Mitten.</i></p>	<p>Activities and materials to help students observe the Lord's Creation in winter, looking at the activities of people, animals, and plants. Suggestions include: Snow Melt, Flakes Up Close, Where Do They Go in Winter? Snow Blanket, and Rhododendron Thermometer. <i>Note: This unit works well with the Inuit and Arctic Animal units.</i></p>
<p>Gold and Pearls <i>(science unit integrated with literature)</i></p> <p>3 copies</p>	<p>1</p>	<p>Includes teaching ideas, N.C. and other background material, project ideas, and these books: <i>Grandfather Twilight, King Midas, and Pearl Oyster.</i></p>	<p>A mini-unit to learn about precious gold and pearls in connection with a worship unit on the Holy City New Jerusalem. One suggestion is to tell students how pearls are formed, showing them pearls, an oyster shell, and sand.</p>
<p>Rainbows <i>(science unit integrated with literature)</i></p> <p>3 copies, enclosed books may vary</p>	<p>1</p>	<p>Lesson plans, N.C. background, tape (<i>I Can Sing a Rainbow</i>) and photographs of projects. Books include: <i>The Rainbow Goblins, Rainbow of My Own, and Rainbow Crow.</i></p>	<p>This one-week unit supports the first grade religion curriculum lessons on Noah. Activities include making colored sand rainbows and rainbow bottles. <i>We suggest using this unit when teaching about Noah in religion!</i></p>
<p>Simple Machines</p> <p>2 copies, enclosed books may vary</p> <p>New DVD!</p>	<p>1</p>	<p>Unit overview and daily lesson plans, N.C. background, and books such as: <i>How Do You Lift a Lion?; Mike Mulligan and His Steam Shovel; Levers, Pulleys, Machines We Use; and Design and Create Simple Machines.</i></p>	<p>This two-week unit looks at simple machines we use in daily life. Includes many hands-on experiments and ways to demonstrate simple machines in the classroom. Fun projects include making miniature flagpoles (pulleys) and helicopter toys.</p>
<p>Teeth <i>(science unit integrated with literature)</i></p>	<p>1</p>	<p>Teaching ideas and these books: <i>No Tooth, No Quarter!; Little Rabbit's Loose Tooth; and Arthur's Loose Tooth.</i></p>	<p>A brief unit about teeth that is well-integrated with literature.</p>
<p>Trees: Through the Seasons <i>(science unit integrated with literature)</i></p> <p>4 copies, enclosed books may vary</p>	<p>1</p>	<p>Many teaching ideas, N.C. background material, audiotape of the Johnny Appleseed song, posters, pictures, and books: <i>The Tree in the Wood, Once There Was a Tree, A Tree Is a Plant, A Tree Is Growing, Tree in the Ancient Forest, One Small Square: Woods, Forest of Dreams, A Tree Is Nice, The Tree Almanac, Be a Friend to Trees, One Day in the Woods, How the Forest Grew, The Seasons of Arnold's Apple Tree, Apple Picking Time, and Lindbergh's Johnny Appleseed.</i></p>	<p>This resource unit covers the parts of a tree, its life cycle, seasonal cycle, uses, and some identification. Activities include a wall collage of tree parts, adopting a tree to follow through the seasons, making acorn elves, learning about Johnny Appleseed, role-playing the life of a tree, identifying products that come from trees, and doing art projects.</p>

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<p>Wild Animals Nearby (science unit integrated with literature)</p> <p>2 copies, enclosed books may vary</p>	<p>1</p>	<p>Teaching suggestions, N.C. background material, pictures, and these books: <i>Whitetails for Kids</i>; <i>Deer at the Brook</i>; <i>Once upon a Springtime</i>; <i>All about Deer</i>; <i>The Deer, Rabbits, Squirrels</i>; and <i>Chipmunks</i>; and <i>Chipmunk at Hollow Tree Lane</i>.</p>	<p>A resource unit to help students learn about deer and squirrels, two animals that depend on trees.</p> <p><i>Note: May be taught with tree unit in the autumn or another part of the year.</i></p>
<p>Frog and Toad Together (science unit integrated with literature)</p>	<p>1-2</p>	<p>Includes lesson plans, N.C. background, activities, and books such as: <i>Frog and Toad Together</i>; <i>Jump Frog, Jump!</i>; <i>The Pond</i>; and <i>The Caterpillar and the Polliwog</i>.</p>	<p>Science activities and books to enrich a literature unit on <i>Frog and Toad Together</i>. This unit could support the study of spring in first grade or the study of water in second grade. Suggestions include observing frogs and learning how they cope with the 4 seasons. (More detailed study of frogs and their life cycle is in the 3rd grade curriculum.)</p>
<p>Ecology: Care for the Environment (science unit integrated with literature)</p> <p>2 copies</p>	<p>1-3</p>	<p>Unit plan, N.C. and other background material, and many activities (making a compost pile and predict what will decompose the fastest, trying to clean up a simulated oil spill, and cleaning up the campus). Books include <i>The Lorax</i>.</p>	<p>An optional mini-unit designed by primary teachers to help children think about our responsibility to take care of the Lord's creation.</p>
