



CRS

COMMUNITY RESOURCES FOR SCIENCE

practical support for great science teaching

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Sample Materials

3rd Grade Earth Science

Audio Tape/CD

Sunshine makes the Seasons

Amazon.com

<http://www.amazon.com/Sunshine-Seasons-reillustrated-Lets-Read---Find-Out/dp/0060592052/ref=ISBN: 978-0060592059>

Make sure to buy the audio cassette edition. By Franklin M. Branley. It all starts with the sun. The sun shines on the Earth and keeps it warm. We have day and night because the Earth spins on its axis and we spend part of each day facing the sun and part of the day facing away from it. But why are days longer in the summer than in the winter? The answer to this question is explained through an experiment using a pencil, an orange, and a flashlight. And when you see this, you'll know the reasons for the seasons. Audiocassette and book also available at Barnes & Noble.

\$10-15

Book only available at Alameda County Public Library. J525.5 BRANLEY.

Tours of the Night Sky

Astronomical Society of the Pacific

<http://www.astrosociety.org>

OA301

This best-selling ASP collection of 4 seasonal audio night sky tours and 40-page booklet with star charts makes stargazing easy. Whether hiking, camping, or simply going out into your backyard, you can play these audio tours (either CD or cassette) on your portable player and embark on a magical tour of the heavens. Using the brightest stars as markers, you will soon effortlessly locate major constellations and discover their mythical origins. It's like having an astronomer by your side! Set includes 2 compact discs, 4 audio cassettes, 40-page booklet.

\$15-20

Classroom Books

Estrellas Y Galaxias: Miramos Mas Alla Del Sistema Solar (The Universe)

Amazon.com

http://www.amazon.com/Estrellas-Galaxias-Universe-Barron-Spanish/dp/0764107607/ref=sr_1_1?ISBN: 978-0764107603

by Miquel Perez, Maria Rius. On a clear, dark night, the children gaze up at the sky and see the stars glittering. They learn that stars are very far away from our own Earth and solar system, and that our sun is really one star in the galaxy we call the Milky Way.

\$5-6

Horrible Harry Goes to the Moon

Amazon.com

http://www.amazon.com/Horrible-Harry-Goes-Moon-Kline/dp/0141306742/ref=sr_1_1?ie=UTF8&qISBN: 0141306742

\$3-4

By Suzy Kline, Frank Remkiewicz (Illustrator). Miss Mackle's third-grade class learns all about the moon from a variety of sources, and holds a bake sale to purchase a used telescope that will give them an up-close look at the celestial body. As always, Harry brings his own exuberant approach to the learning. As in other books in the series, Doug tells the story. His point of view rings true as he reports his classmates' conversations, actions, and even facial expressions. While some of Kline's characters are beginning to seem a little flat, her stories continue to succeed at reflecting everyday life in the classroom.

Saturn

\$8-9

Amazon.com

<http://www.amazon.com>

ISBN0531164306

By Landau, Elaine. These attractive volumes offer much for report writers and browsers. Each begins with a brief overview of the discovery of the planet. With plenty of full-color and black-and-white photographs and paintings, the authors detail what we know, suspect, and hope to find out about Earth's close neighbor Venus and the mysterious ringed Saturn.

Starry Messenger

\$15-20

Amazon.com

http://www.amazon.com/Starry-Messenger-Galileo-Peter-S%C3%ADs/dp/0374470278/ref=sr_1_1

ISBN: 0374371911

By P. Sis. The story of Galileo is at once inspiring and troubling. The brilliant astronomer was a celebrated scientist who was showered with honors and patronage until his greatest discovery--that the earth circled the sun rather than the other way around--proved to be too much of a threat to prevailing orthodoxy.

