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ABSTRACT

This bibliography assists junior and senior high school students and teachers in planning, preparing, executing, and evaluating science fair projects. A few books with experiments suitable for elementary grade students are listed. This publication is not intended to be a comprehensive bibliography but is designed to put the reader "on target." Included are introductions to the topic; subject headings under which materials can be located; basic texts; specialized texts; classroom experiments and activities; handbooks and manuals; bibliographies; book/film reviews and "best book" sources; abstracting and indexing services; journals; journal articles; selected materials; and additional sources of information. (YP)

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SCIENCE FAIR PROJECTS

Compiled by Constance Carter

TB 88-4 December 1988

SCOPE: Sources to assist junior and senior high school students and teachers in planning, preparing, executing, and evaluating science fair projects. A few books with experiments suitable for elementary grade students are listed. Not intended to be a comprehensive bibliography, this literature guide, updating TB 85-9, is designed--as the name of the series implies--to put the reader "on target."

Brief introductions to the topic appear in:

Bergquist, Wilbur. Spring fairs need fall plans. Science teacher, v. 54, Nov. 1987: 60-61. Q181.S38 and Pamphlet box*

McBride, John W., and Frederick L. Silverman. Judging fairs fairly. Science and children, v. 25, Mar. 1988: 15-18. LB1585.S34 and Pamphlet box*

Teachworth, Martin D. Surviving a science project. Science teacher, v. 54, Jan. 1987: 34, 36. Q181.S38 and Pamphlet box*

SUBJECT HEADINGS used by the Library of Congress, under which books on science fair projects can be located in most card, book, and online catalogs, include the following:

SCIENCE--EXPERIMENTS (Highly relevant)
See also subdivision EXPERIMENTS under subject headings of particular interest, such as AIR, ASTRONOMY, BOTANY, BIOLOGY, GEOLOGY, OCEANOGRAPHY, OPTICS, SPACE SCIENCES
SCIENCE--EXHIBITIONS (Highly relevant)
SCIENCE PROJECTS (Highly relevant)
SCIENCE--METHODOLOGY (Relevant)
SCIENCE--STUDY AND TEACHING (Relevant)
See also subdivisions STUDY AND TEACHING or PROBLEMS, EXERCISES, ETC., or AMATEURS' MANUALS under subject headings of interest, such as ASTRONOMY, ASTROPHYSICS, ELECTRONICS, PHYSICS
RESEARCH--METHODOLOGY (More general)

*Available in the reference collection, Science Reading Room

BASIC TEXTS

Beller, Joel. So you want to do a science project! New York, Arco Pub., c1982. 134 p. Q182.3.B44 1982

A guide to selecting, researching, and doing science projects--some not too difficult, others more sophisticated--with lists of projects in various scientific areas.

Gardner, Robert. Ideas for science projects. New York, F. Watts, 1986. 144 p. Q164.G37 1986

Bibliography: p. 142.

Introduces the scientific method through instructions for observations and experiments in biology, physics, astronomy, botany, psychology, and chemistry.

Iritz, Maxine Haren. Science fair: developing a successful and fun project. Blue Ridge Summit, Pa., Tab Books, 1987. 89 p.

Bibliography: p. 88. Q105.A1I75 1987

Loiry, William S. Winning with science: the complete guide to science research and programs for students. Sarasota, Fla., Loiry Pub. House, c1983. 439 p. Q180.55.M4L64 1983*

Revised edition expected in 1989.

A guide for junior and senior high school students, for doing science research, for engaging in science competition, and for becoming involved in science programs. Lists programs (grants, trips, employment, etc.) available in the United States and abroad.

Science fairs and projects. Grades 7-12. Washington, National Science Teachers Association, c1988. 70 p. Pamphlet box*

First edition, 1984; second edition, 1985.

A collection of articles reprinted from Science and children, Science scope, and The Science teacher (1981-87) to assist teachers in organizing a science fair, working with students, and establishing equitable judging procedures.

