

- Margulis, Lynn and Dorion Sagan. *Acquiring Genomes. A Theory of the Origin of Species*. Basic Books 2002.
- Morowitz, Harold J. *The Emergence of Everything. How the World Became Complex*. Oxford Univ. Press 2004.
- Nuland, Sherwin B. *The Mysteries Within. A Surgeon Reflects on Medical Myths*. Simon & Schuster 2000.
- Park, Robert. *Voodoo Science. The Road From Foolishness to Fraud*. Oxford University Press 2000.
- Pine, Stephen J. *Year of the Fire. The Story of the Great Fires of 1910*. Viking 2001.
- Pinker, Steven. *The Blank Slate. The Modern Denial of Human Nature*. Viking 2002.
- Pullman, Bernard. *The Atom in the History of Human Thought*. Oxford Univ. Press 1998 (heavier reading).
- Ridley, Mark. *The Cooperative Gene. How Mendel's Demon Explains the Evolution of Complex Beings*. The Free Press 2001.
- Ridley, Mark. *The Agile Gene. How Nature Turns on Nurture*. Perennial (HarperCollins) 2003.
- Shermer, Michael. *Why People Believe Weird Things. Pseudo-science, Superstition, and Bogus Notions of Our Time*. MJF Books 1997.
- Sykes, Bryan. *The Seven Daughters of Eve. The Science that Reveals our Genetic Ancestry*. W. W. Norton 2001.
- Winchester, Simon. *The Map that Changed the World. William Smith and the Birth of Modern Geology*. Harper Collins 2001.
- Wright, William, *Born That Way, Genes, Behavior, Personality*. Alfred A. Knopf 2000.

To find out what is happening at the Northern California Natural History Museum log on to our website at:

[www.ncnhm.org](http://www.ncnhm.org)

For additional information and answers to your questions contact:

[shirleyswanson@ncnhm.org](mailto:shirleyswanson@ncnhm.org)

or

530-343-2446

Your donations to the Museum effort are generally deductible on State and Federal Income Taxes. Check with your accountant or tax preparer. Personal checks may be made out to:

*Northern California Natural History Museum*

and forwarded to:

Northern California Natural History Museum  
 College of Natural Sciences  
 California State University Chico  
 Chico, CA 95929-0555



**Northern California  
 Natural History Museum  
 at CSU, Chico**  
 (www.ncnhm.org)

**Science Resources  
 and Activities  
 for Students and Parents**

*Compiled by Anne Stephens*

## PERIODICALS

*Discover*. A monthly magazine of science and technology. 12 issues for \$29.95

*Popular Science*. Another good monthly magazine covering science and technology.  
[www.popsci.com/subscribe](http://www.popsci.com/subscribe)

*Science News*. A weekly magazine of science, \$27.25 for 6 months (800)552-4412 (8<sup>th</sup> grade+ readability).

## BOOKS FOR ADULTS TO INCREASE SCIENTIFIC LITERACY

Hazen and Trefil, *Science Matters*, Anchor Books, New York. 1991.

Ahlgren and Rutherford, *Science for All Americans*, Oxford University Press, New York. 1990.

## ACTIVITIES FOR STUDENTS AND CLASSES DURING THE SCHOOL YEAR

**Sacramento Valley Nature Bowl**. The Nature Bowl is a cooperative team competition for all 3<sup>rd</sup> through 6<sup>th</sup> grade students, now into its 19<sup>th</sup> year. Questions and activities focus on local and regional environmental science and issues, and correlate with the State Science Framework and the new Science Standards.

**Ducks Unlimited Greenwing Program at Rancho Esquon**. Middle School students may sign up for the Greenwing Program through their school's counseling office. Teachers may schedule field trips by calling Jay Dee Garr, Ducks Unlimited Education Coordinator at (530)458-5338.

**K-12<sup>th</sup>: River of Words International Poetry and Art Contest**. This is an international program created to promote literacy and environmental stewardship. Its focus is to help youth explore and interpret their watersheds through a multidisciplinary curriculum. Check the RECESS section of the Enterprise Record in January for information about the local River of Words contest sponsored by the Sacramento River Watershed Program. Yearly deadline for poetry and art is February 15<sup>th</sup>.

<http://www.riverofwords.org>

**Snow Goose Festival: (TBA: usually in January)** take part in workshops, guided tours, and lectures from experts as part of Butte County's self-guided Winter Migratory Waterfowl Tour. Bird-lovers know that Chico sits beneath the Pacific Flyway, and congregate at this annual event to celebrate the migration of the snow goose. Held at Chico Masonic Family Center. Some events require a fee. +1 530 891 5556 or 800 852 8570 (U.S. and Canada).

