



CRS

COMMUNITY RESOURCES FOR SCIENCE
practical support for great science teaching

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Berkeley, California 94702

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Sample Materials

First Grade Life Science - Plants and Animals

Audio Tape/CD

Sing the Science Standards

\$30-35

Science Explosion, Inc.

<http://www.scienceexplosion.com>

Join the "Science Explosion" as they sing over 50 songs written to the Science Standards. This is a great way for students in elementary and middle school to review the most important ideas in science. Over 50 songs are included on this double-CD which also includes lyrics and instrumental versions. Bring the Science Standards to life with "Sing the Science Standards with the Science Explosion." Also has another two disc Volume 2 CD. Songbook available for \$27.50.

Classroom Books

A Fruit Is a Suitcase for Seeds (Exceptional Nonfiction Titles for Primary Gra

\$6-7

Amazon.com

http://www.amazon.com/Suitcase-Exceptional-Nonfiction-Titles-Primary/dp/0822559919/ref=sr_1_1
ISBN: 978-0822559917

by Jean Richards (Author), Anca Hariton (Illustrator) An introduction to seeds, their purpose, and growth that should be easy for young children to grasp. On each page, one or two short lines of text appear beneath a large painting. Hariton's use of bright watercolors adds sensual appeal to her illustrations of various fruits, vegetables, animals, and habitats. This cleverly presented book can be used as a read-aloud discussion starter, as a prelude to planting seeds and observing their growth, or in preparation for dissecting fruits and vegetables in order to find the seeds inside. Two final pages in question-and-answer format offer more tidbits of information about seeds.

A Seed Grows : My First Look at a Plant's Life Cycle

\$20-25

Amazon.com

http://www.amazon.com/Seed-Grows-My-First-Look/dp/1550742000/ref=sr_1_1?s=books&ie=UTF8
ISBN: 978-1550742008

by Pamela Hickman (Author), Heather Collins (Illustrator) ISBN-13: 978-1550742008 Seeds and kids start out small and grow wondrously, which may explain some of children's fascination with planting, growing, and, subsequently, exploring their environments. With sentences that mimic the cumulative pattern of "The House that Jack Built," Hickman's hand-sized book uses the backyard garden to investigate plant life cycles. Each page has a fold-over flap that reveals further facts and illustration details relating to the page's topic. Sam plants his vegetable seeds; behind the flap are close-ups of the sprout's growth underground. When a bee pollinates a flower, an opened flap reveals its hive. The vegetable garden the children plant in the beginning of the book is harvested at its end; each vegetable and fruit is cut open to reveal more seeds--the completion of the cycle. It's been done before in many other books, but this version, with its lush illustrations of a bountiful garden, is a summertime treat.

A Tree in the Ancient Forest

\$9-10

Amazon.com

http://www.amazon.com/Tree-Ancient-Forest-Carol-Reed-Jones/dp/1883220319/ref=sr_1_1?ie=UTF8&ISBN1883220319

By Canyon, Christopher (illustrator); Reed-Jones, Carol.

Structured like "This Is the House that Jack Built," this environmental rhyme aims to show the interdependence of living things in the ancient forests.

Berries, Nuts and Seeds (Take-Along Guide)

\$8-9

Amazon.com

http://www.amazon.com/Berries-Nuts-Seeds-Along-Guides/dp/1559715731/ref=sr_1_1?ie=UTF8&ISBN:978-1559715737

by Diane L. Burns (Author), John F. McGee (Illustrator)

ISBN-13: 978-1559715737 The reader will find this attractive book useful for reports or, as the Take Along Guide series title implies, as a nature guide. Each page is devoted to one plant and its fruit. After a brief introduction to berries, nuts, and seeds as the fruit of a plant, Burns looks at specific fruit, one to a page, including raspberries, acorns, pecans, juniper berries, cattails, and thistle blossoms. The format is crisp, and the writing clear; each page features lovely watercolor pictures of the fruit and the plant or tree it comes from and information about what it looks like, where to find it, and who eats it. Interesting activities such as planting a seed garden and making berry watercolors round out a very nice treatment.

Como crece una semilla (How a Seed Grows) (Let's-Read-and-Find-Out Scier

\$6-7

Amazon.com

<http://www.amazon.com>

ISBN-13: 978-0060887162 Revised illustrations and format make this book, originally published in 1960, a valuable choice. With charming illustrations and clear text, this simple introduction leads young readers through a series of steps that result in bean plants as well as a basic understanding of how seeds work. Children are encouraged to follow each aspect of the botanical process, from sowing bean seeds, to the growth of tiny root hairs, to transplanting the plant in the garden. Realistic and inviting full-color watercolors show only procedures that are possible for youngsters to follow with minimal involvement from adults. The African-American girl, who is the main character, is definitely in charge; her white male friend performs only menial tasks.

