



DOVE REFLECTING PRISM

3 inches long. Demonstrates 3 fundamental optical effects of glass prisms. 1) Refraction, giving spectrum (rainbow) effect. 2) Inverting and/or reversing effect by internal reflections. 3) Periscope effect which allows you to see in back of you by internal simple reflection off angled surfaces. U. S. Govt. surplus. Beautiful workmanship. Limited quantity @ \$2.00 each, 2 for \$3.00 and 5 for \$5.00. All P.P. HARRY ROSS Scientific & Lab Apparatus 61-L Reade St., N.Y. 7, N.Y.



FREE CATALOG WITH PRICES

24 EDGE-PUNCHED STOCK CARDS IN A VARIETY OF SIZES AND WITH ONE TO FOUR ROWS OF HOLES DEEP FOR MAXIMUM USE OF "DIRECT EXTRACTION" CODES

Basil M. Parkinson Agency
P.O. BOX 620-A • HILLSIDE, ILLINOIS • 60162

AN AD OF THIS SIZE costs only \$18.90 for a single insertion. Rates are considerably lower per issue for multiple insertions within one year. Circulation of SCIENCE NEWS LETTER is now over 80,000 copies per issue—and increasing steadily. Send us YOUR "copy" instructions, now, for the next issue.

A ONE-INCH DISPLAY "AD"

YOUR SKIN AND ITS CARE

By H. T. Behrman, M.D. and O. L. Levin, M.D. Two dermatologists give you the up-to-date scientific facts. They tell you in detail exactly what to do to beautify and improve your skin, how to avoid or correct skin disorders, and how to deal with many skin problems as: Daily care of the face • allergies • cosmetics • pimples • blackheads • acne • whiteheads • cysts • boils • oily skin • dry skin • chapping • poison ivy • cold sores • hives • superfluous hair • ringworm • moles • birthmarks • scars • warts • tumors • skin cancer • excessive sweating • etc., etc. "Accurate, unvarnished story of practical skin care."—Connecticut State Medical Journal. Price \$3.50 Postfree • 5-day Money-Back Guarantee EMERSON BOOKS, Inc., Dept. 801-M, 251 W. 19th Street, New York 11.

Share the Thrills of Exploring Outer Space!



All DYNASCOPES, including this superb RV-6, 6-inch available on easy terms!

Now it's easy to join the thousands of serious amateurs who have discovered the excitement of exploring our mysterious universe. Your enjoyment begins right from the start, yet the challenges and rewards go on for years! And it's a hobby that can be shared at modest cost.

Choose from a Full Range of DYNASCOPES® 4" Starting at \$49.95

Picking a telescope to fit your needs and your pocketbook is simple when you select a DYNASCOPES — the same instruments used by more than 150 schools, colleges and observatories. Prices begin as low as \$49.95, and your satisfaction is guaranteed by a full-refund warranty.

FASCINATING GUIDE YOURS FREE!

Read these valuable facts before buying any telescope. Mail coupon or postcard for your complimentary copy of this helpful guide.

Criterion Manufacturing Co.
331 Church St., Hartford 1, Conn.

© TM Registered U.S. Pat. Office

CRITERION MANUFACTURING CO.
Dept. NL-30, 331 Church St., Hartford 1, Conn.
Please send your free Telescope Guide.

Name _____
Address _____
City _____ State _____

ANATOMY

Man's Will Can Control All Voluntary Movement

➤ MAN DOES NOT have to practice yoga to control tiny, isolated muscle contractions of his body.

With the help of visual and auditory aids he can train his will to consciously isolate and control individual units that produce the finer body motions, such as twitches.

A Canadian anatomist injected electrodes by means of a hypodermic needle into primary muscles in the right hands of 16 normal persons. Every time the muscle contracted, no matter how slight the motion, it was recorded both visibly and audibly.

By hearing the contractions of the motor units, the subject learned to relax one or more units instantly on command and to reactivate them at will.

Some obtained such fine control that they produced audible rhythms and drum rolls on the recording instrument, an electromyograph. Neighboring cells remained dormant while one cell was in use. A previous study dealing with the control of athletes showed that they have no better control than the average person.

Dr. J. V. Basmajian of Queen's University, Kingston, Ontario, recommended future studies to determine the relationship of manual dexterity and skills to conscious control of all voluntary muscle movements. The future studies may also help to expose the underlying mechanism of the spinal cord, he reported in *Science*, 141:440, 1963.

• *Science News Letter*, 84:116 Aug. 24, 1963

GENERAL SCIENCE

Rat's Body Electricity Powers Radio Signals

➤ RADIO SIGNALS have been generated using the electricity produced naturally by a rat.