Tocci, Salvatore. How to do a science fair project. New York, F. Watts, 1986. 128 p. Q164.T68 1986*

Bibliography: p. 119-122.

A step-by-step guide for creating a variety of projects suitable for entry in a science fair with suggestions for choosing a subject, performing the experiment, and polishing the presentation.

SPECIALIZED TEXTS

Apfel, Necia H. Astronomy projects for young scientists. New York, Arco Pub., c1984. 122 p. QB62.7.A64 1984

Instructions for a variety of experiments in astronomy including making a telescope, building a planetarium, measuring the circumference of the Earth, and detecting cosmic rays.

Barr, George. Science projects for young people. New York, Dover Publications, 1986, c1964. 153 p. Q163.B345 1986
Reprint. Originally published as Research adventures for young scientists (New York, McGraw-Hill, 1964).
Introduces the methods of scientific research through simple experiments with light and color, sound and music, plants, and chemical analysis. Also discusses equipment and safety.

Brown, Bob. 200 illustrated science experiments for children. Blue Ridge Summit, Pa., Tab Books, 1987. 186 p. Q164.B8415 1987

Cook, James G. The Thomas Edison book of easy and incredible experiments, by James G. Cook and the Thomas Alva Edison Foundation. New York, Dodd, Mead, c1988. 146 p. Q182.3.C66 1988
Bibliography: p. 129-135.
A collection of science and engineering projects and experiments covering such areas as magnetism, electricity, electrochemistry, chemistry, physics, energy, and environmental studies.

Discovering science on your ADAM, with 25 programs, by the Talcott Mountain Science Center. John Pellino and others. Blue Ridge Summit, Pa., Tab Books, c1984. 181 p. Q182.3.D57 1984

Gardner, Robert. Energy projects for young scientists. New York, F. Watts, 1987. 127 p. TJ163.95.G37 1987
Bibliography: p. 120-121.
Instructions for a variety of projects and experiments related to solar, thermal, electrical, kinetic, and potential energy.

Gardner, Robert, and David Webster. Science in your backyard. New York, J. Messner, c1987. 114 p. Q164.G376 1987

Goodwin, Peter. Engineering projects for young scientists. New York, F. Watts, 1987. 126 p. TA149.G66 1987
Bibliography: p. 120-122.
Presents practical problems and science fair projects related to engineering and physics, covering such subjects as force, friction, motion, sound waves, light waves, and mechanics.

Heiserman, David L. Experiments in four dimensions. Blue Ridge Summit, Pa., Tab Books, c1983. 501 p. QC33.H38 1983

Holstroemn, Isaac R. Energy from the sun--33 easy solar projects. Blue Ridge Summit, Pa., Tab Books, c1981. 182 p. TJ810.H65

McKay, David W., and Bruce G. Smith. Space science. New York, F. Watts, 1986. 127 p. QB500.264.M36 1986
Bibliography: p. 122-123.
Ideas and instructions for a variety of science projects that examine the characteristics of the space environment and consider forces such as gravity, magnetism, and buoyancy.

Science projects with computers. By Elayne Schulman and others. New York, Arco Pub., c1985. 144 p. Q182.3.S345 1985

Simon, Seymour. How to be an ocean scientist in your own home. New York, J. B. Lippincott, c1988. 136 p. GC21.5.S56 1988
Bibliography: p. 128-129.
A collection of experiments, using easily available relatively inexpensive materials, designed to reveal the various characteristics of the oceans and the plants and animals that live in them.

Other books which include material on science fair projects are classified under the following LC numbers: Q105, Q163-Q164, Q175, and Q181-Q182, and under the following Dewey Decimal numbers: 501-502 and 507.