Earth Science for Every Kid: 101 Easy Experiments That Really Work

\$10-15

Amazon.com

<http://www.amazon.com>

Also available in libraries.

by Janice VanCleave. Intended for children in grades K to 6, it contains 101 thoroughly tested and safe experiments relating to earth science. Each experiment has a clear purpose, list of materials and step-by-step illustrated instructions. In addition, without giving too much away, it provides hints as to what may be expected from a given experiment and offers a full explanation of the outcome in understandable terms. Most materials necessary for the experiments are readily available around the house.

Fall is Not Easy

Amazon.com

\$10-15

<http://www.amazon.com>

By Marty Kelley. A tree complains that the other seasons are simple (winter, bare branches; spring, new leaves; summer, basking in the sun) but that fall presents problems: "Green leaves turn colors, / But mine all look strange." Indeed they do, as the tree tries out more designs than a fashion model: rainbow, yellow smiley face, red-and-white stripes, purple-on-yellow polka dots, black-on-white cow hide, and a fair representation of a hamburger with lettuce.

FOSS Science Stories Single Copy Set (Spanish Grades 1-2)

\$25-30

Delta Education

<http://www.delta-education.com/>

WX-542-1226

Titles: Air and Weather; Balance and Motion; Insects; New Plants; Pebbles, Sand, and Silt; Solids and Liquids. Science Stories for Grades 1-2 use large, colorful photographs and appropriate text to enhance the science learning experience. The stories provide factual information in a clear and concise manner. Other purchasing options: a CLASSROOM SET (56 books, 8 ea. of 6 titles) of all Grade 1-2 Science Stories is \$203.66.

From Cow to Ice Cream

\$6-7

Amazon.com

http://www.amazon.com/From-Cow-Ice-Cream-Changes/dp/0516260669/ref=sr_1_1?ie=UTF8&qid=13800516260669

By Knight, Bertram T. A book chock-full of bold, colorful photographs that show the complete process of turning raw materials into an end product near and dear to kids' hearts. The lively narrative and detailed photographs clearly present each step in making ice cream. The large size and brief texts make these books useful for sharing aloud.

From Seed to Plant

\$8-9

Amazon.com

http://www.amazon.com/From-Seed-Plant-Gail-Gibbons/dp/0823410250/ref=sr_1_1?ie=UTF8&qid=13800823410250

By Gail Gibbons. This is an excellent book for younger students (K-3) about seeds and plants. You can read the book to the students and then plant radish seeds (they grow quickly) in see-through plastic cups. Later, the students can read the book out loud to one another and discuss the seed to plant concept. They can also keep a journal to record their observations of their seeds with illustrations about every other day. This book presents a great opportunity to combine reading, writing and science.

Available at Berkeley
Public Libraries 581.3
G352f.

From Seed to Plant (Rookie Read-About Science)

\$6-7

Amazon.com

http://www.amazon.com/Seed-Plant-Rookie-Read-About-Science/dp/0516273078/ref=sr_1_1?s=b

ISBN: 978-0516273075

by Allan Fowler ISBN-13: 978-0516273075 Beautiful photographs and clear illustrations combined with easy-to-read text make for a good beginning book on plants for your early elementary aged child. Only 31 pages long, but manages to pack a good amount of information into this small space. A short vocabulary list of new words (pistil, pod, pollen, seedcase, seed and stamen) is given at the end of the book.

Green Thumbs: A Kid's Activity Guide to Indoor and Outdoor Gardening

\$10-15

Amazon.com

http://www.amazon.com/Green-Thumbs-Activity-Outdoor-Gardening/dp/155652238X/ref=sr_1_1?

ISBN: 155652238X

by Laurie Carlson . These gardening projects are so simple, quick and fun, anyone can their brown thumb in to a green thumb.

Here Is the Tropical Rain Forest

\$5-6

Amazon.com

http://www.amazon.com/Here-Tropical-Rain-Forest-Life-ebook/dp/B00B3M48FM/ref=sr_1_1?s=bc

ISBN: 0613051424

Both pictures and language are worthy of note in a text that employs a "this is the house that Jack built" format to link plants, animals, and climate. The frog, for example, who bathes in the rain, is protected by the bromeliad, which is held by the tree, and so on. The words read aloud with a distinct rhythm, and Rothman's artwork, in a palette of subdued greens and browns, shows readers the connectedness of the plants and animals.

Hooray for Dairy Farming

\$7-8

Amazon.com

http://www.amazon.com/Hooray-Dairy-Farming/dp/0865056641/ref=sr_1_1?ie=UTF8&qid=140355

by Bobbie Kalman. With photos and clear illustrations we get the information we need about the operation of such farms. The text gives the child researcher a clear look at the workings of a farm, today and in the past.