Sunshine Makes the Season

\$6-7

Amazon.com

<http://www.amazon.com/Sunshine-Seasons-reillustrated-Lets-Read---Find-Out/dp/0060592052/ref>

ISBN: 0064450198

By F. Branley, G. Maestro (Illustrator). The completely rewritten text is better organized with less repetition. It includes less descriptive information about the four seasons and places more emphasis on the causes of seasonal changes. A simply stated and carefully illustrated experiment using an orange, a pencil and a flashlight to help children actually see the differences on earth caused by the tilt of the earth as it rotates on its axis and revolves around the sun is particularly useful.

The Moon (Starting With Space)

\$6-7

Amazon.com

http://www.amazon.com/Moon-Starting-Space-Paulette-Bourgeois/dp/1550741578/ref=sr_1_1?ie=

ISBN: 1550743325

By Paulette Bourgeois, et al. A broad scope makes these introductions useful and appealing; each includes not only basic scientific observations, but also briefly told myths and legends and instructions for easy, homespun demonstrations?all illustrated with a combination of color photos and lively cartoons. To capsule accounts of The Moon's physical history and features, Bourgeois adds explanations of phases and tides, a summary of lunar landings, and legends from around the world. After a look at the past and future of The Sun, she discusses its visible and invisible emissions, seasons, the ozone layer, and the northern lights?the last accompanied by a particularly spectacular photo taken from space. Book can be ordered used for \$1.80 at Amazon Marketplace.

The Planets (Starting with Space)

\$10-15

Amazon.com

[http://www.amazon.com/Planets-Starting-Space-Cynthia-Nicolson/dp/1550745123/ref=sr_1_1?s=l](http://www.amazon.com/Planets-Starting-Space-Cynthia-Nicolson/dp/1550745123/ref=sr_1_1?s=)

ISBN 1550747169

by Cynthia Pratt Nicolson, Bill Slavin (Illustrator). Aimed at readers who know a little and want to know a little more, these above-average surveys include simple projects and briefly told myths. Using a question-and-answer format, Nicolson begins her tour of The Planets with Mercury, systematically describing local conditions ("What would it be like to visit...?"), major physical features ("Why does Venus look so bright?"), and basic facts, such as year length and size compared to Earth's. She also offers

The Stars

\$3-4

Amazon.com

http://www.amazon.com/Stars-Starting-Space-Cynthia-Nicolson/dp/1550745247/ref=sr_1_1?s=books&ie=UTF8&qid=1288111111&sr=1-1
ISBN: 1550745247

By C. Pratt-Nicolson. B. Slavin (Illustrator). Aimed at readers who know a little and want to know a little more, these above-average surveys include simple projects and briefly told myths. Using a question-and-answer format, Nicolson begins her tour of The Planets with Mercury, systematically describing local conditions ("What would it be like to visit...?"), major physical features ("Why does Venus look so bright?"), and basic facts, such as year length and size compared to Earth's. She also offers a pag

The Sun

\$6-7

Amazon.com

http://www.amazon.com/Sun-Paulette-Bourgeois/dp/0613164334/ref=sr_1_1?s=books&ie=UTF8&qid=1288111111&sr=1-1
ISBN: 1550743309

By C. Pratt- Nicolson, P. Bourgeois. B. Slavin (Illustrator). Simon continues his series begun with Earth and The Moon (both Four Winds, 1984) and including Jupiter and Saturn (both Morrow, 1985) with the same format and level of success in this pair on the stars and the sun. The brief text and dazzling illustrations serve as a sort of picture glossary introducing the terminology of stellar objects. Stars presents constellations; the distance to, size, and temperature of the stars; the nuclear power source of stellar energy; binary systems, clusters, galaxies, and quasars; the possibility of other solar systems; and stellar evolution, novae, black holes, neutron stars, and pulsars.