<p>Video <i>The Wonders of God's Creation: Animal Kingdom</i></p>	<p>1-up</p>	<p>A 66 min. video from the Moody Institute of Science showing many wonders of nature and evidence of the Creator's care.</p>	<p>For an older audience, but includes good segments on monarch butterflies (life cycle and migration), bird flight, and honeybees (dances).</p>
<p>The Animal Kingdom: Sheep <i>and Other Domesticated Animals</i> (science unit integrated with literature)</p> <p>3 copies, enclosed books may vary</p>	<p>2</p>	<p>Teaching ideas, N.C. background, sheep's wool, and books such as: <i>Pelle's New Suit</i>, <i>Charlie Needs a Cloak</i>, <i>Warm as Wool</i>, <i>Red Berry Wool</i>, <i>The Snow Lambs</i>, <i>A Symphony for the Sheep</i>, <i>Maury Had a Little Lamb</i>. Books on other domesticated animals include: <i>All Pigs Are Beautiful</i>, <i>Beatrice's Goat</i>, and <i>Hooray for Dairy Farming!</i></p>	<p>This unit helps students learn about sheep, so that they can better understand how the Lord is our Shepherd. Also includes information and some activities relating to other domesticated animals: horses, camels, cattle/calves, goats, and pigs.</p>
<p>Ants (science unit integrated with literature)</p> <p>3 copies, enclosed books may vary</p>	<p>2</p>	<p>Teaching suggestions, N.C. background, plastic model of an ant, and books such as: <i>If You Were an Ant</i>, <i>Hucklebug</i>, <i>Ant Cities</i>, <i>Very First Things to Know about Ants</i>, <i>Armies of Ants</i>, <i>One Hundred Hungry Ants</i>, <i>The Ant and the Elephant</i>, and <i>Amazing World of Ants</i>.</p>	<p>Read aloud <i>The Little Black Ant</i>, an excellent story about a community of ants. Create an ant farm, make a diagram of an ant's body, determine the food preferences of ants, and write about the world as seen by an ant.</p> <p>Includes suggestions for math integration.</p>

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<p>Baby Animals</p> <p><i>3 copies, enclosed books may vary</i></p>	<p>2</p>	<p>Teaching ideas, pictures and these books: <i>Animals Born Alive and Well, If You Were a Kitten, Baby Wild Animals, How Animals Care for Their Babies, Meet Baby Animals, Wild Babies, Baby Whales Drink Milk, Baby Wolf, Black Bear Cub, and The Four Friends.</i></p>	<p>This resource unit includes teaching ideas from three teachers, wonderful books, and pictures.</p>
<p>Birds</p> <p><i>(science unit integrated with literature)</i></p> <p><i>4 copies, enclosed books may vary</i></p>	<p>2</p>	<p>Teaching ideas, N.C. background material, hands-on activities, pictures, and posters of songbirds and nests. Books include: <i>The Little Brown Jay, Puffin's Homecoming, Bald Eaglets, Amazing Birds, How Do Birds Find Their Way?, Chibi, The Cuckoo Child, If You Should Hear a Honey Guide, The Tale of the Mandarin Ducks, Let's Look at Birds, Nature Club Birds, Hayes Book of Birds, What Is a Bird?, and Cardinals, Robins, and Other Birds.</i></p>	<p>A resource unit with lesson plans from two classroom teachers and many hands-on activities including: Mystery Bird Descriptions, Focus on Feathers, Bird Chorus, Try Building a Nest, Why Migrate? Migration Obstacle Course, Night Flight, making clay birds' eggs, and making bird feeders.</p> <p><i>Note: The notebook is now easier to use, having been rearranged as suggested by a classroom teacher.</i></p>
<p>Fish</p> <p><i>(science unit integrated with literature)</i></p> <p><i>2 copies, enclosed books may vary</i></p>	<p>2</p>	<p>Includes teaching ideas, N.C. background, and books such as: <i>If You Were a Fish, Fish Is Fish, Swimmy, The Rainbow Fish, Big Al, Life at the Seashore, The Ocean Alphabet Book, The Underwater Alphabet Book, and Amazing Fish.</i></p>	<p>Follows the proposed science curriculum in looking at the habitats, characteristics, uses, and life cycle of fish. There is great literature that can be used to enrich this unit.</p>
<p>Honeybees</p> <p><i>(science unit integrated with literature)</i></p> <p><i>3 copies, enclosed books may vary</i></p>	<p>2</p>	<p>Teaching suggestions, N.C. and other background material, and activities. Books include: <i>The Bee Tree, The First Book of Bees, Honeybee, Gran's Bees, Inside a Beehive, Life and Times of the Honeybee, The Honeymakers, and Questions and Answers about Bees.</i></p>	<p>Suggested activities include making beeswax candles, exploring the strength hexagons give the honey comb, trying the dance of the bees, and dramatizing the different roles of workers in a beehive.</p>