How a Seed Grows

\$6-7

Amazon.com

http://www.amazon.com/Seed-Grows-Lets-Read---Find-Out-Science/dp/0064451070/ref=sr_1_1?

ISBN: 0064451070

By Jordan, Helene J.

In this charming introduction to seeds and how they grow, the clear explanations and detailed illustrations outline the simple steps for beginning a garden.

Available in Berkeley
Public Library
Childrens Room 582
J763h 1992.

In November by Cynthia Rylant

\$10-15

Amazon.com

<http://www.amazon.com>

In November, the earth is growing quiet. It is making its bed, a winter bed for flowers and small creatures. The bed is white and silent, and much life can hide beneath its blankets." Poetic language and lovely oil paintings evoke the traditional and seasonal activities that occur in November. Families gather around the table for a Thanksgiving feast, cats snuggle together in the corner of the barn, "staying birds" bid farewell to "leaving birds" beginning their long journeys. Rylant's words are simple but

Let's Go Rock Collecting

\$5-6

Amazon.com

http://www.amazon.com/Collecting-LetS-Read---Find-Out-Science-Stage/dp/0064451704/ref=sr_1
ISBN: 0064451704

By Roma Gans (Author), Holly Keller (Illustrator). More than just the title has been changed in this updated edition of Gans's Rock Collecting (Crowell, 1984). The topics are the same: basic rock formation; the characteristics of igneous, metamorphic, and sedimentary rocks; the uses of rocks in the past (Roman roads, Egyptian pyramids) and the present (cement); and, finally, a bit about rock collecting. The excellent diagrams, full-color photographs of specimens, and minor textual changes clarify the concepts (for example, Mohs' scale of hardness) and extend the presentation. Gans barely introduces collecting rocks in the field and organizing and storing them, but the pair of youngsters featured in Keller's brightly colored illustrations certainly convey the joys of being a rock hound.

Linnea's Windowsill Garden

\$1-2

Amazon.com

http://www.amazon.com/Linneas-Windowsill-Garden-Linnea-books/dp/9129590647/ref=sr_1_cc_1
ISBN: 9129590647

This is an illustrated introduction to plants and how they grow in small places with information on creating an urban garden. Interspersed in the by Bjork, Christina. information on birds, seeds, and bulbs are activities that range from simple to complex. Lively line drawings in two colors enhance the text.

Mr. Carey's Garden

\$10-15

Amazon.com

http://www.amazon.com/Mr-Careys-Garden-Jane-Cutler/dp/039568191X/ref=sr_1_1?s=books&ie=
ISBN: 978-0395681916

Ignoring the suggestions of his neighbors about how to rid his garden of snails, Mr. Carey simply states that he sees things in a different light. Mr. Carey takes a different attitude toward his little visitors, an attitude that makes no sense to his neighbors until they catch a glimpse of Mr. Carey's nighttime garden, turned magical by glittering moonlit snail trails. Illustrations in greens, earthy browns, and purples by G. Brian Karas highlight the eccentricities of the elderly characters.

One Bean

\$8-9

Amazon.com

http://www.amazon.com/One-Bean-Anne-Rockwell/dp/0802775721/ref=sr_1_1?ie=UTF8&qid=140
ISBN: 0802775721

by Anne F. Rockwell. What do you get when you take one bean and add a handful of soil and a splash of water? With patience and a bit of sunshine you get a full-grown bean plant that makes beautiful flowers and grows a whole new crop of beans. Packed with facts and featuring activities kids can do themselves, this book is perfect for blossoming botanists and growing gardeners alike.

Plant Profiles: Free Guide to Common Bay Area Native Plants

FREE

The Watershed Project

<http://www.thewatershedproject.org>

Download off of website. Buckeye, Coyote Brush, Lupine.....These are just a few of California's most common native plants. Use this guide to find out more about these amazing species. And now you can identify the most invasive species that threaten their existence.

Reason for a Flower, The \$9-10
Amazon.com

http://www.amazon.com/Reason-Flower-Flowers-Pollen-Explore/dp/0698115597/ref=sr_1_1?s=bc
ISBN: 0698115597

by Heller, Ruth. This poetic presentation tells about plant reproduction, manufacturing of seeds, and seed propagation. It also shows plants which don't seem to be flowers but are flowers. The text is supported by Heller's trademark full-color detailed illustrations that help explain the concepts presented. California author/illustrator.

