



SOLAR CENTER INFORMATION

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Energy Education Resources for Teachers and Students

Good educational resource materials on the topic of energy are a valuable commodity for the teachers and students in our school systems. Listed below are the educational materials that can be found in our Reference Library at the N.C. Solar Center. Teachers and students are encouraged to use the in-house reference resources in the reference library located at the Solar House. Those items marked (SC) may be ordered directly from the Solar Center.

Cooking with the Sun – Beth Halacy and Dan Halacy, Morning Sun Press, 1992. This book provides directions for building solar ovens and solar hot plates. It also offers many recipes that have been taste-tested with these solar cookers. All the cookers are designed to be built by amateurs and are good student projects. (SC)

Energy Education Resources – National Energy Information Center, U.S. Department of Energy, 1998. This book provides a listing of free or low-cost energy education materials available to teachers, students and other users for grades K-12. (SC)

Energy, Technology and Society – National Energy Foundation, 1990. This curriculum package covers renewable energy sources for grades 9-12 and is ideal in North Carolina for physical science, earth studies, physics, chemistry, and biology classes. Originally developed in Australia, the package has been revamped for American audiences. It includes a 45-minute videotape, computer software, a 309-page teacher guide, fact sheets, and posters. Available with the CD-Rom renewable energy encyclopedia, Sun's Joules. (SC)

Environmental Education: Compendium for Energy Resources (K-12) – California Energy Extension Service, 1992. This is an excellent annotated bibliography of energy education materials with many examples of curriculum materials. Many of these materials can be used in subjects other than science.

“From Space to Earth”-The Story of Solar Electricity – John Perlin, 1999. Perlin's book tracks the evolution of

photovoltaics from its nineteenth-century beginning to its high visibility success in the space program, to its current position as an indispensable and versatile power source that is improving our daily lives. It explains how PV cells work by tracing the evolution of technologies and manufacturing, right up to the present.

Information Resources for Conservation and Renewable Energy – N.C. Solar Center factsheet, 1999. This factsheet lists national organizations, government offices, North Carolina trade associations, nonprofit and government agencies that offer information on energy conservation and renewable energy. Addresses and phone numbers are included for all the organizations. (SC)

Photovoltaics Demonstrator Construction Guide – Alabama Solar Energy Center, University of Alabama at Huntsville, 1990. Designed for grades 6-12, this guide describes how to construct a photovoltaics demonstrator and how to run several experiments with it.

Renewables Are Ready – Union of Concerned Scientists, 1991. This guide is for teachers of junior and senior high school students. The activities in this guide cover all forms of renewable energy, such as solar, wind, biomass, and energy economics.

Renewable Energy Factsheets – Solar Energy Industries Association, American Wind Energy Association, American Ocean Industries Association, National Wood Energy Association. These two booklets contain reproducible factsheets for students about technologies which can meet energy needs without causing harmful pollutants.

Solar Activities for Students – N.C. Solar Center factsheet, 1998. Geared towards middle school students, this factsheet educates students about solar energy through activities ranging from solar heating to electricity. (SC)

Solar Energy and You – N.C. Solar Center factsheet, 1990. Geared toward students, this factsheet explains how solar energy can help heat a house or hot water, as well as change sunlight directly into electricity. (SC)

Solar Energy Science Projects – U.S. Department of Energy, National Renewable Energy Laboratory, 1995.

Science Projects in Renewable Energy and Energy Efficiency – American Solar Energy Society, 1991. Science projects are described that provide experiences to develop problem-solving skills related to the scientific process, while increasing the awareness of students about renewable energy. The projects in this book range from working with photovoltaics to wind and ocean energy. The book also lists resources for educators to consult when doing these projects. (SC)

Solar Science Activities – Solar Energy Industries Association, 1986. Aimed at middle school students, this activity guide offers numerous activities for all aspects of solar energy, from the nature of solar energy to passive solar heating and the use of solar cells for electricity.

Sunbook – Energy Division, North Carolina Department of Commerce, 1999. A guide to solar energy in North Carolina.

Interactive Energy Websites

“Energy Ant” Kids Corner – The EIA Kid’s Page began as a class project – the Energy Industry Study Program. Energy issues that are facing the nation, as seen through the eyes of industry.
www.eia.doe.gov/kids/

Energy Quest – California Energy Office. The website provides energy information and activities for teachers and students.
www.energy.ca.gov/education/index.html

Ecovision – This Environmental Broadcast Network contains information and concerns about our environment and is aimed for students in grades K-12.
www.ecovision.org

4E’s Connections Newsletter – Florida Energy & Environmental Alliance, Institute of Science and Public Affairs. This quarterly newsletter, available to non-Florida residents by internet, is published to provide timely informa-

tion on energy, environment, economics and education. It is an excellent information resource for teachers.
www.eea.freac.fsu.edu

The Jason Project – The Jason Project is a year-round scientific expedition designed to excite and engage students in science and technology and to motivate and provide professional development for teachers.
www.jasonproject.org

Kids for the Earth – BCN Environment Center. This website contains facts and fun information about the earth, environment, and energy resources.
bcn.boulder.co.us/environment/ed96/edkids.html

Kids’ Page – Office of Transportation Technologies, U.S. Department of Energy. This webpage is meant for younger students who want to have fun learning about alternative fuel cars and helping the environment.
www.ott.doe.gov/kids.html

Kids’ Stuff – Energy Efficiency and Renewable Energy Network (EREN). This website provides a list of various websites that address energy education.
www.eren.doe.gov/kids.html

Roofus’s Solar and Efficient Neighborhood – Energy Efficiency and Renewable Energy Network (EREN). Roofus leads kids on a virtual tour of his energy-efficient house to learn about renewable energy and energy efficiency. Recommended for grades 1 to 4. The website also contains activity suggestions for teachers for grades K-12.
www.eren.doe.gov/roofus

