

The Weekly Newsmagazine of Science

# SCIENCE NEWS

February 3, 1996  
Vol. 149, No. 5  
Pages 65-80



## The Road to a Backbone

# Science and fun come together

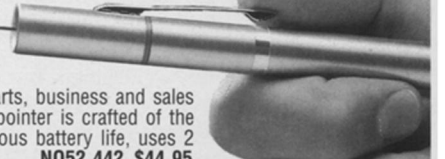
IN THIS UNIQUE COLLECTION OF SCIENTIFIC, EDUCATIONAL AND ENTERTAINING PRODUCTS.



**FOCUS YOUR AUDIENCE'S ATTENTION WITH OUR COMPACT**

## LASER POINTER

Lightweight, measures less than 5 1/2". Ideal for lecturers, educators, instructors, meetings and slide show presentations.



It projects a brilliant red laser dot to focus attention to slide presentations, charts, business and sales meetings at distances up to 150 feet. This compact pen style class IIIa laser pointer is crafted of the finest materials and built to the highest industrial standards. 8 hours continuous battery life, uses 2 "AAA" batteries (included), weighs less than 2 oz. Rated output: 3mW at 675nm. **NQ52,442 \$44.95**

Caution: Laser light, avoid direct eye exposure. Our Best Buy Ever! **\$44.95** NQ52,442

## HOBBYISTS AND FUTURE SCIENTISTS AGREE: WE HAVE THE HARD-TO-FIND ITEMS EVERYONE WANTS.

**SAVE! \$14**  
**Digital Thermometer Shows BOTH Indoor AND Outdoor Temperature, Memory For The Day's High AND Low!**  
 Now, you'll know at a glance how cold it is, with large, easy-to-read LED readout numbers, both the outside and inside temperature. Thermometer also records high and low readings. F° or C° selectable -40°F to +122°F. Modern Hi-Tech case measures 7 x 3/4 x 1/4". Easy to mount. Uses 2 "AA" batteries (not incl.). Complete with 10 ft. outdoor probe sensor cord.  
**On SALE Reg. \$46 NQ39,038 \$32.00**

**Metric Triple Balance Ohaus Scale With Single Pan Balance.**  
 The classic weighing instrument provides accurate weights year after year. Rugged construction, weigh anything - liquids, solids or live animals. Three tiered, notched beams (100-550, 10-100, 0-10 grams) have center readings, sliding poises. 610 gram capacity. Stainless 6" platform 18x6x6". **NQ71,695 \$97.50**  
**Accessory Weight Set, expands scale to 2,610 capacity including 1-500 and 2-1000 gram wts. NQ41,786 \$26.00**

**Mind Boggling Optic Mirage® Creates Baffling Illusions That Defy Explanation.**  
  
 Mirage will become the most baffling, attention-getting conversation piece you'll ever own. Each mirage you display is a scientific phenomenon called a three dimensional real image. For years, students often first heard of them in science labs, but few actually saw one. Observe the path of light rays illustrated as they construct a three-dimensional image of this fascinating optic mirage disc... there is nothing there. The object actually is below, displaying an unusual parabolic optical effect. Even when photographed, the object appears to be on top.  
**Acrylic Mirror Optic Mirage®, 9" diameter NQ72,381 \$39.95**

**Our Six Popular Favorite Science Toys That Teach.**  
 Save \$5.29 on our famous favorites!  
**A \$27.24 Value!**  
**SPECIAL PRICE \$21.95** NQ52,380  
 Classic science demonstration toys have amazed and intrigued young minds for many generations. You'll have fun and learn scientific demonstrations with them.  
 • Amazing Flying Bird • Fickle Foam • Whirling Gyroscope  
 • Sun Powered Radiometer • Rainbow Maker • Space Pet

**Fun And Intriguing! You'll Play For Hours With These Colorful Magnetic Magic Marbles.**  
 Build a mountain or odd geometric patterns with these fascinating, high impact plastic marbles. Each marble has both a negative and positive pole. A challenge to your imagination. Fun for youngsters, adults too!  
**NQ34,966 (Pkg. of 20) @ \$3.95 Ea. (5 Pkg. or more) @ \$3.70 Ea. (10 Pkg. or more) @ \$3.20 Ea. NQ37,623 (50 Marbles incl. bag) @ \$12.95 Ea.**

**Have You Ever Seen The Inside Of Your Eye?**  
 Eyescope is an optical device for looking at the inside of your eye. It's a specially designed diffuser incorporating a parabolic mirror and lens light. Safe and easy to use. A booklet included, describes the various features in-side the normal eye, how the iris works, kinds of floaters and float objects, how to inspect contacts.  
**NQ33,538 \$29.95**

## IT'S SCIENCE FAIR TIME!

**Go Fishing With This Mighty Magnet.**  
 Lifts over 200 lbs. Fun to use around docks and bridges. A "must" for a boat, it helps retrieve metal objects that fall overboard. You'll be amazed at what you pull up. Wt. 2 lbs., measures 4x3 1/2 x 3 1/2". Made with a Poly-Vinyl Chloride coating to resist corrosion and chipping.  
**NQ71,135 \$34.95**

