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GENERAL SCIENCE

Christmas Stocking Science

Since young might-be scientists especially enjoy do-itthemselves Christmas gifts, sources of basic materials and information are suggested.

➤ REMEMBER HOW it was on Christmas morning when you had opened all the packages?

How you sorted out the gifts that were for wearing, or saving for another season, or just for looking at, and piled them back under the tree? Then, a special part of Christmas began as you settled down to savor the gifts you could do something with!

Realizing that Space Age children are just like us in that respect, only much more so, you may wonder whether anything less than a crate of satellite parts or the essential materials for an atomic reactor will thrill them this Christmas. What can a parent or a fond relative buy to make a hopeful young scientist happy? If you should happen to get an inspired idea, where are these fairly unusual items to be found?

Since Science Service searches for just such materials the year around, the files are full of ideas for stuffing "scientific" Christmas stockings. Here, then, are some suggestions that will serve as a basis for your own ideas. Most of these items are very inexpensive and all of them will offer youngsters a chance to use some ingenuity and ability.

You may want to encourage your young scientist in his current interest in rocks or chemistry or stars or biophysics. On the other hand, this may be just the right time to introduce her or him to the adventure of exploring a brand new field.

Science Clubs of America, a Science Service activity, has studied the sources of interest and ideas of the outstanding teen-aged scientists who are winners in the Science Talent Search for the Westinghouse Science Scholarships and Awards or are finalists in the National Science Fair, both administered by Science Service. Of the 1958 finalists, 38% said that their ideas for these top level science projects were stimulated by scientific books, magazines and journals. Apparently, then, a well chosen gift of this kind is very sure to be welcomed.

General scientific magazines most often mentioned by students include such publications as Science News Letter, Science, Scientific American and similar magazines.

Journals in specialized fields often are published by scientific societies. For instance, the Journal of the Audio Engineering Society, Box 12, Old Chelsea Station, New York 11, N. Y., comes with membership (\$3.00 for students); Skylights, aviation facts, news stories, history, careers, etc., (free from National Aviation Education Council, 1025 Connecticut Ave., N.W., Washington 6, D. C.); Pennsylvania Archeologist, quarterly, (junior membership \$1.00, from Society for Pennsylvania Archeology, Pennsylvania State Museum, Harrisburg, Pa.); Space Science, monthly bulletin, 75¢ a year or 50¢ for group subscriptions of five or more, from Astronomical League, 4211 Colie Dr., Silver Spring, Md.). Your public library will have reference lists of dozens of professional societies, many of which have junior memberships available.

As for books to stimulate and challenge your pre-scientist, such an embarrassment of riches exists at the present time that it would be difficult to choose a few to mention even as examples. However, since not all the colorful books in the stores are equally accurate, valuable and well written, you may want the expert guidance of such publications as those of the American Association for the Advancement of Science, 1515 Massachusetts Ave., N.W., Washington 5, D. C. These include An Inexpensive Science Library, listing paperbound science and mathematics books for high school students (25¢) and The Traveling High School Science Library, an annotated catalogue of 200 science and mathematics books (25¢). Many publishers of paper-bound and hard-cover science books offer free information and price lists of their books. Your librarian will be glad to give you her professional advice in choosing from such lists in her files.

For the Air-Minded: Capital Airlines, Inc., Washington 1, D. C., has a free booklet, "Tinkering with the Turbine," which describes the principles of jet-propairplane engine operation. National Aviation Education Council, 1025 Connecticut Ave., N.W., Washington 6, D. C., offers such materials as "Jets," how they are built and operated (50¢); "Space Frontier," space facts and exploration, charts and photographs (25¢); "Helicopters," (50¢). Wright-Patterson Air Force Base, Ohio,

has free leaflets available on such subjects as "Opportunities for You in the New Age of Space"

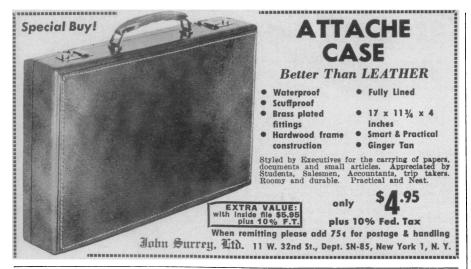
The Civil Aeronautics Administration, Washington 25, D. C., has such interesting material as "Pilot's Weather Handbook" (\$1.50), "Path of Flight" (65¢) and "Terrain Flying" (30¢).