<p>Magnets</p> <p><i>2 copies</i></p>	<p>2</p>	<p>Teacher instructions, activities, 11 copies of <i>Amazing Magnets</i>, Van Cleave's book about magnets, 35 Science Projects, magnetic marbles, magnetic pick up sticks, Levitation set, and lots of magnets.</p>	<p>Magnetism unit is designed for primary grades, but the great equipment could also be used at the intermediate level.</p>
<p>Muscles</p> <p><i>2 copies</i></p>	<p>2</p>	<p>Unit overview, daily lesson plans, <i>You Can't Make a Move Without Your Muscles</i> by Paul Showers, and Seymour Simon's <i>Muscles</i> (for teacher background).</p>	<p>Includes great lesson plans donated by a classroom teacher and a student teacher.</p>

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<p>Plants <i>(science unit integrated with literature)</i></p> <p>2 copies, enclosed books may vary</p>	<p>2</p>	<p>Teaching ideas, N.C. background material, and books such as: <i>Eating the Alphabet, The Reasons for a Flower, Plants that Never Ever Bloom, Alison’s Zinnia, Oh Say Can You Seed?, Miss Rumphius, The Seasons of Arnold’s Apple Tree,</i> and <i>From Seed to Plant.</i></p>	<p>This unit explores the variety of plants, what plants need in order to grow, the parts of plants, plant life cycle, and the uses of plants. Teaching ideas include dramatizing the life of a seed, experiments to see what plants need, discussing what parts of plants we eat, and looking at plants in the land of Canaan.</p>
<p>Water <i>(science unit integrated with literature)</i></p> <p>3 copies, enclosed books may vary</p>	<p>2</p>	<p>Teaching ideas, N.C. background, and experiments from Edith Sisson’s <i>Nature with Children of All Ages.</i> Books include: <i>Follow the Water from Brook to Ocean, The Water’s Journey, Small Cloud, What Makes It Rain?, Who Sank the Boat?, Down Comes the Rain, Follow Water from Brook to Ocean, Pond Year, River of Life, By Lakes and Rivers, River Story, Pond Life, Think of a Beaver, Otters Under Water, Raccoons for Kids, A Drop around the World,</i> Thomas Locker’s <i>Water Dance,</i> and <i>Water Water Everywhere.</i></p>	<p>Learn about water, the water cycle, and how living things depend on water. Experiments explore water in air, soil, and living things, the water cycle, and surface tension. Projects include a story about the journey of a raindrop and a mural of pond life.</p> <p>This unit box also includes ideas for teaching about floating and sinking, rivers, and books about mammals that live near water (e.g. beavers, otters, and raccoons).</p>
<p>Weather <i>(science unit integrated with literature)</i></p> <p>3 copies, enclosed books may vary</p>	<p>2</p>	<p>Many teaching ideas, N.C. and other background material, and books which include: <i>Bringing the Rain to Kapiti Plain, Cloudy with a Chance of Meatballs, Weather Words and What They Mean, Weather Poems for All Seasons, Tornadoes!, Thunder Cake, The Storm Book, Lightning, Why Do We Have Wind and Rain?,</i> and <i>Rain.</i></p>	<p>Look at the sun, seasons (review), types of clouds, kinds of weather, wind, rain, snow, etc. Suggested activities include having students make clouds with cotton balls or the wax resist method, test the direction the wind is blowing, draw a storm sequence picture, and discuss the usefulness of different kinds of weather.</p>
<p>Astronomy: The Solar System <i>(science unit integrated with literature)</i></p> <p>3 copies, enclosed books may vary</p>	<p>3</p>	<p>Unit overview, lesson plans, activities, N.C. and other resource materials, posters, and star finder. Books include: <i>What the Moon Is Like, The Seventh Sister, Sky Detective, Our Universe, the Planets, A Walk through the Heavens, The Starry Sky, Venus, Galaxies, Mars,</i> and more. Also includes the Ranger Rick activity guide: <i>Astronomy Adventures.</i></p>	<p>A resource unit focusing on the sun, the moon and its phases, planets, constellations, and life on other earths. Activities include researching a planet, charting moon phases, and hearing myths relating to the moon or the Milky Way.</p> <p><i>Note: Unit boxes that tie into astronomy include Major Tom and Phases of the Moon.</i></p>

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<p>Dinosaurs</p> <p><i>2 copies, enclosed books may vary</i></p>	<p>3</p>	<p>Teaching ideas, 11 fossils, posters, a videotape, and many books. These include: <i>Patrick's Dinosaurs, Amazing World of Dinosaurs, Learn about Dinosaurs, It's Still Alive, The Last Dinosaur, I Wonder Why Triceratops Had Horns, The Best Book of Dinosaurs, Dinosaurs and Other Prehistoric Animals,</i> and <i>Dinosaur Dream.</i></p>	<p>This unit is taught with amphibians and reptiles in BACS. Fun activities include putting together and identifying various dinosaur “skeletons,” drawing life size dinosaurs on the parking lot (with help from older grade), and writing & illustrating stories about an invented dinosaur.</p>
