



Science Reference Materials for Children and Young People

RICHARD L. STRICKLER

THIS is a list of recent science reference books covering subjects from mathematics and earth science to medicine, chosen with both students and teachers in mind. We sometimes underestimate the ability of some students to comprehend the printed word, but we do know that if a student has any background in a subject he can very often read about it beyond his grade level. Reference books, of course, are for both the inexpert student and the more advanced student, for the one who may or may not need help in looking for bits and pieces of information that he will put together in his own way, and for the other who, on his own, can find and make use of much fuller information that will satisfy him as it is.

The librarian-media specialist in both school and public libraries must choose books that fill the needs of the school curriculum as well as the needs of the students, including material for any special projects they may have: science fairs, science award competitions, etc. A record of books that circulate is easy to keep, and from it the need for more materials can be ascertained; then more books can be selected and purchased that enhance the circulating collection. It is difficult, however, to keep use records of reference books, so the librarian needs to be almost clairvoyant and must be able to anticipate needs.

There is a trend in some school libraries away from the separate reference collection, letting all reference books circulate on an "overnight" basis. Although the books are still marked "Reference," they are shelved with other books in their regular Dewey classes, thereby putting all books on the same subject in one place in the library.

One problem that often confronts elementary school librarians is the identification of specimens that students bring to school which the teacher cannot identify. The foresighted librarian will have a stock of simple keys that will aid in the identification. In these cases a call to the

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area library will be of no use, except, perhaps, for direction to a reference book that is already in the school's library. Good sets of zoological and botanical keys are essential for all grade levels, and copies should be available for circulation as well as for reference. Problems in other areas can be dealt with in the same way, by having the proper tools readily available.

One factor limiting any collection is the amount of money available. Another factor that might affect a school library collection is the nearness of good public library service. Outside service may be supplied by local, regional, county, or area libraries; by college or university libraries; or by state libraries. If any of these libraries is close enough to drive to, or if there is a statewide library network, as in New Jersey, then reference service is as close as the nearest public library or even the nearest telephone, and many reference materials can be dispensed with in the school library. Telephone reference service is good for the short one-fact question but not for identification of an insect, a dinosaur bone, or an organic formula. Good library service that can be had by going to a public library will be helpful to those who can travel by car. But in the long run, if the material can be acquired by the school library then that is where it belongs, and the other libraries can be used to supplement the school library's collection.

Books have been included in the list (1) if the title fits under the general heading of science or technology, (2) if the information in the book can be used by students or teachers in grades K through 12, (3) if the title fills a need or an interest of students or teachers in grades K through 12, and (4) if the title is in the 1973 edition of *Books in Print (BIP)*.

A note on the grade level code used in the list: a number of books have been included which perhaps cannot be used by some students on their own, but which can be used with help from a teacher or a librarian. Restricting books by reading levels would exclude much valuable material from those students who may lack the necessary skill but who have high motivation. The code is: 1 (K-3), 2 (4-6), 3 (7-8), 4 (9-12), 5 (teachers and librarians).

Editor's note: Because of space limitations, books published before 1964 have not been included even though there are a number of excellent older titles still in print, although usually in rather specialized areas, which have not been superseded. For the same reason, some important publishers' series have not been included even though the titles are noteworthy and would find place in both reference and

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circulating collections of flora, fauna, rocks, shells, stars, and other "things" of nature.

All of these series are reasonably priced. Some series examples include: (1) Peterson Field Guide Series published by Houghton-Mifflin, 19 titles; (2) Picture-Key Nature Series published by William C. Brown, How To Know books, 32 titles; (3) Golden Field Guides, 5 so far, and the smaller format Golden Nature Guides (21 in print) and Golden Science Guides (8 in print) published by Western; (4) Putnam's Nature Field Books, 18 in print; (5) Doubleday Nature Field Books, 18 in print; (5) Doubleday Nature Guide Series, 9 in print; and many publications of government agencies such as the U.S. Department of Agriculture *Yearbooks* and the U.S. Atomic Energy Commission's Understanding the Atom Series and The World of Atom Series, both of which are free.

The brief, somewhat standardized annotations were condensed from the compiler's notes on the titles and up-dated if necessary. Some titles, including the bibliographic aids, have been added by the editor. The prices, mostly from the 1973 *BIP*, are advisory only and are, of course, subject to change.