Chico Chamber of Commerce (<http://www.chicochamber.com>)

## SELECTED CALIFORNIA SUMMER PROGRAMS IN MATH AND SCIENCE

**Academic Talent Program**. ATDP offers challenging summer classes for highly motivated students who have completed grades 7-11.

<http://www-atdp.berkeley.edu>

**Berkeley Foundation for Opportunities in Information Technology's IT Leadership Program (BFOIT)**. BFOIT will offer a two-week program aimed at introducing youth to computer science and the university environment on the UC Berkeley campus. This program focuses on women and members of ethnic groups that are historically underrepresented in the information technology fields.

<http://www.bfoit.org>

## Additional References

The list of books that follow were largely written for the serious reader. They provide perspectives on a variety of scientific subjects that are, for the most part, written for, and accessible to the layperson. They should prove useful to parents and mature students who wish to become familiar with some of the current research and thinking in a particular field. Some are classics of their kind. Most are recently published and should be available in your local library and at your bookseller.. A few of the works are relatively challenging reading but should prove useful for those who persevere. Many are authored by major figures in their chosen field, and their other works may be found on the web or literature citations at the end of their books.

Bronowski, J. and Bruce Mazlish. *The Western Intellectual Tradition*. Harper and Row 1960 (heavier reading).

Cadbury, Deborah. *Terrible Lizard. The First Dinosaur Hunters and the Birth of a New Science*. Henry Holt. 2000.

Cole, K. C. *The Hole in the Universe. How Scientists Peered over the Edge of Emptiness and Found Everything*. Harcourt 2001.

Crews, Frederick C. , ed. *Unauthorized Freud. Doubters Confront a Legend*. Viking 1998.

Crick, Frances, H. C. *The Astonishing Hypothesis. The Scientific Search for the Soul*. Charles Scribner's Sons 1994.

Davies, Kevin. *Cracking the Genome. Inside the Race to Unlock Human DNA*. The Free Press, 2001

Dawkins, Richard. *River Out of Eden. A Darwinian View of Life*. Basic Books (HarperCollins) 1995.

Dawkins, Richard. *The Blind Watchmaker. Why the Evidence of Evolution Reveals a Universe Without Design*. W.W. Norton 1986.

Diamond, Jared. *Guns, Germs, and Steel. The Fates of Human Societies*. W. W. Norton 1997 (won Pulitzer Prize).

Flannery, Tim. *The Eternal Frontier. An Ecological History of North America and Its Peoples*.. Atlantic Monthly Press New York 2001

Gould, Stephen Jay. *Questioning the Millennium. A Rationalists Guide to a Precisely Arbitrary Countdown*. Harmony Books 1997.

Greene, Brian. *The Fabric of the Cosmos. Space, Time, and the Texture of Reality*. Alfred A Knopf 2004.

Gribbin, John. *The Birth of Time. How Astronomers Measured the Age of the Universe*. Yale University Press 1999.

Hawking, Stephen W. *The Theory of Everything. The Origin and Fate of the Universe*. New Millennium Press 2002.

Hellman, Hal. *Great Feuds in Medicine. Ten of the Liveliest Disputes Ever*. John Wiley 2001.

Hilton, Richard P. *Dinosaurs and Other Mesozoic Reptiles of California*. University of California Press 2003.

Jaffe, Mark. *The Guilded Dinosaur. The Fossil War Between E. D. Cope and O. C. Marsh and the Rise of American Science*. Crown Publishers 2000.

Kaku, Michio. *Visions. How Science will Revolutionize the 21<sup>st</sup> Century*. Anchor Books Doubleday 1997.

Kayzer, Wim, ed. *A Glorious Accident. Understanding Our Place in the Cosmic Puzzle*. W.H Freeman 1995 (a collection of essays).

Lewontin, Richard. *Human Diversity*. Scientific American Library 1995.

Mackay, Charles. *Extraordinary Popular Delusions and the Madness of Crowds*. Richard Bentley, London 1841. Facsimile reprint, Barnes and Noble Books, 2002.

Science Education Links.

<http://epc.ucsc.edu/cosmos>

The Awesome Library K-12 Science Science.

<http://www.awesomelibrary.org/Classroom/Science/Science.html>

Young Scientists Program (Washington Univ. School of Medicine).