<p>The Five Senses</p> <p><i>(science unit integrated with literature)</i></p> <p><i>3 copies</i></p>	<p>3</p>	<p>Teaching ideas, N.C. background, lesson plans, many experiments, and poems. Books include: <i>Your Amazing Five Senses, Hearing, Smelling, Touching, Tasting, The Magic School Bus Explores the Senses, You Can't Smell Your Ear, Louis Braille,</i> and <i>Helen Keller.</i></p>	<p>Learn about Helen Keller, read books about the five senses, do many experiments, try to read a message in Braille, do creative homework assignments, and enjoy optical illusions.</p>
<p>Gems and Crystals</p> <p><i>4 copies, enclosed books may vary</i></p>	<p>3</p>	<p>Teaching ideas, extensive New Church background, gemstones, and books: <i>Eyewitness Books: Crystals and Gems, Exploring Earth's Treasures, Crystals, Gemstones,</i> and <i>Van Cleave's Rocks and Minerals.</i></p>	<p>Gems illustrate the splendor of the Lord's creation. This unit is integrated with the study of the Tabernacle, and each student researches one of the breastplate gems. Another idea is to read stories mentioning gems in heaven and make a watercolor illustration.</p>
<p>Heart and Lungs</p> <p><i>(science unit integrated with literature)</i></p> <p><i>2 copies</i></p>	<p>3</p>	<p>A resource unit with lesson plans, N.C. background material, photographs of the life-size art project, books, and activities. Books include: <i>The Heart, Hear Your Heart, Swedenborg Gets to the Heart of the Matter,</i> and <i>The Wonderful Wizard of Oz.</i></p>	<p>Covers the heart, lungs, and circulatory system. Students illustrate how these function using a life-size outline of a person.</p>
<p>Insects: Life Cycles</p> <p><i>4 copies, enclosed books may vary</i></p>	<p>3</p>	<p>An integrated unit, which includes an overview, N.C. background, activities, posters, poetry, and plastic insects. Books for teachers include <i>Nature Scope: Incredible Insects, Kneidel's Creepy Crawlies and the Scientific Method,</i> and <i>Roettger's Bugs and Other Insects.</i> Books for students include: <i>Grasshopper on the Road, The Insect Book, Bugs, The Changing Caterpillar, The Butterfly Alphabet,</i> and <i>Eyewitness Butterfly and Moth.</i></p>	<p>This is the year to focus on insects (except bees and ants), learning about their anatomy, life cycles, habits, and habitat. A highlight is observing a Painted Lady butterfly. Some fun activities include: design your own insect, identify the silent stalker insect (through its description), make modge podge butterflies, and assume the character of an insect for one day.</p>

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<p>Reptiles and Amphibians <i>(science unit integrated with literature)</i></p> <p>3 copies, enclosed books may vary</p>	<p>3</p>	<p>Teaching ideas, N.C. background, <i>Life on Earth</i> video with segments on amphibians and reptiles. Books include: <i>Fabulous Frogs; The Frog Alphabet Book; How to Hide a Meadow Frog; Frogs and Toads; Reptiles; Frogs, Toads, Lizards, and Salamanders; Why Frogs Are Wet; Snakes!; Sea Turtles; Alligators and Crocodiles;</i> and <i>Discovering Reptiles and Amphibians</i>. Also includes 3 <i>Zoobooks: Alligators and Crocodiles, Snakes, and Turtles</i>.</p>	<p>Students read books about frogs and toads, then draw life cycle of an amphibian. Draw an amphibian seen in the video, and then place on a habitat mural. Read about reptiles, then make a crocodile or alligator, and be able to explain the difference.</p>
<p>Phases of the Moon (optional)</p>	<p>3-6</p>	<p>Plastic hemisphere, protractor on board, and suggested activities. (Can use with Astronomy or Space Exploration units.)</p>	<p>Teaches scientific facts about the moon, while also demonstrating the Lord's government of the universe, order, patterns, cycles, <i>etc.</i> <i>(Note: This unit box was designed and donated by Morna Hyatt.)</i></p>
<p>Deserts <i>(science unit integrated with literature)</i></p> <p>2 copies, enclosed books may vary</p>	<p>4</p>	<p>Unit plan, lesson plans, N.C. background, poster, activities, projects, and pictures. Books include: <i>Alejandro's Gift, Annie and the Old One, Desert Giant, The Desert Is Theirs, Desert Voices, The Desert,</i> and <i>One Small Square: Cactus Desert</i>.</p>	<p>Students make desert notebooks and learn the main deserts of the world. Each student researches an animal that lives in the desert, makes a desert notebook about the animal, and gives an oral report illustrated with a paper bag puppet.</p>