Computer Software

Space Update CD-ROM

\$35-40

The Public Connection Project at Rice University

<http://earth.rice.edu/>

SPACE UPDATE is an interactive, real-time display system of Earth and Space Science images and data designed for Museums and Schools. 5 modules: ASTRONOMY - Images from the Hubble Space Telescope and other observatories around the globe. SKY TONIGHT - Daily skyviews (including the planets and Moon!), for morning and evening skies, looking N, S, E, W, and UP. The CD ships with 8 preset viewing latitudes. SOLAR SYSTEM - Recent results from planetary missions, plus planetary images from Hubble! SPACE WEATHER - A description of what space weather is and what it does. SPACE EVENTS - Information about new discoveries like Comet Shoemaker-Levy 9 and solar and lunar eclipses. The images and overview of the CD-ROM are available online at <http://mtpe.com/connected/spaceupdate.html>

Kits & Modules

Mobile Glow In The Dark Solar System

\$10-15

Edmund Scientific

<http://www.scientificsonline.com/082623>

Bring home the heavens with this glow in the dark solar system in a box! Hangs from your ceiling! Anyone into planet watching will love this personal planetarium. Includes 9 planets with hangers, Sun with hanger, 32 feet of clear plastic line for hanging and a solar system guide.

Recommended age 6+

Posters/Pictures/Slides

The Celestial Zodiac

\$7-8

Einstein's Emporium

<http://www.einsteins-emporium.com>

35 x 35" Full Color Poster. A stunning glow in the dark poster of the twelve signs of the zodiac and their positions in the night sky.

Specimen

Meteorites

\$25-30

MARE Meteoritics

<http://home.flash.net/~meteors/index.htm#tektites>

The Astronomical Society of the Pacific recommended this vendor. Buy Iron Meteorites not rocky ones. Price Range \$25-\$500

Meteorites

\$100-120

New England Meteoritic Services

<http://www.meteorlab.com>

New England Meteoritic Services offers meteorites of all kinds. The Astronomical Society of the Pacific recommends you purchase an iron meteor. Prices range from \$25-\$500

Stickers/Games

Giant Solar System Puzzle Map

\$35-40

Carolina Biological

<http://www.carolina.com>

item # 957117 - Take a fabulous field trip through the solar system and its 9 planets with this colorful puzzle map. Puzzle measures 3 ft in diameter with identification of planets, moons, and nearby stars and constellations. Contains 152 pieces with 39 punch-outs labeled on the reverse sides for identification. Puzzle is constructed of durable Wonder Foam® for many years of use.

Teacher Guide/Reference/Curriculum

Integrating Mathematics, Science, and Language (Paso Partners): B \$25-30
SEDL

<http://www.sedl.org>

TRNG-11

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 2 Topics: Oceans, Weather, Sun and Stars, Matter, Sound, Simple Machines. Lessons in English and Spanish available to download online at <http://www.sedl.org/scimath/pasopartners>

Moon Mission Leader Kit \$35-40
Astronomical Society of the Pacific

<http://www.astrosociety.org>

FA103-LK

Come explore the Moon in legend & folktale, and as a world with conditions very different from our own!

The Moon is the one place beyond Earth that human beings have actually visited in person. Our Moon Mission activities will help your event participants learn that the Moon is more than just a bright object in the sky:

Explore the Moon in legend and folktale with "Toad in the Moon"

Understand why the Moon looks different during the course of the month with "Our Changing Moon"

"Sizing Up the Moon"

More Universe at Your Fingertips \$25-30
Astronomical Society of the Pacific

<http://www.astrosociety.org>

BO123

The best-selling astronomy education resource available just got better! The thousands of educators and astronomers who own the original Universe at Your Fingertips have asked us for more! Here are 25 new classroom-tested activities, a host of resource listings and teaching suggestions, plus a guide to reliable astronomy information and activities on the web. Activities include Measuring the Hubble Deep Field, Organizing the Galaxies, Sorting Saturn's Moons, Making a Mapping a Volcano, and many more! An indispensable supplement to the first notebook and a stand-alone guide to the most up-to-date astronomy education resources.

Specifications: 180 sheets, 3-hole punched. For all grades.

Shipping: Oversized shipping is an additional \$4.

Night Sky Adventure Leader Kit \$35-40
Astronomical Society of the Pacific

<http://www.astrosociety.org>

FA101-LK

Get to know the bright stars and constellations of each season!