Recent Science Reference Books

General Science Encyclopedias and Dictionaries

Ballentyne, D. W., and Banford, A. P. *Dictionary of Named Effects and Laws in Chemistry, Physics, and Mathematics*. 3d ed. Wiley, 1970. \$9.50

An advanced work, for advanced students and for teachers of advanced science courses. 4, 5

Book of Popular Science. 10 vols. Grolier, 1973. \$90

A browsing set divided into 15 groups or departments with excellent illustrations. Index in last volume; separate paperback indexes available from publisher. 1, 2, 3, 4

Britannica Yearbook of Science and the Future. Encyclopaedia Britannica, annual. Price varies

Updates the science parts of the *EB*. Excellent drawings and photographs. Particularly useful for libraries not getting the new *EB* every year. 3, 4, 5

Collocott, T. C., ed. (*Chambers*) *Dictionary of Science and Technology*. Barnes and Noble, 1972. \$23.50

Comprehensive, up to date, clear definitions but with some British bias in spelling and usage. 4, 5

Harper Encyclopedia of Science. Rev. ed. Harper, 1967. \$40

Dictionary format with signed articles varying in length and in degree

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- of difficulty. Clear photographs and diagrams, some in color. 1, 2, 3, 4, 5
McGraw-Hill Encyclopedia of Science and Technology. 3d ed. 15 vols. McGraw-Hill, 1971. \$360
Very thorough coverage of all fields of science; fuller, more specialized than most general encyclopedias. Clear illustrations. 4, 5
McGraw-Hill Yearbook of Science and Technology. McGraw-Hill, annual. Price varies
Topical survey articles plus updating of parent set between editions. Excellent photographs and other illustrations. 4, 5
- Popular Science Magazine, ed. *Popular Science Encyclopedia of the Sciences*. Grosset, 1968. \$6.95
A one-volume work with cross-references and index. A study guide aids readers in seeing interrelationships among the sciences. 2, 3, 4, 5
Science Year: The World Book Science Annual. Field Enterprises, annual. Price varies
Updates the science parts of the *WB*. Excellent drawings and photographs. Particularly useful for libraries not getting the new *WB* each year. 2, 3, 4, 5
Van Nostrand's Scientific Encyclopedia. 4th ed. Van Nostrand Reinhold, 1968. \$42.75
One volume, dictionary format, cross-referenced; definitions vary in length from one sentence to several pages, and in difficulty. 4, 5
- 510 Mathematics (and Computers)*
- Abramowitz, Milton, and Stegun, Irene A., eds. *Handbook of Mathematical Functions with Formulas, Graphs, and Mathematical Tables*. Dover, 1964. \$6.95
Covers everything in mathematics; subject index, notation index, Greek letter table, notation tables. 4, 5
- Bendick, Jeanne, and Levin, M. *Mathematics Illustrated Dictionary: Facts, Figures, and People Including the New Math*. McGraw-Hill, 1965. \$4.50
Terms defined; portraits and articles on great mathematicians. Cross-referenced. 2, 3, 4
- James, Glenn, and James, Robert C. *Mathematics Dictionary*. 3d ed. Van Nostrand Reinhold, 1968. \$14.50
Complete dictionary with good short definitions, plus appendices, log tables, mortality table. 4, 5
- Selby, Samuel M. *CRC Handbook of Tables for Mathematics*. 4th ed. Chemical Rubber Co., 1970. \$26.50
For the advanced student; a math teacher or a librarian may be needed to help students use the book. Good for teacher reference. 4, 5
- Selby, Samuel M., ed. *Standard Mathematical Tables*. 20th ed. Chemical Rubber Co., 1972. \$5.95, text ed.
Similar to the *CRC Handbook* above, but less expensive. 4, 5
- Jordain, Philip B., ed. *Condensed Computer Encyclopedia*. McGraw-Hill, 1969. \$15.50
Alphabetically arranged with long thorough definitions of terms, but with a minimum of illustration. 4, 5