<p>Digestion and Nutrition (2 weeks or 6 lessons)</p>	<p>4</p>	<p>Teaching ideas, N.C. background, and books including: <i>How Did We Find Out About Germs?, Germs Make Me Sick!, What Happens to a Hamburger</i> and <i>Your Stomach and Digestive System</i>.</p>	<p>A brief unit with a great project using clay to diagram digestive tract. <i>Note: There is also a unit covering the Heart, Lungs, Digestion, and Nutrition which is ideal for home schooling.</i></p>
<p>Flowers (optional) (1 week or 3 lessons)</p> <p>2 copies, enclosed books may vary</p>	<p>4</p>	<p>Unit plan, N.C. background, hands-on activities, posters of wildflowers, pictures, and project ideas. Books include: <i>Usborne First Nature: Flowers, Fairy Dusters and Blazing Stars, Wildflowers around the World, A Flower Alphabet Book,</i> and <i>Flowers, Fruits, and Seeds</i>.</p>	<p>A resource unit of activities such as a flower hunt, wildflower identification, dissecting a daffodil or tulip, dissecting a dandelion, discussing the correspondence of flowers and weeds, and talking about gardens in heaven.</p>
<p>Mammals</p> <p>2 copies</p>	<p>4</p>	<p>A resource unit with teaching ideas, N.C. background material, and books such as: <i>The World of Animals, Animals, Forest Animals, About Mammals, Our Amazing Animal Friends,</i> and several <i>Zoobooks</i>.</p>	<p>An optional unit for introducing mammals before studying them in the context of various habitats. Learn to categorize animals as herbivores, carnivores, or omnivores.</p>

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SCIENCE UNIT BOXES

<p>Oceans and Continents</p> <p><i>2 copies, enclosed books may vary</i></p>	<p>4</p>	<p>Teacher's manual, N.C. background, shells, and many books: <i>The Magic School Bus on the Ocean Floor, One Small Square: Seashore, The Sea and Its Marvels, Kon-Tiki, The Big Wave, Nine True Dolphin Stories, Whales and Dolphins</i>. Also 3 videos: <i>Seasons in the Sea, Ocean Symphony, and Cities of Coral</i>.</p>	<p>After a brief introduction to the continents and oceans, the major focus of this unit is the wonders of oceans. This unit box offers a wide array of activities and reference materials for teachers and students.</p> <p><i>See also the literature unit box on The Big Wave.</i></p>
<p>Polar Regions</p> <p><i>(science unit integrated with social studies and literature)</i></p> <p><i>2 copies, enclosed books may vary</i></p>	<p>4</p>	<p>Unit overview, lesson plans, activity pages, and books. Books include: <i>The Penguin Family Book, Far North, Frozen Land, Polar Regions, Here Is the Arctic Winter, and Questions and Answers about Polar Animals</i>.</p>	<p>Learn about the Arctic, Antarctica, and how plants, animals, and people survive in the Arctic regions. Compare polar regions to deserts. Learn about penguins and other animals that live in these regions.</p>
<p>Rainforests</p> <p><i>2 copies, enclosed books may vary</i></p>	<p>4</p>	<p>Unit plan, N.C. and other background for the teacher, sample rainforest notebook, and two activity books: Fredericks' <i>Exploring the Rain Forest</i> and Nature Scope's <i>Rain Forests: Tropical Treasures</i>. Books for students include: <i>Animals of the Rain Forest, Rainforest Secrets, Rain Forest Babies, At Home in the Rainforest, and River</i>.</p>	<p>Learn about the wonders of the rainforest and how it helps us all. What are the special features that allow such biodiversity in this habitat? Students make a rainforest notebook about an animal and its environment. Fun activities include sampling food from the rainforest, measuring the height of the canopy, understory, etc.</p>
<p>Seeds</p> <p><i>(science unit integrated with literature)</i></p> <p>(1 week or 3 lessons)</p> <p><i>2 copies</i></p>	<p>4</p>	<p>Teaching ideas, N.C. background, some seeds, books, etc. Books include: <i>All About Seeds, From Seed to Plant, The Dandelion Seed, Wacky Plant Cycles, Seeds by Wind and Water, and How Do Apples Grow?</i></p>	<p>This brief unit looks at seed structure, seed dispersal, and seed germination. Activities include sorting seeds by method of dispersal; dissecting soaked lima beans, corn, or peanuts; estimating and then counting the seeds in one ear of corn; and determining optimal conditions for seed germination.</p>
<p>Sun, Light, and Heat</p> <p>(3 weeks or 9 lessons)</p> <p><i>2 copies</i></p>	<p>4</p>	<p>Includes teaching ideas, N.C. background, experiments, prism, and photographs of art projects (paper chain light spectrum, clay diagram of the sun on black cardboard, sun prints). Books include: <i>Sun, Our Star: The Sun, Light and Color, The Universe: The Sun, Now You See It, Now You Don't, The Optical Illusions Book, and Light FunDamentals: Funtastic Science Activities for Kids</i>.</p>	<p>This three-week unit of 9 science lessons explores the spiritual and natural suns, light, and heat through stories, prisms, art projects, and experiments. Experiments demonstrate radiation, conduction, convection, friction generating heat, reflection, and refraction. Optional activities: an ice cube race, exploring optical illusions, and a pin hole camera.</p>