CLASSROOM EXPERIMENTS AND ACTIVITIES

Abraham, Michael R., and John R. Renner. The sequence of learning cycle activities in high school chemistry. Journal of research in science teaching, v. 23, Feb. 1986: 121-143. Q181.A1J6

Allen, Dorothea. Science demonstrations for the elementary classroom. West Nyack, N.Y., Parker Pub. Co., c1988. 266 p. LB1585.A46 1988

Challand, Helen J. Activities in the earth sciences. Chicago, Childrens Press, c1982. 93 p. QB46.C44 1982
Activities and experiments--such as making charcoal, measuring shadows, and calculating the speed of sound--in the areas of astronomy, weather, and geology.

Collette, Alfred T., and Eugene L. Chiappetta. Science instruction in the middle and secondary schools. St. Louis, Times Mirror/Mosby College Pub., 1984. 565 p. Q183.3.A1C637 1984*
Revised edition, published by Merrill Pub. Co., Columbus, Ohio, expected in 1989.
See especially "Science projects, science fairs, field experiences": p. 146-173.

Falk, David S., Dieter R. Brill, and David G. Stork. Seeing the light: optics in nature, photography, color, vision, and holography. New York, Harper & Row, c1986. 446 p. QC358.F36 1986
Bibliography: p. 429-431.

Fields, Steve. Introducing science research to elementary school children. Science and children, v. 25, Sept. 1987: 18-20. LB1585.S34

Fitzsimmons, Charles P. Model rockets and microchips: when it's time for model rockets, don't just build and launch them. Analyze them! Science teacher, v. 53, Feb. 1986: 42-44. Q181.S38

Heidemann, Merle K. Exercises in biological science. Boston, Willard Grant Press, c1985. 293 p. QH316.5.H45 1985

Klein, William J. Learning under the sun. Ames, Iowa State University Press, 1988. 386 p. QH53.K57 1988

Latham, Robert E. Holography in the science classroom. Physics teacher, v. 24, Oct. 1986: 395-400. QC30.P48

Levenson, Elaine. Teaching children about science: ideas and activities every teacher and parent can use. Englewood Cliffs, N.J., Prentice-Hall, c1985. 211 p. LB1585.L395 1985
Bibliography: p. 210-211.

Lunetta, Vincent N., and Shimshon Novick. Inquiring and problem-solving in the physical sciences: a sourcebook. Dubuque, Iowa, Kendall/Hunt Pub. Co., c1982. 202 p. Q182.3.L86 1982*

Mebane, Robert C., and Thomas R. Rybolt. Adventures with atoms and molecules: chemistry experiments for young people. Hillside, N.J., Enslow Publishers, c1985. 82 p. QD38.M43 1985
Chemistry experiments for home or school demonstrate the properties and behavior of various kinds of atoms and molecules.

Norton, Thomas W. Solar energy experiments for high school and college students. Emmaus, Pa., Rodale Press, c1977. 129 p. TJ810.N67 1977
Bibliography: p. 121-122.
Presents eighteen self-explanatory solar energy experiments and classroom activities suitable for individual student analysis.

Opportunities for academic research in a low-gravity environment. Edited by George A. Hazelrigg, Joseph M. Reynolds. New York, American Institute of Aeronautics and Astronautics, c1986. 318 p. (Progress in astronautics and aeronautics, v. 108) TL507.P75 v. 108
Based on papers presented at a workshop held in Washington, D.C., July 10-11, 1985, sponsored by the National Science Foundation.

Physics demonstration experiments. Edited by Harry F. Meiners. Reprint ed. Malabar, Fla., R. E. Krieger Pub. Co., 1985, c1970. 2 v.
1970 printing available in SciRR. QC33.P45 1985
Contents: v. 1. Mechanics and wave motion.--v. 2. Heat, electricity and magnetism, optics, atomic and nuclear physics.

Primack, Alice Lefler. Finding answers in science and technology. New York, Van Nostrand Reinhold, c1984. 364 p. Z7401.P86 1984*

Scienceworks: 65 experiments that introduce the fun and wonder of science. From the Ontario Science Centre. Reading, Mass., Addison-Wesley, 1986, c1984. 86 p. Q164.S299 1986
Provides instructions for experiments that reveal a variety of scientific principles.