Science Reference Materials

- Schmalz, Larry C., and Sippl, Charles J. *Computer Glossary for Students and Teachers*. Funk and Wagnalls, 1973. \$6.95
Good basic vocabulary clearly defined. 3, 4, 5
- Sippl, Charles J., and Sippl, Charles P. *Computer Dictionary and Handbook*. 2nd ed. Sams-Bobbs-Merrill, 1972. \$16.95
A 14,000-term dictionary plus 13 chapters of handbook material on systems, languages, flowcharts, models, the industry, etc. For teachers. 4, 5

520 Astronomy

- Alter, Dinsmore. *Pictorial Guide to the Moon*. 3d ed. Crowell, 1973. \$8.95
Over 200 excellent photos of the moon's surface taken by Earth observatories and by lunar astronauts. 2, 3, 4, 5
- Levitt, I.M., and Marshall, Roy K. *Star Maps for Beginners*. Simon and Schuster, 1964. \$4.50
For beginners of all ages, introduction clarifies use of maps. The maps look simple, but the subject is complex. 2, 3, 4, 5
- Moore, Patrick, ed. *Atlas of the Universe*. Rand McNally, 1970. \$35
Superb illustrations, excellent index, great for browsing. 1, 2, 3, 4, 5
- New Space Encyclopedia*. 3d ed. Dutton, 1969. \$14.95
Dictionary format; covers astronomy and space exploration. Definitions range from one sentence to two pages. Cross-referenced. 2, 3, 4, 5
- Nicolson, Iain. *Exploring the Planets*. Grosset, 1971. \$3.99, library binding.
Elementary level, simple but thorough, with good color illustrations and a good index. 1, 2, 3
- Weigert, A., and Zimmerman, H. *Concise Encyclopedia of Astronomy*. American Elsevier, 1968. \$9
Dictionary format with good illustrations; definitions and articles range from one sentence to several pages. 4, 5

530 Physics-540 Chemistry (and Mineralogy)

- American Institute of Physics Handbook*. 3d ed. McGraw-Hill, 1972. \$49.50
Over 90 chapters by subject experts; for advanced students with good mathematics backgrounds. Extensive index. 4, 5
- CRC Handbook of Chemistry and Physics*. 54th ed. Chemical Rubber Co., 1973, about \$26
"The" handbook, comprehensive, thorough, authoritative, but users may need guidance from a science teacher or a science librarian. 4, 5
- Dean, J. A., ed. *Lange's Handbook of Chemistry*. 11th ed. McGraw-Hill, 1973. \$15.50
Covers chemical and physical properties of elements, compounds, minerals, industrial materials; includes many excellent tables. 4, 5
- Grant, Julius, ed. *Hack's Chemical Dictionary*. 4th ed. McGraw-Hill, 1969. \$31.50
Includes 55,000 definitions giving both American and British viewpoints. Concise, thorough coverage with numerous cross-references. 4, 5
- Hampel, Clifford A., and Hawley, Gessner G. *Encyclopedia of Chemistry*. 3d ed.

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- Van Nostrand Reinhold, 1973. \$39.50
Seeks to cover all aspects of chemistry in over 800 signed articles, both theoretical and practical. References, cross-references, index. 4, 5
- Hawley, Gessner G. *Condensed Chemical Dictionary*. 8th ed. Van Nostrand Reinhold, 1971. \$27.50
Thorough coverage of terms in general use in chemistry, the process industries, pharmaceuticals, etc.; includes trademarks, packaging. 4, 5
- Hurlbut, Cornelius S., Jr., ed. *Dana's Manual of Mineralogy*. 18th ed. Wiley, 1971. \$16.95
An old standby in the field of mineralogy, with both a general index and a minerals index. 4, 5
- Miall, L. Mackenzie, and Sharp, D. W. eds. *A New Dictionary of Chemistry*. 4th ed. Wiley, 1968. \$15.50
Concise definitions with *see* and *see also* references; illustrations are organic formulae. 4, 5
- Steere, Norman V., ed. *CRC Handbook of Laboratory Safety*. 2d ed. Chemical Rubber Company, 1971. \$25
Chemical and microbiological hazards of various kinds; first aid; eye care; safety programs; equipment; lab animals. Bibliographies, index. 4, 5