Seeds, Stems, And Stamens: The Way Plants Fit into Their World \$20-25
Amazon.com

http://www.amazon.com/Seeds-Stems-Stamens-Plants-Their/dp/0761318747/ref=sr_1_1?s=books
ISBN: 978-0761318743

by Susan E. Goodman ISBN-13: 978-0761318743 This book about the ways plants survive in their various habitats is both creative and inviting. The short chapters discuss fitting into the environment; getting sun, water, and food; inherent defenses; and propagating. Readers are encouraged to think about these topics by way of a series of questions. For example, the author states that through transpiration, "A tree can lose hundreds of gallons of water a day. With all that water going out, more needs to come

Simple Earth Science Experiments with Everyday Materials \$5-6
Amazon.com

<http://www.amazon.com>

by Louis V. Loeschmig. Although the presentations do not reflect true scientific methodology and analysis, the material is well organized, with each activity divided into sections: "You need," "What to do," "What happens," and "Why." A wealth of activities and demonstrations, with many classic classroom ones, are presented, touching on everything from earthquakes and glaciers to time, soil, gravity, and conservation. The headings for chapters and activities are appealing (though not particularly informative

Someday a Tree \$7-8
Amazon.com

http://www.amazon.com/Someday-Tree-Eve-Bunting/dp/0395764785/ref=sr_1_1?s=books&ie=UT
ISBN: 0395764785

by Bunting, Eve. A young girl, her parents, and their neighbors try to save an old oak tree that has been poisoned by pollution in the soil. Unable to save the tree, the girl remembers the acorns she collected when the tree was still healthy and plants them. Delicate watercolors complement this emotional story. California author.

Teaching Math and Science Through Nursery Rhymes \$15-20
Teacher Created Materials

<http://www.teachercreated.com>
TCM2654

Use traditional nursery rhymes as springboards for standards-based lessons. Watch students learn math and science...and enjoy every minute of it!

The Friendship Tree	\$6-7
Amazon.com	
<i>http://www.amazon.com/Friendship-Holiday-House-Reader-Level/dp/0823413764/ref=sr_1_1?ie=l</i>	
<p>By Kathy Caple. This Holiday House Reader includes four little stories about trees. Best friends Blanche and Otis are sheep who live next door to each other and share their sorrows and joys. In the first story, Otis surprises Blanche with colorful autumn leaves cascading from her one tree, an evergreen. In the next, Blanche shares Otis' sadness when a large tree in his yard is felled by lightning. At Christmas, they exchange tree-related presents. In the spring, they plant a pine tree and enjoy watching birds nest in its branches. The line-and-watercolor illustrations reflect the sweet, gentle tone of the text with the soft, pastel shades. Fiction.</p>	
The Gardener	\$10-15
Amazon.com	
<i>http://www.amazon.com/Plantzilla-Jerdine-Nolen/dp/0152053921/ref=sr_1_1?s=books&ie=UTF8&ISBN:0374325170</i>	
<p>by Sarah Stewart, David Small. A series of letters relating what happens when, after her father loses his job, Lydia Grace goes to live with her Uncle Jim in the city but takes her love for gardening with her.</p>	
The Gift of the Tree	\$15-20
Amazon.com	
<i>http://www.amazon.com/The-Gift-Tree-Alvin-Tresselt/dp/0688106846</i>	
<p>Tresselt. Describes the role of an oak tree in the cycle of nature, including the creatures that utilize the tree for food, shelter and raising young. Exquisite paintings and engaging text make this book a perfect choice for children ages 5-9.</p>	
The Habitat Garden Book: Wildlife Landscaping for the San Francisco Bay R The Watershed Project	\$15-20
<i>http://www.thewatershedproject.org</i>	
<p>Use this guide to transform your own backyard, patio, or community site into a healthy home for a wondrous array of fascinating creatures. Offers easy-to-grow plants appropriate to the Bay Area climate. Published by Coyote Ridge Press. \$15</p>	
The Living Earth	\$6-7
Amazon.com	
<i>http://www.amazon.com</i>	
ISBN: 0735813159	
<p>By Eleonore Schmid. Schmid continues her nature series by considering the ecology of Earth. She concentrates on the importance of topsoil and describes the complex interactions of plants and animals that maintain this resource's viability. In her discussion of the impact of humans on the Earth, she crosses the scientific with the social. The author notes that some farmers carefully plant their crops to restore the earth but faults large-scale agricultural use of artificial fertilizers and other practices for reducing the land's natural productivity. She also warns against squandering resources such as coal and oil. As in Air and Water, softly colored, double-page spreads of panoramic views and poetic language emphasize the wonder and beauty of the natural world.</p>	

The Reason for a Flower (World of Nature)

\$6-7

Amazon.com

<http://www.amazon.com>

ISBN: 0698115597

by Ruth Heller. The reason for a flower is to manufacture seeds, but Ruth Heller shares a lot more about parts of plants and their functions in her trademark rhythmic style.

Available in Spanish at Berkeley Public Library and Alameda County Public Libraries.

The Reasons for The Seasons

\$6-7

Amazon.com

<http://www.amazon.com>

This is a great book because it offers detailed, factual information about seasons, and doesn't leave any of the important concepts out. It also has great illustrations that are labeled. Gibbons gives children credit for being intelligent enough to understand the complex ways in which our world works, yet understands their developmental needs, and therefore makes the text accessible.