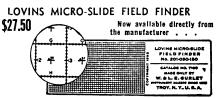
The Smithsonian Institution, Washington 25, D. C., offers a well-illustrated 166-pp. book, "The National Aeronautical Collections" (\$1.50).

The younger ones on your list will like the safe rocket that is propelled over 100 feet by a stream of water (\$2) and plastic space ship model kits (\$1 each) from Science Materials Center, 59 Fourth Ave., New York 3, N. Y.

For Atomic Researchers: The Atomic Energy Commission, Washington 25, D. C.,

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Christmas Stocking Science

(Continued from page 374)

has prepared a great variety of helpful material, single copies free: Directions and diagram for a homemade Geiger counter; information on laboratory experiments with radioisotopes (no AEC license necessary) and with a continuous cloud chamber; and publications on power reactors, biological problems and peaceful uses of atomic energy.

Atomic Research Laboratory, 10717 Venice Blvd., Los Angeles 34, Calif., has a 75¢ booklet on laboratory experiments with radioisotopes and free leaflets on radiation safety in schools and a price list of radioactive isotopes.

Kits for physics experiments, a cloud chamber, an electromagnet, etc., can be purchased from Atomic Laboratories, 3086 Claremont Ave., Berkeley, Calif., at prices ranging from \$15 up.

For Electronics Enthusiasts: Various kits, such as a microphone kit (about \$10), a crystal radio kit (about \$8), a tool set including a soldering iron (about \$10), other kits from \$5 up are available from the Heath Co., Benton Harbor, Mich. Helpful background includes "Radio

Builder's Handbook" (25¢), "Coil Winding Calculator" (50¢), "Parallel-Resistance and Series-Capacitance Calculators" (35¢) and others from Allied Radio Corp., 102 N. Western Ave., Chicago 80, Ill.

Bugs and Radio Tubes

Radio Corporation of America, Electron Tube Division, Harrison, N. J., has tube manuals for 75¢ and \$1, a book on transistors and semi-conductor diodes for 25¢.

For Star Gazers: A manual for observing variable stars is supplied for \$1 by The American Association of Variable Star Observers, 4 Brattle St., Cambridge, Mass.

Rand McNally and Co., Box 7600, Chicago 80, Ill., has issued a colorful wall map of the moon with a map of the planets, drawings of rockets and satellites, and detailed information on the reverse side, \$1.

A gyroscope (in stores \$1 up) makes a good stocking-stuffer, especially if you include "The Gyroscope Through the Ages" (free) issued by Sperry Gyroscope Marcus Ave., Great Neck, L. I., N. Y.

Beginner's Set, mounting biological specimens in plastic; Aquarium Assortment; Prepared Microscope Slide Set, Carolina Biological Supply, Elon College, N. C.

Catalogue of lenses, prisms, filters, solar energy items, spectroscopes, instruction booklets, etc., Edmund Scientific Co., 505 E. Gloucester Pike, Barrington, N. J.

Guides, list of 55 nature bulletins at 15¢ each, Nature Charts, 25¢ each, National Audubon Society, 1130 Fifth Ave., New York 28, N. Y.

Illustrated Science Catalogue (price 50¢), insect nets, pins, boxes, plant presses, aquaria, live specimens, glassware, chemicals, etc., New York Scientific Supply Co., 28 W. 39th St., New York 1, N. Y.

Nature Guide Catalogue, materials for mineral, fossil, insect collectors, other science hobbies, Ward's Natural Science Establishment, Box 1712, Rochester 3, N. Y.

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