550 Earth Sciences

- Challinor, John. *Dictionary of Geology*. Oxford, 1967. \$7
Concise definitions, clear and understandable. List of prefixes and suffixes used in geology. Has British flavor. 2, 3, 4, 5
- Fairbridge, Rhodes W., ed. *Encyclopedia of Earth Sciences*. 8 vols. Van Nostrand Reinhold. Vol. 1: *Encyclopedia of Oceanography*. 1966. \$27.50; Vol. 2: *Encyclopedia of Atmospheric Sciences and Astrogeology*. 1967. \$38.50; Vol. 3: *Encyclopedia of Geomorphology*. 1968. \$39.50; Vol. 4: *Encyclopedia of Geochemistry and Environmental Science*. 1972. \$49.50.
Subsequent volumes will cover geophysics, structure, and petrology; applied geology and sedimentology; stratigraphy and paleontology; and world geology (plus biographies).
Dictionary format, in-depth treatment; articles signed, some cross-referenced to other volumes in set; bibliographies; indexes. 4, 5
- Fenton, Carroll L., and Fenton, Mildred A. *The Rock Book*. Doubleday, 1970. \$12.95
Chapters based on rock origins: from the depths, from the sky, from solutions, etc. Good illustrations. 2, 3, 4, 5
- Todd, David K., ed. *Water Encyclopedia*. Water Information Center (Port Washington, N.Y.), 1970. \$27.50
Includes nine chapters of resources and use tables: climate and precipitation, surface water, water quality, pollution control, agencies, etc. 3, 4, 5
- United States Weather Bureau. *World Weather Records 1951-1960*. 4 vols. Superintendent of Documents. Vol. 1: *North America*, 1965. \$2.75; Vol. 2: *Europe*, 1966. \$3.00; Vol. 3: *South America, Central America, West*

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Indies, Caribbean, Bermuda, 1966. \$2.50; Vol. 4: *Asia*, 1967. \$3.25.
Inexpensive guide to climate and weather around the world. 3, 4, 5

570 Biology

Encyclopedia of the Life Sciences. 8 vols. Doubleday, 1964-1967. \$4.95 each. Vol. 1: *The Living Organism*, Vol. 2: *The Animal World*, Vol. 3: *The World of Plants*; Vol. 4: *The World of Microbes*; Vol. 5: *The Human Machine: Mechanism*; Vol. 6: *The Human Machine: Disorders*; Vol. 7: *The Human Machine: Adjustments*; Vol. 8: *Man of Tomorrow*. (Translation of a French work).

Excellent photographs and photomicrographs. Index in each volume and set index in Vol. 8. Note: Vols. 1-3 may be out of print. 2, 3, 4, 5

Firth, Frank E., ed. *Encyclopedia of Marine Resources*. Van Nostrand Reinhold, 1969. \$25

Signed articles with bibliographies for further reading. Covers economic side of marine life. Good index. 3, 4, 5

Gray, Peter. *Encyclopedia of Biological Sciences*. 2d ed. Van Nostrand Reinhold, 1970. \$26.95

Detailed, signed articles in dictionary format, for the advanced student and teacher. Excellent illustrations. Index. Bibliographies. 4, 5

Gray, Peter. *Handbook of Basic Microtechnique*. 3d ed. McGraw-Hill, 1964. \$10.95

Introduction to the microscope and its use and to the preparation and use of microscope slides, in botany, zoology, medical technology. 3, 4, 5

Gray, Peter. *Student Directory of Biology*. Van Nostrand Reinhold, 1973. \$7.95

Includes all important genera, roots of terms, combining forms, key to pronunciation, clear definitions. 3, 4, 5

Parker, Bertha M. *New Golden Treasury of Natural History*. Golden, 1968. \$5.95

Excellent introduction to the natural sciences, in color. A browsing book with an index. 1, 2, 3

Steen, Edwin B. *Dictionary of Biology*. Barnes and Noble, 1973. \$8.50

For students of all levels. Concise definitions in nontechnical, accurate language of some 12,000 terms; subject-field usage cited. 3, 4, 5

580 Botany

Chinery, Michael. *A Science Dictionary of the Plant World*. Watts, 1969. \$4.95

Brief, simple definitions; good color drawings. 1, 2, 3, 4, 5

De Wit, H. C. *Plants of the World*. 3 vols. Dutton, 1966-69. \$19.95 each

Semipopular treatment with excellent photographs and drawings, some in color. Vol. 1: *Gymnosperms, Angiosperms, Dicots, Monocots*. Vol. 2: *Angiosperms, Dicots, Monocots*; Vol. 3: *Lower Plants: Bacteria, Algae, Molds, Lichens, Liverworts, Mosses, Ferns*. 3, 4, 5