The Snail's Spell

\$6-7

Amazon.com

http://www.amazon.com/Snails-Spell-Picture-Puffins/dp/0140508910/ref=sr_1_1?s=books&ie=UTF

ISBN: 978-0140508918

A young boy gradually shrinks to the size of a snail and experiences a garden full of wildlife from his new perspective. Intricate pen drawings are used to re-create this creature's closely observed world.

The Tiny Seed

\$8-9

Amazon.com

http://www.amazon.com/Tiny-Seed-World-Eric-Carle/dp/1416979174/ref=sr_1_1?ie=UTF8&qid=1

ISBN: 088708155X

By Eric Carle. In autumn, a strong wind blows flower seeds high in the air and carries them far across the land. One by one, many of the seeds are lost -- burned by the sun, fallen into the ocean, eaten by a bird. But some survive the long winter and, come spring, sprout into plants, facing new dangers -- trampled by playing children, picked as a gift for a friend. Soon only the tiniest seed remains, growing into a giant flower and, when autumn returns, sending its own seeds into the wind to start the process over again. Eric Carle's eloquent text and brilliant collages turn the simple life cycle of a plant into an exciting story, a nature lesson, and an inspiring message of the importance of perseverance.

Available at Berkeley Public Library Children's section Call # P Carle, E

The Year At Maple Hill Farm, Provensen

\$8-9

Amazon.com

<http://www.amazon.com>

In January, the cows stay in the barnyard, and the chickens don't lay many eggs. By March, you can tell spring is coming: the barn is filled with baby animals. Month by month, the animals at Maple Hill Farm sense the changing seasons and respond to the changes. Through gently humorous text and charming illustrations, Alice and Martin Provensen capture one year at their beloved Maple Hill Farm in a way sure to delight city slickers and country folk alike.

Un arbol es hermoso

Oakland Public Library

<http://www.oaklandlibrary.org>

SPA P Udry, J

by Janice May Udry, Maria A. Fiol (Translator). Ages 4-8. In this Spanish edition of Udry's A Tree Is Nice (Harper), Fiol's sound translation maintains the poetic language of the English-language classic celebrating the beauty and usefulness of trees. Library bind edition available for \$14.95 at Amazon.com, Paperback out of print, available in libraries.

FREE

Available at Oakland
Public Library, Call #
Juvenile Spanish
Fiction Udry

What About Ladybugs?

Amazon.com

http://www.amazon.com/What-About-Ladybugs-Celia-Godkin/dp/0871565498/ref=sr_1_1?ie=UTF8

ISBN: 978-0871565495

by Celia Godkin. The text describes a gardener who learns to rid his crops of pests safely. While pesticides disrupt the garden ecosystem, ladybugs are able to control the aphid population without disturbing the rest of nature. Double-page illustrations look at the garden from above and within. The book provides a starting point for discussion about natural- and human-produced pesticides and ecological balance. Ages 4-8.

\$10-15

What Kinds of Seeds Are These? (Picture Book)

Amazon.com

http://www.amazon.com/What-Kinds-Seeds-Are-These/dp/1559719559/ref=sr_1_1?ie=UTF8&qid=

ISBN: 978-1559719551

by Heidi Bee Roemer (Author), Olena Kassian (Illustrator)

An interactive guessing game about seeds and the plants they produce. Through rhyming text and clues, Roemer introduces nine different types. Lyrical language and descriptions (angel-winged maple seeds, hitchhiking burdock burrs, and wispy-soft dandelion tufts) paired with lush watercolor paintings perfectly express the natural transformations that take place. The repetitive question What kind of seed is this? is answered on the opposite page in bold font. This riddling book will be fun to share one-on-one or in a group setting. Follow-up crafts and activities are appended.

\$15-20

Kits & Modules

4Rs Teaching Kit

StopWaste.org

<http://www.stopwaste.org>

Kit includes "Kids Talkin' Trash" and "Do the Rot Thing" videos; Reduce, Reuse, Recycle, Rot: pictograms/ discussion guide; A Teacher's Guide to Compost Activities: "Do the Rot Thing"; Poster - Classroom compost poster; "Teaching Waste Reduction Through Children's Literature" : a review of 67 children's books for their links to waste reduction messages.

FREE

Fungi Specimen Kits

Tilden Nature Area-Tilden Regional Park

<http://www.ebparks.org>

2 week rental. Life cycles of plants and fungi can be compared. Displays incorporate mounted specimens. Hinged to the sides of each display are text panels printed with natural history information. Three different displays can include: Shelf Fungi, Witches Butter, Lichens, Death Cap, Fly Agaric, Panther Fungus, Waxy Cap, Emetic Russula, Puffball, and Milky Cap.