Schlemmer, Phillip L. Science projects. West Nyack, N.Y., Center for Applied Research in Education, c1987. 203 p. (Learning on your own, unit 3) Q181.S34 1987

Smith, Norman F. How fast do your oysters grow? Investigate and discover through science projects. New York, J. Messner, c1982. 95 p.
Bibliography: p. 91-92. Q163.S57 1982
Describes how to select a science project, plan the investigation, choose equipment and test procedures, record data, draw conclusions, and report the results.

Summerlin, Lee R., and James L. Ealy. Chemical demonstrations: a sourcebook for teachers. 2nd ed. Washington, American Chemical Society, 1988. 2 v. QD43.S77 1988b

HANDBOOKS AND MANUALS

Bruman, Raymond. Exploratorium cookbook I: a construction manual for Exploratorium exhibits. Rev. ed. San Francisco, The Exploratorium, c1987. 1 v. (various pagings) Q164.B846 1987
Contains "recipes" numbered 1-82.
Enables an individual to construct exhibits similar to those at the Exploratorium; skill levels needed for each project are included.

Filson, Brent. Famous experiments and how to repeat them. New York, J. Messner, c1986. 71 p. Q164.F54 1986
Bibliography: p. 65-67.
Examines the experiments of Archimedes, Galileo, Newton, Fleming, and others, whose scientific efforts gave new ideas to mankind. Includes instructions for the reader to perform the same experiments.

Harré, Rom. Great scientific experiments: 20 experiments that changed our view of the world. Oxford, Phaidon, 1981. 222 p. Q182.3.H37 1981
Bibliography: p. 221-222.

Hipschman, Ron. Exploratorium cookbook III: a construction manual for Exploratorium exhibits. San Francisco, The Exploratorium, c1987. 1 v. (various pagings) Q164.H5862 1987
Contains "recipes" numbered 135-201.
Directions for creating science exhibits which demonstrate scientific principles in such areas as mechanics, electricity, stereoscopic vision, sound, heat, and light.

Gutnik, Martin J. How to do a science project and report. New York, F. Watts, 1980. 63 p. Q164.G96

Kanare, Howard M. Writing the laboratory notebook. Washington, American Chemical Society, 1985. 145 p. Q180.58.K36 1985

Mann, Joanne Zinser. Science day guide. Edited by Lynn Edward Elfner. Columbus, Ohio Academy of Science, 1984. 64 p. ED 248 128**
A revision and expansion of the Academy's Science day standards handbook (1966).

**Available in microform collection, Science Reading Room

Mitchell, Mark L., and Janina M. Jolley. Research design explained. New York, Holt, Rinehart and Winston, c1988. 428 p. Q180.55.M4M57 1988
Bibliography: p. 411-415.

Pentz, Mike, and Milo Shott. Handling experimental data. Edited by Francis Aprahamian. Milton Keynes, Eng., Philadelphia, Open University Press, c1988. 95 p. Q182.3.P46 1988

Saul, Wendy, and Alan R. Newman. Science fare: an illustrated guide and catalog of toys, books, and activities for kids. Introduction by Isaac Asimov. New York, Harper & Row, c1986. 295 p. LB1585.S28 1986*
Includes bibliographies and index.

Science and technology fairs: an organisation guide. London, British Association for the Advancement of Science, 1983. 29 p. ED 248 110**

Thousands of science projects: classified titles of exhibits shown at science fairs and/or produced as projects for the Westinghouse Science Talent Search. Compiled by Science Service. 2nd ed. Edited by Ruby Yoshioka. Washington, The Service, c1987. 96 p. Q182.3.T48 1987

Wold, Allen L. Computer science: projects for young scientists. New York, F. Watts, 1984. 122 p. Q163.W64 1984
A guidebook for the student who wants to use a computer in a science project, indicating the ways computer knowledge can be used in the performance of an investigation or project or in the analysis of the results.