<http://medinfo.wustl.edu/~ysp/>

SchoolNet Science Links.

<http://www.hudmark.com/schoolnet/science.html>

Curriculum Links for Science Educators

<http://esu8.esu8.k12.ne.us/~esu8web/curriculum/science.html>

AAAS Science NetLinks, including *Curriculum Connections*.

<http://www.sciencenetlinks.com/>

Science Learning Network.

<http://www.sln.org/>

Science Net (In English and French).

<http://sciencenet.tpl.toronto.on.ca/>

Science Junction.

<http://www.ncsu.edu/sciencejunction/>

K-12 Science Lesson Plans.

<http://www.lessonstop.org/science.html>

## ASK A SCIENTIST

AskA+ Locator. This directory of online question answering services (AskA) is “designed to link students, teachers, parents and other K-12 community members with experts on the Internet.” Each service listing includes identification information (e.g., publisher, e-mail address, contact name, and links), scope, target audience, and a general description of the service.

<http://www.vrd.org/locator/>

Ask a Scientist E-mail Addresses from SCORE.

<http://scorescience.humboldt.k12.ca.us/fast/ask.htm>

**Camp Sea Lab.** The Mission of Camp SEA Lab is to provide a unique residential educational experience for youth, their families, and their teachers: one fostering life-long excitement, scientific understanding, and inspiring stewards of today for the oceans of tomorrow.

<http://csl.ssmmedia.com/Programs/SummerCamp>

**Chabot Space and Science Center.** Chabot Space & Science Center offers camps for young people interested in science and having fun! Chabot’s excellent, hands-on student-centered learning model combines well with the outstanding resources available in the Science Center.

<http://www.chabotspace.org/visit/programs/summercamps.asp>

**CMU-NASA Summer Program in Robotics.** RoboCamp-West is a robotics camp offered by Carnegie Mellon University in cooperation with NASA/Ames Research Center. The summer course introduces students to the electronics, mechanics and computer science of robotics, culminating in a series of autonomous robot challenges.

<http://west.cmu.edu/specialPrograms/robocamp/index.htm>

**University of California COSMOS Summer Program for Math and Science.** Designed specifically for talented and motivated high school students, the **California State Summer School for Mathematics and Science** is a 4-week summer residential program for young scholars with demonstrated interest and achievement in math and science. The program is also open to exceptionally advanced and emotionally mature 8th graders capable of participating in a one-month program away from home. This intensive experience is intended to encourage the brightest and most promising young minds to continue their interest in these fields. Located on three University of California campuses (Davis, Irvine, and Santa Cruz), COSMOS provides students with an unparalleled opportunity to work side-by-side with outstanding researchers and university faculty, covering topics that extend beyond the typical high school curriculum.

<http://epc.ucsc.edu/cosmos>

**Johns Hopkins University, Center for Talented Youth** (sites in CA, MA, MD, PA, NY) In CTY’s Summer Programs, qualifying students can enjoy three fulfilling and fun weeks learning and (in our residential programs) living in the company of other bright young minds. Students take one course during this time in subjects ranging from writing to computer science, history to mathematics.

<http://cty.jhu.edu>

## NASA Summer High School Apprenticeship Research Program (SHARP)

Each year, approximately 400 students will be selected to participate in NASA SHARP for a minimum of eight weeks during the summer. They will work with some of NASA’s top science professionals, assisting with cutting-edge research as well as working on state-of-the-art equipment.

<http://www.nasasharp.com>

**Point Reyes Science Camp.** For teenagers 13-16, a six-day Adventure Camp. Teens love this camp because it provides opportunity for social interaction without the social pressure. Highlights of the week include a 4-day backpack trip within the park and a dance on the last night.

<http://www.ptreyes.org/camp/index.html>

**Quest Scholars Environmental Science Program.** Quest is a five-year long leadership and science education program for talented, low-income youth. Quest begins with a five-week summer residential program on the Stanford campus, and continues through the undergraduate college experience.

<http://questscholars.stanford.edu>

**Sally Ride Camps.** In summer 2004, Sally Ride Science Camps will be held again at Stanford University (Stanford, CA) and Agnes Scott College (Atlanta, GA). These unique, overnight camps provide girls an opportunity to explore science, technology, and engineering while having fun on a college campus.

<http://www.sallyridecamps.com>

**Stanford University Mathematics Camp (SUMAC).** Brings mathematically talented and motivated high-school students from across the United States, and from around the world, to Stanford University for four weeks of serious mathematical pursuits.