\$10-15

Specialized Nature Kits \$25-30
Wildcare
http://www.wildcarebayarea.org/site/PageServer?pagename=NatureEducation_Programs_Naturel
2 or 3 week rental. Nature Kits contain: a taxidermied animal in a life-like pose, information cards with important facts about the animal, facsimile ceramic bird eggs for students to handle in bird kits, ideas for integrated, thematic experiences, and a poster. Choose from: Animal Footprints, Indian Uses of Native Plants, Beaks and Feet Comparative Kit, Butterflies, Water Cycle Puppets.

Teacher's Pet Kit \$25-30
Delta Education
<http://www.delta-education.com/>
200-6256
The portable teacher's pet is a 1/17-gallon aquarium/terrarium with a ventilated lid. All set-up materials and a guide will allow students to enjoy observing goldfish, hermit crab, or chameleon.

Terrarium Explorations Mini Kit \$15-20
Delta Education
<http://www.delta-education.com/>
110-5125
Observe the interaction and interdependence of biotic (living) and abiotic (non-living) elements in the terrarium. Includes materials and a step-by-step teacher's guide with background information and ideas for further exploration.

Posters/Pictures/Slides

Fresh Fruit and Vegetable Photo Cards FREE
California Healthy Kids Resource Center
<http://www.hkresources.org>
#6890
PreK-12. This collection of photo cards includes 100 photographs of different fruits and vegetables. Each card lists the Spanish and English name, nutritional and geographic information.

Local Butterflies of the San Francisco Bay Area \$7-8
The Watershed Project
<http://www.thewatershedproject.org>
This laminated "quick-guide" to commonly seen local butterflies also identifies favorite food and nectar plants for the garden. Published by Local Birds, Inc.

The Most Common Trees in California Forests FREE
The Forest Foundation
<http://www.calforests.org/foundation>
This poster graphically portrays the four most common trees in California forests, their different physical structures, and describes the attributes and uses of each.

Specimen

Butterfly Farm Monarch and Painted Lady rearing kit with certificate

\$35-40

Educational Science: Online Science & Nature Store

<http://educationalscience.com/index.htm>

BF400

Compare the life cycles of the monarch and Painted Lady Butterfly. Grow a milkweed plant and study the interaction and development of plant and the monarch butterfly. Kit includes one certificate for 3-6 monarch larvae and 3-6 Painted lady larvae. Watch monarch larvae grow into beautiful 4 inch butterflies. Witness the monarch caterpillar transform into a beautiful jade green chrysalis (10 days) and later emerge as a butterfly! The kit includes certificate for 3-6 Monarch larvae (2-3 day Priority Mail shipping included), artificial monarch diet or milkweed leaves, feeding cups, rearing cage, larvae brush, forceps, butterfly feeding kit (pictured feeder not included), pop-up observation, emergence, and breeding cage, milkweed seeds (you must first grow or obtain a milkweed plant - cat. no. BF100A) before mailing in the live material certificate), monarch lifecycle chart, and complete instructions. Watch painted lady caterpillars grow into beautiful orange and black butterflies. Witness the caterpillar's transition as it grows into a golden brown chrysalis (7 days) and later emerges as a Painted Lady butterfly. The kit includes certificate for 3-6 Painted Lady larvae(2-3 day air shipping included), artificial diet, rearing cups, larvae brush, feeding kit, observation, emergence, and breeding tent, and complete instructions. Excellent for young children as the Painted Lady caterpillars require very little care. Ages 6 and up. Recommended optional cages: Pop-Up Butterfly Terrarium LH30(flight cage) or LH175(breeding cage), as seen on our home page Note: Pictured feeder not included.

Create-a-Water Garden

\$60-70

Carolina Biological

<http://www.carolina.com>

162456

Brighten your classroom with this unique and economical mini-water garden. Students use a generous selection of beautiful aquatic plants to create a balanced ecosystem. Kit includes durable 23x15" poly mini-pool, water lily, an assortment of oxygenating and floating plants, snails, gravel, and instructions. Several small goldfish (not included) may be added once the ecosystem is established (2-4 weeks). A water garden requires at least 4-6 hours of sunlight each day.

How Soils Are Formed Set

\$25-30

Carolina Biological

<http://www.carolina.com>

Item # GEO750 -- Contains 15 primary rocks, soil samples, and derivatives of primary rocks. Effects of weathering and differences in soil particle sizes are shown. Specimens are about 1 1/2 x 1 1/2" and are number coded and keyed to a list on the inside cover of the compartmented container.

Introduction to Rocks Study Kit

\$10-15

Carolina Biological

<http://www.carolina.com>

Item # GEO111 A great kit for studying the basic rock types. Includes 5 each of igneous, sedimentary, and metamorphic rocks; an activity guide; and a magnifying glass.