BIBLIOGRAPHIES

Educators guide to free science materials. 1st ed.- 1960-
Compiled and edited by Mary H. Saterstrom. Randolph, Wis., Educators Progress Service. annual. Q181.A1E3*

Pilger, Mary Anne. Science experiments index for young people. Englewood, Colo., Libraries Unlimited, 1988. 239 p. Q164.P735 1988b*
"A Libraries Unlimited data book."
Available also in a software version.
An index to science experiments and activities in almost 700 books, with descriptions, location codes, and cross-indexing.

Science experiments on file: experiments, demonstrations and projects for school and home. New York, Facts on File, c1988. 300 p. (loose-leaf)
In Press
"The experiments, demonstrations and projects were developed by the winners and finalists in the Presidential Award for Excellence in Science and Mathematics administered by the National Science Foundation."
Intended as a resource for students, grades 6-12.

Science fair project index, 1960-1972. Compiled by the staff of the Science and Technology Division of the Akron Summit County Public Library. Edited by Janet Y. Stoffer. Metuchen, N.J., Scarecrow Press, 1975. 728 p. Q182.3.S34 1975*
Bibliography: p. 713-728.

Science fair project index, 1973-1980. Edited by Science and Technology Division, Akron-Summit County Public Library. Metuchen, N.J., Scarecrow Press, 1983. 723 p. Q182.3.S34 1975 Suppl.*
Bibliography: p. 709-723.

Science fair project index, 1981-1984. Edited by Cynthia Bishop, Deborah Crowe, Science and Technology Division, Akron-Summit County Public Library. Metuchen, N.J., Scarecrow Press, 1986. 686 p.
Bibliography: p. 680-686. Q182.3.S34 1975 Suppl. 2*

Science for children: resources for teachers. National Science Resources Center, Smithsonian Institution--National Academy of Sciences. Washington, National Academy Press, 1988. 176 p.
Z5818.S3S38 1988 and Pamphlet box*

Science project information index, 1973-1983. Edited by Alex Spence. Toronto, Infolib Resources, c1984. 282 p.
Bibliography: p. 279-282. Q182.3.S64 1984 and Pamphlet box*

The Second science project information index. Edited by Alex Spence. Toronto, Infolib Resources, c1986. 144 p. Pamphlet box*
Bibliography: p. 141-144.

BOOK/FILM REVIEWS AND "BEST BOOK" SOURCES

Appraisal: science books for young people. v. 1- winter 1968-
Boston, Children's Science Book Review Committee. Z7401.A63

Morrison, Philip, and Phylis Morrison. Books: again the Christmas piñata is filled with science books for young readers. Scientific American, v. 259, Dec. 1988: 120-127. T1.S5
An annual feature of the December issue; title varies from year to year.

Mount, Ellis, and Barbara A. List. Best sci-tech books of 1987: one hundred and one recommended books for sci-tech collections. Library journal, v. 113, Mar. 1, 1988: 27-33. Z671.L7
An annual feature of the March 1 issue.

The Museum of Science and Industry basic list of children's science books. 1973/1984- Compiled by Bernice Richter and Duane Wenzel. Chicago, American Library Association, 1985- Z7401.M87
Kept up to date with annual supplements.

New York. Public Library. New technical books. v. 1- June/Aug. 1915- New York. Z5854.N542*

O'Connell, Susan M., Valerie J. Montenegro, and Kathryn Wolff. The best science books and A-V materials for children. Washington, American Association for the Advancement of Science, 1988. 335 p. (AAAS publication 87-11) Z7401.027 1988*

Outstanding science trade books for children in 1987. New York, Children's Book Council, 1988. 6 p. Best Books vertical file*
Reprinted from Science and Children, v. 25, Mar. 1988.
"The 79 books were chosen for their accuracy, readability, and pleasing format, and are aimed primarily at children in grades K-8. Each entry is annotated."