A step-by-step introduction to the night sky, the Night Sky Adventure Leader Kit is full of activities and information to help explorers of all ages enjoy the night sky together. Each Family ASTRO Leader Kit below allows you to lead at least two 90-minute Astronomy Events and includes these unique adventures:

"Seeing in the Dark" – For the best viewing, learn why it's important to let your eyes adjust to the nighttime darkness.

"Constel

Project ASTRO Partners Kit
Astronomical Society of the Pacific

\$70-80

<http://www.astrosociety.org>
KT112

Funded by the NSF and NASA, Project ASTRO is an innovative ASP program to pair amateur and professional astronomers with 4th and 9th grade educators. These materials have been developed by our Project ASTRO staff and participants and tested in the many regional ASTRO sites across the country. The Project ASTRO Kit includes both The Universe and More Universe at Your Fingertips, the Partners in Learning DVD, and the How-To Manual for Teachers and Astronomers. (El Universo a sus pies not included)

Tools/Equipment

Celestial Globe
Edmund Scientific

\$100-120

<http://www.scientificsonline.com/>
3053594

Economical Globe for All Classrooms Learn About the Stars, Constellations, Sun and Planet Positions with this unique 12" transparent globe featuring an internal 4" Earth globe with adjustable Sun. Includes Study Guide. For grades 5-12.

EARTH-MOON MODEL

\$8-9

American Science & Surplus

<http://www.sciplus.com/>
92427

You can take the plastic parts in this Earth Moon Model Making Kit and make a 3-3/4" dia Earth and 7/8" dia moon. The first sits on a 3-3/8" pylon, the second sits on the end of a 5" arm and can be moved in a circular orbit around the Earth. You can then enhance the relief surfaces of both with the brush and paints in the kit (6 one-ounce pots of color, plus 2 pots of glow-in-the-dark paint)

Inflatable Solar System Set
Carolina Biological

\$40-45

<http://www.carolina.com>

Item # 957103 -This set includes an inflatable 36" Sun, proportional planets and the moon, a teacher's activity guide, and a convenient foot pump. You can easily demonstrate rotation of planets and their revolutions around the Sun, their relative sizes and orbits, and much more. When the lesson is over, hang everything from the ceiling on the hooks provided. Each piece is made of durable, washable plastic and easily deflates for storage.

Motorized Solar System
Carolina Biological

\$40-45

<http://www.carolina.com>

Item # 957152 - This dramatic light show brings our solar system right into your classroom. The model sun shines onto the 9 planets as they orbit around it. A star dome can replace the solar dome, converting a darkened room into a spectacular planetarium sky complete with major constellations. The base features planetary longitude marks, so the planets can be set up to their correct positions every day using the 5-year planetary longitudinal chart included. Powered by an AC adapter (included) or 4 C batteries (not included).

solar system model \$35-40
 American Science & Surplus
<http://www.sciplus.com/>
 91930
 This is one slick motorized solar system and planetarium from Educational Insights®. Make assembling it an educational exercise. Demonstrate how the planets circle the sun. The 4" dia sun is yellow plastic, lit with a krypton bulb. The planets are colored, reasonably proportional given their actual sizes, and marked with their symbols. They ride on black metal arms that disappear in the dark. The helpful instruction manual suggests activities, and includes a heliocentric longitude chart. Use it with the deg

Solar System Simulator \$90-100
 Edmund Scientific
<http://www.scientificsonline.com/>
 3053595
 Each planet is set on an independent wire arm that surrounds the sun. Calendar at the base allows for positioning of planets. Lesson plans discuss orbit and speed. For grades 3 - 9.

Solar System Simulator \$100-120
 Carolina Biological
<http://www.carolina.com>
 Item # 612254 -AMEP. A 3-dimensional model of the sun and planets suitable for all grade levels for teaching planet identification, sizes, distances, and colors. Size, 12 × 22". With study guide.