Plants Prepared Slide Kit \$10-15
Lakeshore Learning Store

<http://bit.ly/1xhzswd>

tem# LC3541

Children get an up-close look at plants with 12 ready-to-use slides! Plastic slides are 2 1/4".

Standard Stock Seeds \$10-15
Carolina Biological

<http://www.carolina.com>

158804

Pack of 50 seeds. The Standard Stock represents the standard form and performance for Wisconsin Fast Plants. Plants have been selected to have a uniform, short flowering time (14 days) under ideal growing conditions of continuous light, water, and nutrition. The entire life cycle is short; under ideal growing conditions, plants will produce harvestable seeds approximately 40 days after planting. Average plant height at day 14: 15 cm. For investigations in life cycles, environmental science, botany, comparative morphology, and physiology.

Teacher Guide/Reference/Curriculum

Access Nature \$35-40
National Wildlife Federation

<http://www.nwf.org>

Item #NWFNL5

An inclusive curriculum for grades K-8 offering more than 60 hours of hands-on, habitat-based activities, Access Nature can be enjoyed by all audiences, including students with disabilities. Finally, educators can meet the diverse needs of today's classroom with activities that include adaptations for students with hearing, learning/cognitive, motor or visual disabilities.

Construct-a-Greenhouse \$15-20
National Science Teachers Association

http://www.nsta.org/store/product_detail.aspx?id=10.2505/9780873551793

Shed some light on the physics supporting plant growth in a controlled environment. Greenhouses provide the differential energy needs of plants during their growth cycle. Students design structures that convert light to heat during germination and reconfigure those structures to promote photosynthesis. By comparing the effects of design characteristics on plant growth, students observe the connections between plant biology and thermodynamics and energy transfer.

Creating a Butterfly Garden \$8-9
Amazon.com

http://www.amazon.com/Creating-Butterfly-Garden-Marcus-Schneck/dp/0671892460/ref=sr_1_1?s

ISBN: 0671892460

Practical and beautiful, this book shows how to attract butterflies to a back yard garden--and turn it into a fluttering paradise. Marcus Schneck explains the life cycles, migration patterns, and mating behavior of these creatures, and offers invaluable information on everything from pesticide-free garden maintenance to the use of feeders.

DIG IN!	\$20-25
Acorn Naturalists	
<i>http://www.acornnaturalists.com/store/DIG-IN-Hands-On-Soil-Investigations-P2102C0.aspx#B-10064.</i>	
Hands-On Soil Investigations. Natural Resources Conservation Service. This activity book will have kids in grades K-4 up to their elbows in the study of soil formation, habitats, soil animals, land use and soil conservation. Includes teacher-tested lesson plans, assessment methods and suggestions for further study. Integrates science with art, geography, language arts, math and social studies. Perfect introduction to soil study for young children who usually need little encouragement to go play in the soil.	
Digging Deeper	\$15-20
National Gardening Association	
<i>http://www.garden.org</i> #11-4016	
130 pages. This how-to guide is designed for teachers, parents, and community workers who are interested in creating children's gardens that are linked to a community's heritage and food security. Includes photos, case studies of successful children's gardens, curriculum activities, and sample garden designs.	
GEMS Terrarium Habitats	\$10-15
Lawrence Hall of Science	
<i>lawrencehallofscience.org</i> 0-924886-51-X	
K-6. Five activities, 92 pages. These life science activities bring the natural world into your classroom and deepen children's understanding of and connection to all living things. Students investigate soil, design, and populate terrariums, and observe and record changes over time.	
GrowLab: Activities for Growing Minds	\$20-25
National Gardening Association	
<i>http://www.garden.org</i> #10-4008	
This K-8 curriculum will bring plant-based inquiry to life by helping you spark students' curiosity about plants and engage them in thinking and acting like scientists, whether you're growing on a windowsill, in a greenhouse or in one of our GrowLab Indoor Gardens. Concepts Covered: Beginning with Seeds, Basic Needs, The Soil Connection, Transport and Support, Plants as Food Makers, Plants from Seeds and Parts, Adaptations, Diversity, Interdependence, and Human Impact on the Global Garden. Subjects from language arts to drama are woven into investigations. Includes reproducible record-keeping sheets and assessment sheets.	
Integrating Mathematics, Science, and Language (Paso Partners): A	\$25-30
SEDL	
<i>http://www.sedl.org</i> TRNG-10	
Authors: B. J. Mace Matluck, Norma G. Hernandez. Paso Partners applies the best emerging strategies and materials for teaching and integrating mathematics, science and language development. Volume I topics include: Five Senses, Spiders, Dinosaurs, Plants and Seeds, Human Body, Good Health. Lessons in English and Spanish available to download online at http://www.sedl.org/scimath/pasopartners	

Junior Master Gardener: Golden Ray Series--Health and Nutrition from the Garden \$25-30
Texas Cooperative Extension