Powell, Russell H., and James R. Powell. Core list of books and journals in science and technology. Phoenix, Oryx Press, 1987. 134 p. Z7401.P778 1987*

Science & technology: a purchase guide for branch and public libraries. Pittsburgh, Carnegie Library of Pittsburgh, 1987. 103 p. Best Books vertical file*
Published yearly, this is an annotated bibliography of new books. The titles are intended primarily for the general adult reader, but a number of books of interest to young persons are also represented. A special feature is the selection of books for libraries which buy only 50-100 titles each year.

Science books & films. v. 1- Apr. 1965- Washington, American Association for the Advancement of Science. Z7403.S33*

Science books for children: selections from Booklist, 1976-1983. Selected by Denise Murcko Wilms. Chicago, American Library Association, 1985. 183 p. Z7401.S363 1985*

Specialist books. New scientist, v. 118, June 30, 1988: 72-73, 75, 77-81, 83, 85-86. Q1.N52
This review feature appears annually, e.g., June 25, 1987, Apr. 10, 1986, Apr. 18, 1985, Apr. 12, 1984.

Student books. New scientist, v. 118, Apr. 28, 1988: 64-71, 74-75, 77-82. Q1.N52
A selection by university teachers of texts for undergraduates in computer science, physics, astronomy, mathematics, chemistry, earth sciences, biochemistry, biology and psychology.
This feature appears annually, e.g., Apr. 30, 1987, Sept. 18, 1986, Sept. 26, 1985, Sept. 27, 1984.

Technical book review index. v. 1- Sept. 1935- Pittsburgh, JAAD Pub. Co. Z7913.T36*
Issued 1935-76 by the Special Libraries Association.

Wilms, Denise Murcko. Outstanding science books for the classroom. Learning, v. 12, Feb. 1984: 50-52. LB5.L43

Wolff, Kathryn, Susan M. O'Connell, and Valerie J. Montenegro. AAAS science book list, 1978-1986. Washington, American Association for the Advancement of Science, 1986. 568 p. (AAAS publication 85-24) Q131.A1A68 no. 85-24*

ABSTRACTING AND INDEXING SERVICES that index relevant journal articles and other literature are listed below. Some suggested terms are given as aids in searching. The following indexes are available in most public and college libraries.

Current Index to Journals in Education (1969-) Z5813.C8 SSRR
See: Science Activities
Science Experiments
Science Fairs
Science Projects

Education Index (1929-) Z5813.E23 SSRR
See: Science--Activities
Science--Exhibits
Science--Experiments
Science--Projects

General Science Index (1978-) Z7401.G46*
See: Science Fairs, School
Science--Exhibitions

Magazine Index (Oct. 1984-) Available on film/ROM reader SSRR
See: Science--Exhibitions
Science--Experiments

Readers' Guide to Periodical Literature (1900-) AI3.R45 SSRR
See: Science Fairs
Science Experiments

Resources in Education (1966-) Z5813.R4 SSRR
See: Science Activities
Science Experiments
Science Fairs
Science Projects

Vertical File Index (1932/1934-) Z1231.P2V48 SSRR
See: Science--Study and Teaching
Subject of interest, e.g., Astronomy, Chemistry, etc.

Students may also need to use subject-oriented abstracting and indexing services for information on the subject of their projects. Sample titles are listed below. These may be available only in large or specialized libraries. A librarian may be able to suggest additional titles.

Applied Science & Technology Index (1913-)
Astronomy and Astrophysics Abstracts (1969-)
Bibliography and Index of Geology (1933-)
Biological Abstracts (1926-)
Biological & Agricultural Index (1916-)
Chemical Abstracts (1907-)
Electrical & Electronics Abstracts (1898-)
Energy Research Abstracts (1976-)
Engineering Index (1884-)
Environment Abstracts (1974-)
Food Science and Technology Abstracts (1969-)
International Aerospace Abstracts (1961-)
Mathematical Reviews (1940-)
Metals Abstracts (1968-)
Meteorological & Geoastrophysical Abstracts (1950-)
Physics Abstracts (1898-)
Pollution Abstracts (1970-)
Psychological Abstracts (1927-)
Zoological Record (1864-)