<http://math.stanford.edu/sumac>

**Summer Science Program in Astronomy.** Operating since 1959, the Summer Science Program (SSP) is designed for academically gifted students interested in astronomy. Originally housed in Ojai, California, the SSP opens a new phase this year with expansion to a second campus at New Mexico Tech at Socorro, New Mexico.

<http://www.summerscience.org>

**The Tech Summer Camps, The Technological Museum of Innovation.** These programs allow kids to experience The Tech in a whole new way. Bringing together high-quality lab facilities, engaging curriculum, and personalized instruction, our camps will create a fun and inspiring way for your kids to deepen their interest in science and technology.

<http://www.thetech.org/summercamps>

Computer science, history to mathematics.

<http://cty.jhu.edu>

**CyberCamps** (nationwide). Courses in Animation, Programming, Robotics, and Video Game Design.

<http://www.giantcampus.com/cybercamps/index.asp>

**Earthwatch Institute, Student Challenge Awards Program (SCAP)** (worldwide). SCAP aims to broaden the horizons and heighten the aspirations of talented young people by exposing them to the frontiers of scientific endeavor. High school students are eligible to apply for this special fellowship program when nominated by a teacher.

<http://www.earthwatch.org/education/student/scap.html>

**Fair Play.** Female students will immerse themselves in the fascinating worlds of engineering, technology, and physical science as they enjoy a two-week camp experience.

[www.girlscoutsofsc.org](http://www.girlscoutsofsc.org)

**iD Tech Camps.** Educators work with students to exercise their creativity while embracing technology as an invaluable tool for life. iD Tech Camps offer cutting-edge, hands-on technology education that sparks interest, cultivates learning, and inspires the “internalDrive” in students.

<http://www.internaldrive.com>

**Lawrence Hall of Science Summer Camps.** At Lawrence Hall of Science residential summer camps, the mountains, forests, and seashore become exciting places to explore science in ways not possible inside a classroom. As UC Berkeley’s science museum and center for K–12 education, LHS knows how to combine the best hands-on, inquiry-based environmental education activities with what students love most about summer camp.

<http://www.lawrencehallofscience.org/classes/camps.html>

## DIRECTORIES OF SUMMER MATH AND SCIENCE PROGRAMS

### Bay Area Kid Fun.

<http://www.bayareakidfun.com/pages/summercamps.html>

### Johns Hopkins University, CTY resources page

<http://cty.jhu.edu/imagine/linkA.htm>

### NAGC Summer Programs List

<http://www.nagc.org/summer/intro.html>

### PyMath List of Math and Science Summer Programs

<http://www.pymath.com/MathCamps.html>

### Searchable Directory of Summer Science Programs

<http://www.sciserv.org/stp>

## SCIENCE FAIR INFO

Chico Unified Teachers offer an evening workshop for students and their parents every winter. Check your school’s newsletter for this year’s date and time.

In the meantime, check out the official website of the California State Science Fair: *Getting Started with Your Project*. It has links to 24 helpful websites.

<http://www.usc.edu/CSSF/Resources/GettingStarted.html>

## SCIENCE ACTIVITY BOOKS FOR FAMILIES

Cobb, Vicky. *Science Experiments You Can Eat*

Cobb, Vicky. *Science Magically!*

<http://www.vickicobb.com/scienceyoueat>

## SITES FOR “COOL” SCIENCE LINKS

Online Exhibits Hotlist.

<http://sln.fi.edu/tfi/jump.html>

New Scientist Planet Science: Keysites - Hot Internet Issues and Cool Sites

<http://www.newscientist.com/weblinks/>

KIDS Report — “Kids Identifying and Discovering Sites”, a biweekly publication produced by K-12 students as a resource to other K-12 students exploring the Internet.

<http://scout.wisc.edu/Projects/PastProjects/>

Insanely Great Science Websites.

<http://www.eskimo.com/~billb/amateur/coolsci.html>

Exploratorium’s Cool Sites Archives.

[http://www.exploratorium.edu/learning\\_studio/sciencesites.html](http://www.exploratorium.edu/learning_studio/sciencesites.html)

Kathy Schrock’s Guide for Educators.

<http://school.discovery.com/schrockguide/>

## WEB DIRECTORIES FOR SCIENCE EDUCATION SOURCES

Cornell Math and Science Gateway for Grades 9-12

<http://www.tc.cornell.edu/Edu/MathSciGateway/>

World Lecture Hall.

<http://www.utexas.edu/world/lecture/>