<http://tce.tamu.edu/>

B-6164

Children are motivated to eat the fruits of their labor in their study of "Health and Nutrition from the Garden." This imaginative curriculum teaches children that growing and eating nutritious fruits and vegetables is rewarding and fun. This teacher/leader guide has six learning concepts, with activity pages for children and program information for leaders. (187 pp. + cards for "Fruit and Veggie Mania" game)

By: Shelley S. Genzer, Randy Seagraves, Lisa Whittlesey

Junior Master Gardener: Golden Ray Series--Wildlife Gardener \$30-35
Texas Cooperative Extension

<http://tce.tamu.edu/>

B-6167

The National Wildlife Federation and the Junior Master Gardener program have joined forces to create an engaging learning opportunity for children. This curriculum will help children learn about the habitat needs of wildlife and develop a greater appreciation for the environment. The program culminates in a community service project, as the students develop a site recognized by the NWF as a Certified Schoolyard Habitat. (230 pp.)

By: Randy Seagraves, Lisa Whittlesey, Michelle Meche, Cynthia Klemmer

Sing the Science Standards Songbook \$25-30
Science Explosion, Inc.

<http://www.scienceexplosion.com>

Join the "Science Explosion" as they sing over 50 songs written to the Science Standards. This is a great way for students in elementary and middle school to review the most important ideas in science. Songbook includes lyrics for the over 50 songs on the double-CD. Bring the Science Standards to life with "Sing the Science Standards with the Science Explosion."

The Art and Science Connection \$35-40
Amazon.com

<http://www.amazon.com>

ISBN: 0201455447

By Kimberly Tolley. This innovative new resource uses a thematic, holistic, hands-on approach to teaching children about the natural world. Students paint the oceans and continents, investigate the structure of crystals, design recycling posters, and more. (Grades K-3)

The Butterfly Garden: Turning Your Garden, Window Box, or Backyard into a Butterfly Paradise \$6-7
Amazon.com

http://www.amazon.com/Butterfly-Garden-Backyard-Beautiful-Butterflies/dp/0916782697/ref=sr_1_1
ISBN: 0916782697

Mathew Tekulsky brings how-to instructions. He begins with an informative, simple description of the lives and habits of some 50 common butterflies, giving gardeners much of what they need to know; then he explains the variety of plants daisies, marigolds, dogwood, etc. that provide butterflies with food and nectar. He offers good advice on how to lure butterflies and how to turn the garden into a haven for them: selecting sunny spots, providing shelter from the wind, assuring abundant drinking water. An appendix describes butterfly migration, nectar preference, habitats, etc. and lists sources for supplies and further information.

Windowsill Science Centers

\$4-5

Amazon.com

http://www.amazon.com/Windowsill-Science-Centers-Grades-K-3/dp/0590743953/ref=sr_1_1?s=b
ISBN: 0590743953

by Lynne Kepler . Spark your students' interest in science with these fun, teacher-tested experiments and activities that require only the simplest of supplies and your classroom windowsill! Favorite topics like seeds and plants, evaporation, light and shadow, and animal observation will get your students thinking like scientists!

Tools/Equipment

Delta Terraria

\$4-5

Delta Education

<http://www.delta-education.com/>
033-6836

Assemble several terraria in the classroom. These plastic transparent containers are provided with lids with holes. 6-Liter, 12" x 7".

Video

Backyard Safari - full series

\$400-500

GPN Educational Media

<http://shopgpn.com/>
Product Code: 686.0000V

Backyard Safari is an engaging series of 13 half-hour programs that introduce four-to seven-year olds to topics in science and natural history. The primary goal of the series is to excite children, particularly those in under-served audiences, such as girls and children of color, to investigate the natural world and develop positive connections with scientific practice. A complementary goal is to help empower all children to see themselves as "scientists" who can turn off the television, step outside, and learn directly from the world around them.

Backyard Safari: Trees

\$35-40

GPN Educational Media

<http://shopgpn.com/>
Product Code: 686.0011V

Backyard Safari is an engaging series of 13 half-hour programs that introduce four-to seven-year olds to topics in science and natural history. The primary goal of the series is to excite children, particularly those in under-served audiences, such as girls and children of color, to investigate the natural world and develop positive connections with scientific practice. A complementary goal is to help empower all children to see themselves as "scientists" who can turn off the television, step outside, and learn directly from the world around them.

Your children will explore the wonders of trees, including:

- How trees grow from tiny seeds to towering giants.
- What features trees have in common and how they differ.
- What types of animals make trees their home.

Trees

\$25-30

Teacher's Video Company

<http://www.teachersvideo.com>

Product # : 353867

From bonzais to huge sequoias, trees are amazingly strong, resilient, and resourceful life forms. How do trees communicate with each other? How do experts determine the age of trees? What is the primary function of bark? How do roots work? Why are trees important to human beings? Discover the answers!