Grimm, William C. *Home Guide to Trees, Shrubs, and Wildflowers*. Stackpole, 1970. \$9.95

Useful for identification. Divided into wet places, woodland, field and

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- wayside, and by spring, summer, late summer, fall. Indexes. 1, 2, 3, 4, 5
- Grimm, William C. *Recognizing Native Shrubs*. Stackpole, 1966. \$7.95
For identifying particular plants within larger native shrub families. Bibliography, glossary, indexes. 1, 2, 3, 4, 5
- Kingsbury, J. M. *Poisonous Plants of the United States and Canada*. 3d ed. Prentice-Hall, 1964. \$17.25
To confirm identification of plants whose parts are poisonous. Includes many common weeds and garden plants. Good index; bibliography. 4, 5
- Morton, Julia F. *Exotic Plants*. Golden, 1971. \$4.95, library binding.
Introduction to plants that have been brought into the U.S. from other countries. All illustrations are in color. 1, 2, 3
- Rickett, H. W. *Wild Flowers of the United States*. McGraw-Hill, 1966-73. 6 vols. in 14 parts: Vol. 1: *Northeastern States*, 1966. \$65; Vol. 2: *Southeastern States*, 1967. \$47.50; Vol. 3: *Texas*, 1969. \$39.50; Vol. 4: *Southwestern States*, 1970. \$52.50; Vol. 5: *Northwestern States*, 1971. \$57.50; Vol. 6: *Central Mountains and Plains*, 1973. \$72
Arranged by botanical families; excellent drawings and color photographs. Indexes to common and scientific names. Take your pick! 2, 3, 4, 5
- Taylor, Norman. *Guide to Garden Shrubs and Trees*. Houghton Mifflin, 1965. \$9.95
For identifying or selecting trees and shrubs for the garden. Covers 500 of the more common species in the U.S. and Canada. 2, 3, 4, 5
- Usher, George. *Dictionary of Botany, including Terms in Biochemistry, Soil Science and Statistics*. Van Nostrand Reinhold, 1966. \$14.95
Broad coverage, concise definitions; illustrations are mostly of organic molecules. 4, 5

590 Zoology

- Blair, William F. *Vertebrates of the United States*. 2nd ed. McGraw-Hill, 1968. \$21
Thorough treatment with good drawings; keys for identification; good general and regional bibliographies. 2, 3, 4, 5
- Burton, Maurice. *University Dictionary of Mammals of the World*. Peter Smith, 1968. \$5.50
Arranged by standard biological system; includes descriptions, ranges, breeding habits, food; good drawings, good index. 4, 5
- Chinery, Michael. *Science Dictionary of the Animal World*. Watts, 1969. \$4.95, library binding
Brief, simple definitions; good color drawings. 1, 2, 3, 4, 5
- Grossman, Mary L., and Grossman, John H. *Birds of Prey of the World*. Potter, 1970. \$25
Part I: prehistory, birds and man, ecology, habits, survival, conservation; Part II: for identification; good drawings, photographs. 2, 3, 4, 5
- Grzimek, Bernhard, ed. *Grzimek's Animal Life Encyclopedia*. 13 vols. Van Nostrand Reinhold, 1972-74. \$29.95 each. Vol. 1: *Lower Animals*; Vol. 2: *Insects*; Vol. 3: *Mollusks*; Vols. 4-5: *Fishes (and Amphibians)*; Vol. 6:

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- Reptiles*; Vols. 7-9: *Birds*; Vols. 10-13: *Mammals*.
Comprehensive coverage. Has animal dictionary, four-language common-name index, scientific name index, volume indexes, bibliographies. 1, 2, 3, 4, 5
- Money, Sali. *The Animal Kingdom*. Grosset, 1971. \$3.99, library binding
Simple introduction to zoology with good color illustrations. 1, 2, 3
- Pennak, Robert W. *Collegiate Dictionary of Zoology*. Ronald, 1964. \$10.50
Good definitions but no illustrations. Appendix is a taxonomic outline of the animal kingdom including extinct animals. 3, 4, 5
- Sparks, John. *Bird Behavior*. Grosset, 1970. \$3.99, library binding
Simple introduction to birds; illustrations all in color. 1, 2, 3
- Stix, Hugh, and Stix, Marguerite. *The Shell*. Abrams, 1968. \$28.50
Excellent guide to identification; covers the world. "500 million years of inspired design." 2, 3, 4, 5
- Swan, Lester A., and Papp, Charles S. *Common Insects of North America*. Harper, 1972. \$15
Covers range, appearance, size, food, habitat of over 2,000 species. Excellent glossary, bibliography, indexes, but drawings vary in scale. 3, 4, 5
- Walker, Ernest P., et al. *Mammals of the World*. 2nd ed. 3 vols. John Hopkins, 1968. \$45 the set.
Comprehensive, giving common and scientific names, habitats, ranges, size, abundance, color, natural history. Good photographs, bibliography. 4, 5

600 Technology

- Crispin, Frederic S. *Dictionary of Technical Terms*. Rev. ed. Macmillan, 1970. \$6.95
Covers modern trades, industry, shopwork, technical procedures. 3, 4, 5
- Swezey, Kenneth M. *Formulas, Methods, Tips and Data for Home and Workshop*. Harper, 1969. \$7.95
Very practical. Selection, finishing, preservation of wood; finishing, plating, working of metals; paints, paint removers; arts, crafts; etc. 2, 3, 4, 5
- The Way Things Work: An Encyclopedia of Modern Technology*. 2 vols. Simon and Schuster, 1971. \$9.95 each
Over 400 common technical concepts and products described and explained; very clear diagrammatic illustrations. 1, 2, 3, 4, 5

610 Medicine and Health

- American Medical Association. *Today's Health Guide*. Latest ed. AMA. \$6.50 (paperback)
General medical information and guidance covering the human body, mental and emotional health, drugs, and so on. Useful illustrations. 4, 5
- Dorland's Illustrated Medical Dictionary*. 24th ed. Saunders, 1965. \$13.50
Comprehensive coverage. Includes section on medical etymology. Few but excellent plate illustrations. 3, 4, 5

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- Fishbein, Morris, ed. *New Illustrated Medical and Health Encyclopedia*. 4 vols. McKay, 1970. \$39.95
Popular treatment, dictionary format. Index in Vol. 4. Could be good for health assignments. 3, 4, 5
- Gray, Henry. *Anatomy of the Human Body*. 29th ed. Lea and Febiger, 1973. \$28.50
Standard work, frequently updated. Clear illustrations. Sections on embryology, anatomy, osteology, joints, muscles, nerves, heart, etc. 4, 5
- Lewis, Paul, and Rubenstein, David. *The Human Body*. Grosset, 1971. \$3.99, library binding
Good introduction to the human body and its anatomy. All illustrations in color. 1, 2, 3
- Stedman, Thomas L., et al. *Stedman's Medical Dictionary*. 22nd ed. Williams and Wilkins, 1972. \$8.50
Concise definitions, few illustrations. Appendixes on pharmaceutical preparations, blood groups, lab analysis, Latin terms, etc. 4, 5
- Thomson, William A., ed. *Black's Medical Dictionary*. 29th ed. Barnes and Noble, 1971. \$9
Simpler explanations than Dorland or Stedman, but cheaper. Drawings and excellent photographs. 3, 4, 5

621.38 *Electronics*

- American Radio Relay League. *Radio Amateur's Handbook*. Rev. annually. ARRL. \$4.50
Standard manual, reference work, covering operation of amateur radio communication equipment, concepts, policy, regulations. 4, 5
- Collins, A. Frederick. *Radio Amateur's Handbook*. 12th ed. Crowell, 1970. \$5.95
Covers fundamentals of construction, elementary theory, regulations; some more complicated apparatus, solid-state devices, mobile equipment. 4, 5
- Markus, John. *Electronics and Nucleonics Dictionary*. 3d ed. McGraw-Hill, 1967. \$17.50
Covers 16,338 terms more completely than an unabridged dictionary does. Good illustrations. 3, 4, 5