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<p>Trees in Habitats <i>(science unit integrated with literature)</i></p> <p>2 copies, enclosed books may vary</p>	<p>4</p>	<p>Teaching activities, N.C. background material and many books: <i>In the Heart of the Village, Ancient Ones: The World of Old-Growth Douglas Fir, Tree of Life: The World of the African Baobab, The Ever-living Tree: The Life and Times of a Coast Redwood, Tree Almanac: A Year-Round Activity Guide, Birches, One Day in the Woods, One Small Square: Woods; Trees, Leaves, and Bark; Trees and Leaves; and The Giving Tree.</i></p>	<p>A resource unit to help students explore the characteristics, basic parts, life cycles, uses, habitat interactions, and simple classification of trees. Includes worship suggestions, math, poetry, and other activities.</p>
<p>Grasslands (Optional)</p> <p>2 copies, enclosed books may vary</p>	<p>4-6</p>	<p>Teaching ideas and these books: <i>One Small Square: African Savanna, What Do We Know about Grasslands?, Grasslands, On Safari, Tree of Life, and Here Is the African Savannah.</i></p>	<p>A resource unit that could help teachers include grasslands as one of the habitats studied as part of the fourth grade science curriculum or be used to enrich the study of Africa in sixth grade.</p>
<p>Geology</p>	<p>5</p>	<p>Lesson plans, N.C. background material, student notebooks, many experiments, rock displays (igneous, metamorphic, and sedimentary) and some gemstones. Books include: <i>Sylvester and the Magic Pebble</i> and <i>What's Alive?</i></p>	<p>Students categorize rocks, go rock hunting, make volcanoes, learn about crystals and gems, and do many experiments.</p>
<p>Hibernation and Migration (6-10 lessons)</p> <p>2 copies</p>	<p>5</p>	<p>Unit overview, N.C. and other background material, lesson plans, and activity sheets. Students mark a large map with flyways of migrating birds they have researched. 1 poster and the book, <i>Hibernation.</i></p>	<p>This unit includes 2 mini-research projects. The first looks at a migrating bird and its flyway. The second is on an animal that hibernates.</p>
<p>Skin and Bones</p> <p>2 copies</p>	<p>5</p>	<p>Overview, lesson plans, N.C. background material, student notebook, activities for teaching about the skin and bones, study-guide, and test.</p>	<p>A resource unit with some suggestions and activities for teaching about the parts, uses, and care of the skin and bones.</p>
<p>Space Exploration and Principles of Flight</p> <p>2 copies</p>	<p>5</p>	<p>Teacher's manual with curriculum, teaching ideas, water rocket, science experiments, pictures, and books: <i>A Day in Space, Looking at Space, Voyager, Space Travel, Eyewitness Books: Space Exploration, The Astronauts, and Exploring the Earth and Moon.</i></p>	<p>Combines two science units to survey the history of space exploration before learning about Bernoulli's Principle, drag, thrust, and other core concepts. Teaching ideas include making a space race timeline and doing several experiments to explore flight.</p>
<p>Weather</p> <p>2 copies, enclosed books may vary</p>	<p>5</p>	<p>Teaching ideas and these books: <i>Usborne Weather and Climate, Weatherschool, and Kids Discover: Weather.</i></p>	<p>A resource unit to help students explore weather.</p>

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SCIENCE UNIT BOXES

<p>Introduction to Science</p>	<p>6</p>	<p>Teacher’s manual, <i>Unity in the Universe</i>, and the Correspondence Game (as a general introduction to correspondences).</p>	<p>This is a resource unit supporting this brief unit that introduces the branches of science (life, earth, physical, chemistry, <i>etc.</i>) and the qualities of a scientist. Includes information about Swedenborg’s work as a scientist to support one of the suggested activities in this unit.</p>
<p><i>Classification A:</i> Introduction to the Classification of Living Things</p>	<p>6</p>	<p>Teacher’s manual, activity book on microorganisms, and DVDs such as “Life” (Eyewitness) and “Bacteria” (Schlessinger).</p>	<p>This unit introduces the way living things are classified. Because the plant and animal kingdoms are covered in later units, the key focus is on introducing the three other kingdoms of living things: monera, protista, and fungi.</p>
<p><i>Classification B:</i> Plant Classification</p>	<p>6</p>	<p>Teacher’s manual with suggested activities, overhead transparencies relating to the plant kingdom, and DVDs such as “Plants” (Eyewitness) and “Photosynthesis” (Schlessinger).</p>	<p>This unit explores a variety of plants, parts of plants, processes such as plant reproduction & photosynthesis, and uses of plants. Includes some great experiments from various activity books.</p>