JOURNALS that often contain articles relevant to science fair projects are:

American Biology Teacher QH1.A275
Journal of Chemical Education QD1.J93
Journal of College Science Teaching Q183.U6J68
Journal of Geological Education QE40.J6
Physics Teacher QC30.P48
  See particularly "String & sticky tape experiments" and "Doing physics," features which appear at irregular intervals.
Popular Mechanics T1.P77
Science Activities Q181.A1S29
Science and Children LB1585.S34
Science News Q1.S76
Science Scope Not in LC collections
Science Teacher Q181.S38
Scientific American T1.S5
  See particularly "Amateur scientist" feature which appears each month.
Sky and Telescope QB1.S536

REPRESENTATIVE JOURNAL ARTICLES

Good, Ron, and Mike Smith. How do we make students better problem solvers? Science teacher, v. 54, Apr. 1987: 31-32, 34-36. Q181.S38

Haldeman, Janice H., and Jane P. Ellis. Using cauliflower to demonstrate plant tissue culture. American biology teacher, v. 50, Mar. 1988: 154-159. QH1.A275

Hart, Gerald P. Measurement of the speed of sound in metal rods using the microcomputer. Physics teacher, v. 24, Feb. 1986: 89. QC30.P48

Hoehn, Robert G. Self-initiated science projects. Science activities, v. 25, Feb./Mar. 1988: 38-41. Q181.A1S29

Lauzon, Peter A., Howard Kimmel, and Reginald P. T. Tomkins. Surefire steam turbines: foam balls, spoons, and wire make generators you can rely on. Science teacher, v. 54, Feb. 1987: 38-39. Q181.S38

Pratt, Carl R. Gray squirrels as subjects in independent study. American biology teacher, v. 49, Nov./Dec. 1987: 434-437. QH1.A275

Pugh, Ava, and Lennell Bevans. Bait shop science. Science activities, v. 24, Feb./Mar. 1987: 21-24. Q181.A1S29

Shaw, Edward L., and Nancy Pruitt Kalupa. Making life-sized human body models. Science activities, v. 23, Apr./May 1986: 28-31. Q181.A1S29

Tunley, A. Tom. Photogrammetric exercise for high school students. Journal of geological education, v. 34, Jan. 1986: 14-18. QE40.J6

Tingle, Joy. Science fairs ... unfair? Science and children, v. 25, Nov./Dec. 1987: 33-35. LB1585.S54

Selected articles, all by Jearl Walker, from Scientific American's regular feature, "The Amateur scientist." The December issue lists the year's titles.

Boomerangs! How to make them and also how they fly. Scientific American, v. 240, Mar. 1979: 162, 164, 167-168, 170, 172, 174. T1.S5

Does convection or the Bernoulli principle make the shower curtain flutter inward? Scientific American, v. 258, June 1988: 116-119. T1.S5

Hot water freezes faster than cold water. Why does it do so? Scientific American, v. 237, Sept. 1977: 246, 248, 250, 252, 257. T1.S5

Icicles ensheathe a number of puzzles: just how does the water freeze? Scientific American, v. 258, May 1988: 114-117, 127. T1.S5

Making a barometer that works with water in place of mercury. Scientific American, v. 256, Apr. 1987: 122-127, 128. T1.S5

Rainbow holograms, unlike conventional ones, can be observed in ordinary light. Scientific American, v. 255, Sept. 1986: 114-119, 120. T1.S5

The Secret of a microwave oven's rapid cooking action is disclosed. Scientific American, v. 256, Feb. 1987: 134-138, 140. T1.S5

Why a fluid flows faster when the tube is pinched. Scientific American, v. 257, July 1987: 104-107, 116. T1.S5

SELECTED MATERIALS available in the Science Reading Room pamphlet boxes include:

Environmental experiments ... from Edison. Southfield, Mich., Thomas Alva Edison Foundation, 1984, c1973. 32 p.
Publication and price information available from Charles Edison Fund, 101 South Harrison Street, East Orange, N.J. 07018.