The Orbitor \$140-160
 Edmund Scientific
<http://www.scientificsonline.com/>
 3053596
 The Orbitor is a gear driven model of the sun, Earth & moon. The components revolve around one another, depicting the true relationship between the three. The Orbitor allows you to demonstrate the positions during the day, night, various seasons. and phases of the moon.
 Earth and moon are mounted on a 15" arm that rotates around the 6" Sun. Includes Instructional Guide. Brighten your model up with the illuminated version that lights up the sun.

Video

Bill Nye: Earth's Seasons \$35-40
 Disney Education Products
<http://www.edustation.disney.com>
 68A93VL00
 Get the full tilt on the reasons for the seasons. Help explain why when it's winter in America, it's summer in Australia.

Some titles available at public libraries. Berkeley school teachers can borrow from the Central Media

Bill Nye: Outer Space Video \$35-40
 Disney Education Products
<http://www.edustation.disney.com>
 68A92VL00
 Bill Nye talks about Outer Space-- planets, stars, galaxies, and the universe. He also visits the Mount Wilson Observatory in California to help illustrate how long it takes light to travel through the galaxy.

Some titles available at public libraries. Berkeley school teachers can borrow from the Central Media.

Bill Nye: The Moon

Disney Education Products

<http://www.edustation.disney.com>

68A91VL00

Learning about the Earth's natural satellite is an out-of-this-world experience as loony Bill Nye illuminates the orbit and phases of the moon. The program features an interview with Harrison Schmitt, the last astronaut to walk on the moon.

\$35-40

Some titles available at public libraries. Berkeley school teachers can borrow from the Central Media

Bill Nye: The Moon DVD

Disney Education Products

<http://www.edustation.disney.com>

77A15VL00

Learning about the Earth's natural satellite is an out-of-this-world experience as loony Bill Nye illuminates the orbit and phases of the moon. In addition to the complete 26-minute episode of "The Moon," this disk is loaded with incredible DVD features like:

*Fully indexed "chapters" correlated to National Science Standards.

*Interactive glossaries and quizzes.

*Bonus footage of never-before-seen segments, interviews, and demos.

*Spanish translation and closed-captioning.

*On-disk implementation Guide

\$45-50

Some titles available at public libraries. Berkeley school teachers can borrow from the Central Media

Bill Nye: The Planets

Disney Education Products

<http://www.edustation.disney.com>

68A58VL00

Go planetgazing and take a serious look at Jupiter's features, Earth's elliptical orbit, and the distances between planets. Cool home demo shows how to make Mars soil.

\$35-40

Some titles available at public libraries. Berkeley school teachers can borrow from the Central Media

Bill Nye: The Planets DVD

Disney Education Products

<http://www.edustation.disney.com>

77A17VL00

Bill Nye gets up close and personal with each set of the solar system's planets and moons. Bill goes planet gazing and takes a serious look at Jupiter's features, Earth's elliptical orbit, and the distances between planets. In addition to the complete 26-minute episode of "The Planets," this disk is loaded with incredible DVD features like:

*Fully indexed "chapters" correlated to National Science Standards.

*Interactive glossaries and quizzes.

*Bonus footage of never-before-seen segments, interviews, and

\$45-50

Some titles available at public libraries. Berkeley school teachers can borrow from the Central Media

Science in Action

Foundation for Biomedical Research

<http://www.fbresearch.org>

K-4 animated video designed to excite children about science. Included with video are a teacher's guide/activity booklet and activity sheets. The video is a story about a scientist who takes a young boy and his sister on an adventure through time and space. They encounter everything from meteors to dinosaurs and realize that science is part of practically everything around them. (8 minutes)

\$20-25

Tell Me Why Video #1 - In Spanish - Space, Earth, and Atmosphere

\$15-20

Amazon.com

<http://www.amazon.com>

Answers questions such as "How big is the universe?" "What makes the stars shine?" "Why does the Moon change shape?" and much more! (Also Available in English) Each video comes complete with its own printed Study Guide containing a glossary, additional questions and suggested learning strategies. Run time 30 min.