<p><i>Classification C:</i> Animal Classification</p>	<p>6</p>	<p>Teacher’s manual with color transparencies and a variety of activities; DVDs such as “Mammal” (Eyewitness); and activity books such as <i>Learning About Invertebrates</i>, <i>Learning About Vertebrates</i>, and <i>Discover! Animals</i>.</p>	<p>Looks at a variety of invertebrates (sponge, cnidarian, various worms, mollusca, arthropoda, and echinodermata) as well as vertebrates with which the students are more familiar (fish, amphibians, reptiles, birds, and mammals).</p>
<p>Ecology: Ecosystems and Endangered Species</p>	<p>6</p>	<p>Teaching ideas, N.C. background, student notebook, <i>Milliken Ecology</i> teacher’s guide, <i>50 Simple Things Kids Can Do to Save the Earth</i>, <i>Endangered Forest Animals</i>, <i>Endangered Grassland Animals</i>, and <i>One Small Square: Backyard</i>.</p>	<p>Learn about food chains, ecosystems, and various biomes. (One suggested activity is to do an owl simulation to see how owl populations are influenced by food supply.) This unit also looks at the pollution (of air, water, and land) and endangered species in the plant and animal kingdoms. One of the suggested projects is to make a diorama of endangered species.</p>
<p>Electricity and Magnetism (6 weeks or 12 lessons)</p> <p><i>2 copies</i></p>	<p>6</p>	<p>Teacher’s manual with a unit overview, N.C. and other background materials, and suggested activities. Also includes DVDs such as “Understanding Electricity” (Schlessinger); some materials needed for making circuits; and reference materials such as <i>Safe and Simple Electrical Experiments</i>, <i>Science Book of Magnets</i>, and <i>Flying Tinsel</i>.</p>	<p>A resource unit for exploring magnetism, static electricity, current electricity, and electrical safety. Activities include making electro-magnets, completing circuits, static electricity experiments with tinsel, and using switches to send Morse Code.</p> <p>The unit box also includes fun experiments such as “Potato Power” and directions for making the “Boating Game” and other magnetic toys.</p>

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Introduction to Chemistry	6	Teacher’s manual, activity books such as <i>Simple Chemistry</i> and <i>The Atom</i> , and a DVD on “Atoms and Molecules” (Schlessinger).	This introduction to chemistry explores the properties of matter, introduces the Periodic Table, and gets students thinking about atoms and compounds. Includes directions or materials for several great activities such as Element Bingo and experiments such as “Is Burned Sugar Still Sugar?”
<i>Note: Several new unit boxes are being developed for seventh and eighth grade science units, supporting the 2007 General Church science curriculum. Since we are still in the process of acquiring books and DVDs for these unit boxes, there may be some discrepancies between what is listed below and the final contents of the unit boxes.</i>			
<i>Human Body Box A:</i> Introduction to Science	7	Teacher’s manual with activities to explore laws of nature, scientific processes, the scientific method, the metric system, lab safety, and how to write a lab report.	Suggested activities that are included in the manual: Mystery Boxes, Testing Paper Towels, Bouncing Raisins, Who Wrote That?, etc.
<i>Human Body Box B:</i> Introduction to the Human Body	7	Teacher’s manual with N.C. background material and suggested activities.	Looks at why people were created, how they differ from the rest of the animal kingdom, the variety of components within the human body, and the interdependence of its parts.
<i>Human Body Box C:</i> Cell Structure	7	Teacher’s manual, DVD on <i>Cells</i> , and a book on <i>A World of Microorganisms</i> .	Looks at the structure of various kinds of cells and the function of its parts.
<i>Human Body Box D:</i> Cell Processes	7	Teacher’s manual and Robert Snedden’s book on <i>Cell Division and Genetics</i> .	Looks at cell division, photosynthesis, and types of transport (active, passive, and diffusion).
<i>Human Body Box E:</i> Nervous System	7	Teacher’s manual, DVD on <i>Alcohol and Alcoholism</i> (Schlessinger), and these books: <i>The Brain</i> and <i>Eyes and Ears</i> .	Covers the brain and spinal cord, nerve cells, the five senses, substance abuse, and diseases that affect the brain. One project idea is to have students research a substance that is often abused, noting how it affects the body.
<i>Human Body Box F:</i> Cardiovascular System	7	Teacher’s manual and Seymour Simon’s book on <i>The Heart</i> .	This unit covers the structure and function of the heart, circulation, blood vessels, blood types, and the spiritual correspondence of the heart.