Ford, Brian K., and William J. Van Scheik. Goof-proof biotelemetry transmitter construction. American biology teacher, v. 50, Mar. 1988: 167-168.

Graham, Elrica S. Crystal growing--a classroom project. Journal of geological education, v. 26, Nov. 1978: 208.

Harrison, Donna M. Be a winner! Sciencing and science fair projects. Science activities, v. 23, Apr./May 1986: 32-34.

Jones, Gail. Design a science fair winner! Science scope, v. 12, Oct. 1988: 10-11.

Martin, Helen E. Could you build a satellite tracking station? Don't say 'no' until you try. Science teacher, v. 54, Jan. 1987: 15-17.

McLure, John W. Investigating fish behavior inside the classroom and out. Science activities, v. 23, Nov./Dec. 1986: 6-9.

Nuclear experiments you can do ... from Edison. Southfield, Mich., Thomas Alva Edison Foundation, 1986, c1979. 32 p.
Publication and price information available from Charles Edison Fund, 101 South Harrison Street, East Orange, N.J. 07018.

Park, John C., and Norman D. Anderson. Interfacing a student-built theodolite with a microcomputer. Science activities, v. 23, Nov./Dec. 1986: 13-19.

Payne, Mark M. Does the earth rotate? Physics teacher, v. 25, Feb. 1987: 86-87.

Pietraface, William J. Plant regeneration. American biology teacher, v. 50, Apr. 1988: 234-235.

Pratt-Butler, Grace K. How to care for living things in the classroom. Washington, National Science Teachers Association, c1978. 20 p.

Science fairs and projects. Grades K-8. Washington, National Science Teachers Association, c1988. 74 p.
First edition, 1984; second edition, 1985.
A collection of articles reprinted from Science and children, Science scope, and The Science teacher (1981-87) to assist teachers in organizing a science fair, working with students, and establishing equitable judging procedures.

Simple experiments on magnetism and electricity ... from Edison. Southfield, Mich., Thomas Alva Edison Foundation, 1986, c1979. 32 p. Publication and price information available from Charles Edison Fund, 101 South Harrison Street, East Orange, N.J. 07018.

Useful science projects ... from Edison. Southfield, Mich., Thomas Alva Edison Foundation, 1986, c1979. 32 p. Publication and price information available from Charles Edison Fund, 101 South Harrison Street, East Orange, N.J. 07018.

Wagner, John Robert. Using layer-cake geology to illustrate structural topographic relationships. Journal of geological education, v. 35, Jan. 1987: 33-36.

Walker, Jearl. Hanging a spoon from the nose. Physics teacher, v. 25, Apr. 1987: 216-217.

Wiener, Geraldine. Kaleidoscope caper. Science and children, v. 25, Sept. 1987: 41-43.

ADDITIONAL SOURCES OF INFORMATION

American Chemical Society
Dept. of Educational Activities
1155 Sixteenth Street, N.W.
Washington, D.C. 20036
Telephone: (202) 872-4590

Charles Edison Fund
101 South Harrison Street
East Orange, New Jersey 07018
Telephone: (201) 675-9000
Distributes teaching materials containing experiments of interest to science fair enthusiasts.

National Council of Teachers of Mathematics
1906 Association Drive
Reston, Virginia 22091
Telephone: (703) 620-9840

National Science Teachers Association
1742 Connecticut Avenue, N.W.
Washington, D.C. 20009
Telephone: (202) 328-5800
Publishes Science fairs and projects, Science and children, Science scope, and Journal of college science teaching.

Science Service
1719 N Street, N.W.
Washington, D.C. 20036
Telephone: (202) 785-2255
Administers the International Science and Engineering Fair and the Westinghouse Science Talent Search.

Thomas Alva Edison Foundation
3000 Book Building
Detroit, Michigan 48226
Telephone: (313) 965-1149
Publishes a number of pamphlets describing experiments that would be of interest to science fair enthusiasts.