629 *Automotive and Space*

- Georgano, G. N., ed. *Complete Encyclopedia of Motorcars: 1885 to the Present*. 2d ed. Dutton, 1973. \$30
Photographs, color plates, abbreviations, glossary, Anglo-American terminology, index to personalities, index to component parts makers. 2, 3, 4, 5
- Marks, Robert W., ed. *New Dictionary and Handbook of Aerospace*. Praeger, 1969. \$10
Over 50,000 terms. Tables of planets, satellites, constellations, early U.S. and U.S.S.R. launchings. 2, 3, 4, 5
- Taylor, John W. *Aircraft*. Grosset, 1972. \$3.99, library binding
Simple introduction to aircraft and their history. Good drawings and index. 1, 2, 3

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630 Agriculture Including Animal Husbandry

- American Kennel Club. *The Complete Dog Book*. 11th ed. Howell, 1972. \$7
The official publication of the AKC. Excellent descriptions, illustrations, and "point" scale for each breed. Glossary, index. 2, 3, 4, 5
- Brady, Irene. *America's Horses and Ponies*. Houghton Mifflin, 1969. \$9.95
Scale drawings, detailed descriptions of all breeds of horses and ponies and many related animals. Includes directory. 3, 4, 5
- Cust, George, and Bird, Peter. *Tropical Freshwater Aquaria*. Grosset, 1971. \$3.99, library binding
Simple introduction to tropical fish and aquarium care. All illustrations are in color. 1, 2, 3
- Graf, Alfred B. *Exotic Plant Manual*. 2nd ed. Scribner, 1973. \$32.50
Gives identification, care, common and scientific names of ornamental plants often found in homes and green houses. Good illustrations. 3, 4, 5
- Hamilton, Ferelith. *World Encyclopedia of Dogs*. World, 1971. \$20
Some 280 breeds are described, aided by 1,100 illustrations. 1, 2, 3, 4, 5
- Pirone, Pascal P. *Tree Maintenance*. 4th ed. Oxford, 1972. \$15
Care and treatment of trees: planting, fertilizing, pruning, surgery, pest and fungi description and control. Site suggestions; illustrations. 3, 4, 5
- Pond, Grace, ed. *The Complete Cat Encyclopedia*. Crown, 1972. \$14.95
Descriptions, standards, characteristics of breeds; anatomy, health problems; associations, shows; photographs, drawings. 3, 4, 5
- U. S. Department of Agriculture. *Diseases of Forest and Shade Trees of the U.S.* (Handbook No. 386). GPO, 1971. \$4
Diseases listed under scientific names so a teacher or a librarian may have to help students in using the work. Comprehensive. Index. 4, 5
- U. S. Department of Agriculture. Agriculture Research Service. *Common Weeds of the U.S.* Dover, 1971. \$4.50 (paperback)
Pictures and describes over 220 species; common names, scientific names, distribution maps; clear drawings, ample text. 2, 3, 4, 5
- Westcott, Cynthia. *Plant Disease Handbook*. 3d ed. Van Nostrand Reinhold, 1971. \$19.95
Covers diseases, chemical treatment, plant pathogens, specific host-plant diseases. Ag experiment station list, glossary, bibliography, index. 3, 4, 5
- Wyman, Donald. (Diane Harris, ed.) *Wyman's Gardening Encyclopedia*. Macmillan, 1971. \$17.50
Covers description, scientific names, selection, growing, new techniques, fertilizing practices. Well illustrated. 2, 3, 4, 5

677 Textiles

- American Fabrics Magazine, ed. *Encyclopedia of Textiles*. 2nd ed. Prentice-Hall, 1972. \$39.95
Covers both man-made and natural fibers, their origins, history, inventors, fabric names, design, dyeing, weaving, testing. Dictionary. 2, 3, 4, 5

Klapper, Marvin. *Fabric Manual*. 2nd ed. Fairchild, 1971. \$6.95
 Basically a dictionary plus U.S. fabric statistics, U.S. man-made fibers, natural fibers and their sources, and so on. 2, 3, 4, 5

Biography

American Council of Learned Societies. *Dictionary of Scientific Biography*. 12 vols. (8 vols. so far). Scribner, 1970- . \$35 each