<i>Human Body Box G:</i> Respiratory System	7	Teacher’s manual <i>Lungs: Your Respiratory System</i> .	Looks at the components of the respiratory system with special emphasis on the lungs. Also looks at diseases which affect the lungs.
<i>Human Body Box H:</i> Skeletal and Muscular Systems	7	Teacher’s manual and books by Seymour Simon: <i>Bones: Our Skeletal System</i> and <i>Muscles: Our Muscular System</i> .	Learn about the skeletal and muscular systems with a variety of activities.

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<i>Human Body Box I:</i> Skin	7	Teacher's manual	Study the layers of the skin, its uses, and how we can protect the skin.
<i>Human Body Box J:</i> Digestive and Excretory Systems	7	Teacher's manual <i>Guts: Our Digestive System.</i>	Explores nutrition, digestion, eating disorders, and the excretory system. One of the suggestions is having students create posters on the correspondences associated with the digestive system.
<i>Human Body Box K:</i> Immune System	7	Teacher's manual, <i>Matters of Life and Death</i> DVD, and Snedden's book on <i>Fighting Infectious Diseases</i>	Explores the role of bacteria and viruses in causing illnesses, ways the body defends itself against infection, and how medicine can help.
<i>Human Body Box L:</i> Reproductive System	7	Teacher's manual, <i>The Miracle of Birth</i> DVD (Nova), and Gollhofer's book on <i>Puberty and Reproduction.</i>	Focuses on the structure, function, and care of the reproductive system along with an overview of conception and pregnancy.
<i>Human Body Box M:</i> Endocrine System	7	Teacher's manual	Gives an introduction to the endocrine system and its many components. Also touches on the challenges of diabetes and hypoglycemia.
<i>Human Body Box N:</i> Heredity and Genetics	7	Teacher's manual, a DVD such as <i>Science Odyssey: Origins</i> (PBS), and Snedden's book on <i>Cell Division and Genetics.</i>	While studying genetics and heredity, students learn about Gregor Mendel, the Punnett Square, and DNA.
<i>Earth Science Box A:</i> Introductory Unit—Earth Formation	8	Teacher's manual with background material and teaching ideas. Also includes <i>Geologic History</i> DVD (Schlessinger).	Introduces various theories about creation and the theory of plate tectonics as well as studying the structure of the earth's interior, geological time and fossils.
<i>Earth Science Box B:</i> Rocks and Minerals	8	Teacher's manual with N.C. background, teaching ideas, activities and experiments. Also includes <i>Splendid Stones</i> DVD (National Geographic).	Explore the characteristics of minerals, learn how rocks and minerals are classified, review the rock cycle, and consider the uses of rocks and minerals. Also learn the meaning of rocks and minerals used in the Word.
<i>Earth Science Box C:</i> Erosional Forces	8	Teacher's manual, <i>Weathering and Erosion</i> DVD (Schlessinger), and <i>Shaping the Earth: Erosion</i> by Sandra Downs.	Looks at the major agents of erosion, including wind, surface water, glaciers, and waves against a shoreline.
<i>Earth Science Box D:</i> Weathering and Soil	8	Teacher's manual, <i>Soil</i> DVD (Schlessinger), and <i>Geology: The Active Earth.</i>	Explores the various ways that rocks are weathered and soil formation and its uses.
<i>Earth Science Box E:</i> Weather and Climate	8	Teacher's manual, <i>Weather</i> DVD (Eyewitness), and Usborne <i>Weather & Climate.</i>	Learn more about factors influencing our weather, weather patterns, weather related disasters (tornadoes, hurricanes, etc.), and layers of the atmosphere. Also explore the spiritual meaning of thunder, lightning, rain, rainbows, storms, etc.

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<i>Physical Science Box A:</i> Chemistry	8	Teacher's manual with many activities and poster of the Periodic Table.	Learn about the Law of Conservation of Mass, the Kinetic Theory of Matter, groups or families of the Periodic Table, <i>etc.</i> building on what was introduced in grade 6.
<i>Physical Science Box B:</i> Astronomy	8	Teacher's manual with N.C. background material, teaching ideas, activities, and more. Unit box also includes Schlessinger DVD on the <i>Sun</i> .	Explore theories about the formation of the universe and our solar system. Also learn more about stars, the planets and sun in our solar system, the movement of our earth, <i>etc.</i>
<i>Physical Science Box C:</i> Motion and Energy	8	Teacher's manual with teaching ideas and the <i>Forces and Motion</i> DVD (Discovery Channel School).	Learn about motion, speed, velocity, acceleration, and Newton's Laws of Motion. Teacher's manual includes some great experiments.
<i>Physical Science Box D:</i> Optics	8	Teacher's manual with a variety of activities.	Looks at the reflection and refraction of light, different kinds of mirrors (plane, concave, convex), lenses (concave, convex) and suggests related concepts that could be explored.