Renewable Energy, Environmental and Sustainability websites – National Renewable Energy Laboratory. This website lists sites providing information about renewable energy and sustainability.
www.nrel.gov/business/education/wwwed.html

The Solar Cooking Archive – This website provides plans for building solar cookers, a solar cooking photo gallery, newsletters, and other informative resources. The site can be viewed in six different languages.
www.solarcooking.org/

Solar Host – Web hosting for a better planet. Website consists of information on renewable energy as well as global energy in the marketplace.
www.crest.org/

The Sun’s Joules – Center for Renewable Energy and Sustainable Technology. Multimedia encyclopedia on renewable energy, appropriate for middle school students to adult.
solstice.crest.org/renewables/SJ

CD-Rom

The Sun's Joules – Center for Renewable Energy and Sustainable Technology, 1995. Multimedia encyclopedia on renewable energy for newer Macintosh or Windows computers. Appropriate for middle school students to adult. Can be purchased through www.learningteam.com

Periodicals

The following are several periodicals in the Solar Center's reference library that might be of interest to educators. They are not for sale but educators may browse through them.

Carolina Sun – This is the quarterly magazine of the N.C. Solar Energy Association. It covers solar and renewable energy developments in North Carolina. It may be obtained by membership in NCSEA (see organizations listed below). A sample copy is available from the Solar Center upon request.

EcoLink – This newsletter is published monthly for teachers by the University of Central Florida. The newsletter provides information for teachers on upcoming teacher workshops and new curricula materials that are available on environmental issues (see organizations listed below).

Solar Industry Journal – This journal is published quarterly by the Solar Energy Industries Association and provides news about the status of the industry, new and ongoing solar projects nationwide, and the latest on available solar technology applications. It may be obtained by membership in SEIA (see organizations listed below).

Solar Today – This journal is published bimonthly by the American Solar Energy Society. It provides articles on solar developments nationwide. It may be obtained by subscription or by membership in ASES (see organizations listed below).

Other Organizations

The following organizations publish many resources for educators on energy education. Contact them for a list or catalogue of their resources.

Alabama Solar Energy Center
University of Alabama at Huntsville
Johnson Research Center
Huntsville, AL 35899
Phone: (256) 890-6343 Fax: (256) 890-6848
Toll Free: (800) 874-3327 (in Alabama)

American Solar Energy Society
2400 Central Avenue, Unit G-1
Boulder, CO 80301
Phone: (303) 443-3130 Fax: (303) 443-3212
Email: ases@ases.org
Web: www.ases.org

Center for Renewable Energy & Sustainable Technology
1612 K Street, NW
Suite 202
Washington, D.C. 20006
Phone: (202) 293-2898 Fax: (202) 293-5857
Email: info@crest.org
Web: www.crest.org

Energy Efficiency and Renewable Energy Clearinghouse/Network
P.O. Box 3048
Merrifield, VA 22116-0121
Phone: (800) 363-3732 Fax: (703) 893-0400
Email: doe.erec@nciinc.com
Web: www.eren.doe.gov

Florida Solar Energy Center
1679 Clearlake Road
Cocoa, FL 32922-5703
Phone: (321) 638-1000 Fax: (321) 638-1010
Email: webmaster@fsec.ucf.edu
Web: www.fsec.ucf.edu

National Energy Education Development Project
8408 Kao Circle
Manassas, VA 20110
Phone: (703) 257-1117 Fax: (703) 257-0037
Email: info@need.org
Web: www.need.org

National Energy Foundation
3676 California Ave. St. A117
Salt Lake City, UT 84104
Phone: (801) 908-5800 Fax: (801) 908-5400
Email: info@nef1.org
Web: www.nef1.org

National Energy Information Center
U.S. Department of Energy
Energy Information Administration, EI30
1000 Independence Ave., SW
Washington, D.C. 20585
Phone: (202) 586-8800
Email: infoctr@eia.doe.gov
Web: www.eia.doe.gov

National Renewable Energy Laboratory
1617 Cole Boulevard
Golden, CO 80401-3393
Phone: (303) 275-3000 Fax: (303) 275-4053
Email: webmaster@nrel.gov
Web: www.nrel.gov

N.C. Solar Energy Association
P.O. Box 6465
Raleigh, NC 27628-6465
Phone: (919) 832-7601
Email: ncsea@mindspring.com
Web: www.ncsolar.org

Solar Cookers International
1919 21st St., Suite 101
Sacramento, CA 95814
Phone: (916) 455-4499 Fax: (916) 455-4498
Email: info@solarcookers.org
Web: <http://solarcooking.org>

Solar Energy Industries Association
1616 H Street, NW
8th Floor
Washington, D.C. 20006
Phone: (202) 628-7745 Fax: (202) 628-7779
Email: info@seia.org
Web: www.seia.org

Solar Now Project
100 Sohier Road
Beverly, MA 01915
Phone: (978) 927-9786 Fax: (978) 927-9191
Email: solarnow@mediaone.net
Web: www.solarnow.org

Southface Energy Institute
241 Pine St.
Atlanta, GA 30308
Phone: (404) 872-3549 Fax: (404) 872-5009
Email: questions@southface.org
Web: www.southface.org

Union of Concerned Scientists
2 Brattle Square
Cambridge, MA 02238
Phone: (617) 547-5552 Fax: (617) 864-9405
Email: ucs@ucsusa.org
Web: www.ucsusa.org

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1340 Mail Service Center, Raleigh, NC 27699-1340
Phone: (919)733-2230, Fax: (919)733-2953
Toll-free: 1-800-662-7131
E-mail: Doa_Energy@ncmail.net
Web: www.energync.net

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