The "broadcasts" have important possibilities for medicine and biology. Although nothing has yet been transmitted except a "busy signal" indicating the transmitter was operating, future devices could be used to transmit information from a human's interior.

Reducing the transmitter's size and adapting it for use inside an animal's body is now being undertaken. Within a few months, L. W. Reynolds of General Electric's Space Sciences Laboratory at Valley Forge, Pa., hopes to have a miniature radio station established inside a dog, operating on power drawn from the dog's own body.

Future development is expected to yield many applications. Transmitters implanted inside human beings could send out information concerning the heart, nervous system, brain and various body processes.

Use of a transmitter of this type, which is harmless to body functions and produces no pain, would eliminate the need for short-lived batteries and cumbersome external attachments. This would be particularly valuable in space medicine and biophysics.

• *Science News Letter*, 84:116 Aug. 24, 1963

Questions

ASTRONOMY—What is the summer triangle? p. 122.

BIOLOGY—How do penguins add to the growth of algae in the South Pole? p. 119.

GENERAL SCIENCE—What is the granddaddy of lobbying organizations for scientists? p. 117.

MEDICINE—What is the more popular name for "housewives' dermatitis"? p. 128.

SPACE—How does solar wind affect Echo 1? p. 115.

ZOOLOGY—What is the fastest-known reflex in nature? p. 121.

SCIENCE NEWS LETTER

VOL. 84 AUG. 24, 1963 NO. 8

Edited by WATSON DAVIS

The Weekly Summary of Current Science, published every Saturday by SCIENCE SERVICE, Inc., 1719 N St., N.W., Washington, D. C. 20036, North 7-2255. Cable Address: SCIENSERV.

Subscription rates: 1 yr., \$5.50; 2 yrs., \$10.00; 3 yrs., \$14.50; ten or more copies in one package to one address, 7½ cents per copy per week; single copy, 15 cents, more than six months old, 25 cents. No charge for foreign postage. Change of address: Three weeks notice is required. Please state exactly how magazine is addressed. Include postal zone number.

Copyright © 1963 by Science Service, Inc. Republication of any portion of SCIENCE NEWS LETTER is strictly prohibited. Newspapers, magazines and other publications are invited to avail themselves of the numerous syndicated services issued by Science Service. Science Service also produces and distributes THINGS of science (monthly), produces and publishes books, and conducts the National Science Youth Program.

Printed in U.S.A. Second class postage paid at Washington, D. C. Established in mimeograph form March 13, 1922. Title registered as trademark, U.S. and Canadian Patent Offices. Indexed in Reader's Guide to Periodical Literature, Abridged Guide, and the Engineering Index. Member of Audit Bureau of Circulation.



SCIENCE SERVICE

The Institution for the Popularization of Science organized 1921 as a non-profit corporation.

Board of Trustees—Nominated by the American Association for the Advancement of Science: William W. Rubey, University of California at Los Angeles; Wallace R. Brode, Washington, D. C. (Treasurer); Douglas Whitaker, Rockefeller Institute for Medical Research. Nominated by the National Academy of Sciences: Harlow Shapley, Harvard College Observatory; Philip Bard, Johns Hopkins University; Henry Allen Moe, John Simon Guggenheim Memorial Foundation. Nominated by the National Research Council: Leonard Carmichael, Smithsonian Institution (President); John R. Dunning, Columbia University; Benjamin H. Willier, Johns Hopkins University. Nominated by the Journalistic Profession: Gordon B. Fister, Allentown (Pa.) Call-Chronicler; O. W. Riegel, Washington and Lee University; Ralph B. Curry, Flint Journal. Nominated by the Scripps Estate: Edward J. Meeman, Memphis Press-Scimitar; Ludwell Denny, Washington, D. C.; Charles E. Scripps, Cincinnati, Ohio (Vice President and Chairman of Executive Committee).

Staff—Director: Watson Davis. Assistant Director: Dorothy Schriver. Writers: Ann Ewing, Elizabeth Hall, Faye Marley, Elizabeth Mirel, Barbara Tufty, Judith Viorst, Walter Wingo, Ruby Yoshioka. Science Youth Division: Joseph H. Kraus, Leslie V. Watkins. Photography: Fremont Davis. Production: Priscilla Howe, Marcia Nelson. Conferences: Forrest L. Snakenberg. Librarian: Margit Friedrich. Interlingua Division in New York: Alexander Gode, 80 E. 11th St., GRamercy 3-5410. Advertising Manager: Fred A. Moulton, METropolitan 8-2562, Washington, D. C.