Will include 4,500 scientists and mathematicians from every region and period, similar in format to DAB and DNB. Bibliographies. 3, 4, 5

American Men and Women of Science: Physical and Biological Sciences. 12th ed. 6 vols. Bowker, 1971-73. \$210

Concise biographies of American scientists with doctorates and/or with demonstrated abilities as by publication or achievement. 3, 4, 5

Asimov, Isaac. *Asimov's Biographical Encyclopedia of Science and Technology*. Rev. ed. Doubleday, 1972. \$12.95

Short biographies of 1,195 scientists from ancient times to the present, chronologically arranged with complete subject and name index. 2, 3, 4, 5

McGraw-Hill Modern Men of Science. 2 vols. McGraw-Hill, 1966-68. \$22.50 each

One or two pages each, with portrait sketch, on life and important contributions of scientists in the forefront of modern science. 3, 4, 5

World Who's Who in Science. Marquis, 1968. \$60

Some 30,000 scientists from antiquity to the present, in typical condensed format but with ancients in essay form. Users may need help. 3, 4, 5

Bibliographic and Other Aids

Applied Science & Technology Index, covering 225 periodicals, and *Biological & Agricultural Index*, covering 189, can be useful to both teachers and advanced students even though the library gets only a small number of the periodicals covered. H. W. Wilson Co., service basis. 4, 5

Deason, Hilary J., comp. *AAAS Science Book List*. 3d ed. AAAS, 1970. \$10

Selected and annotated list of 2,441 books in pure and applied sciences and mathematics for junior/senior high students, college undergraduates, and nonspecialists. 4, 5

———. *AAAS Science Book List for Children*. 3d ed. AAAS, 1972. \$8.95

Selected and annotated list of science and math books for elementary school children and for children's collections in school and public libraries. 5

American Association for the Advancement of Science. *AAAS Science Books*. AAAS, 1965- . \$12/year

Current science and math books critically reviewed by scientists. Lists about 1,000 books and many science films each year, kindergarten through college level and for nonspecialists. 5

———. *Science for Society: A Bibliography*. 4th ed. AAAS, 1973. \$1

Comprehensive citation list to some 4,000 books, journals, articles, and other publications concerned with current issues of science and society. 5

Science Reference Materials

- Children's Science Book Review Committee. *Appraisal: Children's Science Books*. 3 issues/year. CSBRC, 1967- . \$4/year
Current books reviewed by both librarians and specialists giving overall ratings and suggested age levels, preschool through 9th grade. 5
- Educators Guide to Free Science Materials*. 14th ed. Educators Progress Service, 1973. \$9.25
Audiovisual and other enrichment aids: charts, posters, magazines, pamphlets, etc.; classified, annotated; sources of materials given. 5
- New Unesco Source Book for Science Teaching*. Unesco, 1973. \$7.00
Do-it-yourself guide to equipment and experiments. Covers plants, animals, human body, rocks, minerals, astronomy, weather, soils, water, machines, magnetism, heat, energy, sound. 5

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Children and Young People – the Importance of Physical Activity. December 2001. Acknowledgements. Å Lars Bo Andersen – University of Copenhagen, Institute for Exercise and Sports Sciences, Copenhagen, Denmark Araceli Bora-Ata PÃ©rez, M.D. – CARICD - Consejo Superior de Deportes, Madrid, Spain. 2. Children and Young People – the Importance of Physical Activity. December 2001. Contents. Like popular science, science for children and young people is a historical topic rich in fascinating stories about the ways in which scientific knowledge travels through society and culture. Although children and young people certainly belong to wider audiences for science outside the realm of specialized science, we have come to believe that studying science for children and young people allows us to probe even deeper into the ways in which science interacts with people’s lives, their social relations and their hopes for the future. Å Referencing James Secord’s influential metaphor of –knowledge in transit–, Topham in a Focus section of Isis on popular science argued Working with children and young people as a therapist and as a counselling psychologist has been some of the most challenging and fun parts of my work as a therapist. I think that combination of working with young people who have so much going on within their lives, and then developing and changing almost as you watch them if you’re in a longer-term relationship with them, becomes such a an interesting and rewarding kind of process. For me there’s something very interesting about working with a client group that I always feel as a culture we don’t fully understand yet. We talk about children a...