**Helio Mr. Wrigley, and Bazooka Jo Jo Too! Now You Can Make Your Own Chewing Gum.**  
  
**NEW!**  
 Years ago sap from the Sapodilla tree was collected to make chicle. It's fun. It's easy. A mini-course in the chemistry of making chewing gum using real chicle from the tree forests of Guatemala. Complete instructions included for melting, kneading, mixing, rolling, cutting and wrapping. Contains everything needed, makes 15-20 pieces. For ages 8 and up. **NQ55,136 \$16.95**

**Miniature Water Pump For Science Fairs, Photo Darkrooms, Water Displays.**  
 This tiny pump can pump a pint per minute with a 12" high flow. Ideal for temperature control and circulation of dark-room chemicals, table fountains, model waterfalls, water filtration and more. Can be used in either direction and is self-priming. Operates on 2 flashlight batteries (not included), runs up to 48 hours before battery change is required. 4" tube included. **NQ50,345 \$7.95**

**An Experiment Book For Prize Winning Science Fair Projects.**  
 New, up-to-date edition of the best known science experiment book in the world. Compiled by science instructors under the auspices of UNESCO in Paris, featuring optical projection, electricity, chemistry, astronomy, magnetism, geology, physiology and more. Describes experiments with easy-to-follow instructions and diagrams. 251 pages **NQ9301 \$16.95**

**Authentic Russian KGB Micro Binoculars.**  
 Originally designed as KGB restricted issue micro binoculars by the Lytcorino Optical Factory (the former Soviet Union's most secretive military optics factory). These 2.5 power micro binoculars feature 17.5mm coated objective lens and individual focusing eyepieces. Lightweight, compact folding design weighs only 2 1/2 oz.  
**NQ53,014 \$29.95**

**Flash Rocks. Package of 3 bags (6 rocks)**  
 Strike them together and see amazing flashes inside the rocks! The source of light is a miniature "lightning flash" that occurs in the quartz material within the rocks. It's nature's Piezo effect.  
**NQ37,474 \$8.95**

**Radiometer... A Solar Engine.**  
 It's fascinating to watch the delicate vanes within this 5" precision-made sphere spin faster and faster illustrating the basic principles of solar heating. When light strikes the vanes it transfers heat and the vanes begin to move. Four vane rotor spins continuously at up to 3000 RPM. Works from artificial or direct sunlight. An attractive conversation piece.  
**Plain Glass Radiometer NQ60,082 \$7.95**  
**Silvered Radiometer NQ60,529 \$14.95**

**Perform Experiments With Equilateral Prisms Discovered By Sir Isaac Newton.**  
 Prism discovery optics have three equal 60° angles, ideal for classroom demonstrations. Turn sunshine into rainbows, bend light, even make a periscope. You can perform Newton's basic dispersion of white light into the spectrum experiments. All made of optical glass.  
 All prism faces are 25mm.  
 25mm, NQ39,124 \$4.55  
 50mm, NQ31,801 \$5.45  
 75mm, NQ31,797 \$5.95  
 100mm, NQ31,798 \$6.95  
 150mm, NQ31,799 \$9.50

## SCIENCE DISCOVERY!

**Build Your Own Robot With A Two-Way Sensor.**  
  
**NEW!**  
 • A Spunky Little Robot For Ages 10 and Up.  
 • Built-In Electronic Control Sound Sensor.  
 Hyper Peppy is an intelligent robot that responds to sound and obstacles in its path. When the sound/touch sensor (in front) detects an obstacle or hears a loud noise, such as a hand clap, Hyper Peppy will automatically reverse, then turns left before embarking on a new course. Kit incorporates the basic principles of robotic sensing and locomotion, and guarantees an adventure that's exciting, challenging, educational and fun. Comes complete with step-by-step instructions, pre-assembled PC board, condenser microphone and easy to assemble mechanical drive system. Powered by 2 1.5V "AA" batteries, (not incl.) **NQ52,864 \$29.95**

**The Powerful Edmund Scientific 400X Full Size Student Microscope... Ideal For Every Age Classroom.**  
 Open the hidden world to budding scientists to explore the fields of health, science and medicine with this professional instrument. It's the best quality and most economically priced microscope for the home/school budget. Features a large 14 1/2" tall heavy duty all metal frame built to International DIN Standards and weighs a hefty 7 lbs. 4 oz. Comes with three turret-mounted achromatic objectives, 40X - 100X - 400X and accepts all DIN objectives and eyepieces. Rack and pinion COARSE/FINE focusing allows for high power performance. Substage iris diaphragm provides precision light control for high contrast. Focus stop slide protection, adjustable inclination and spring clips included. This ES 400X student microscope, backed by a five year limited warranty, is highly recommended for your child's first microscope. Dust cover incl. (Optional storage case available) **NQ52,453 \$145.00**  
**Wooden Storage Carrying Case A \$49.95 Value! NQ53,234 \$29.95**

**Motors By The Bag For Hobbyists & Modelmakers.**  
 Our inexpensive motors can make wheels go 'round, propellers turn. Unlimited applications.  
 Have fun by adding motion to your science fair projects, demonstrations and experiments with this special buy of 20, 1" motors with 1/4" long shafts.  
**20, 1" Motors NQ1304 \$14.95**

**Add Spectacular Color To Your Home With A Rainbow Light Display.**  
 Our equilateral prism mounted in an attractive high tech positioning base catches the sunlight from your window and projects the ever-changing rainbow patterns over your walls, ceiling and floor. It's almost like being inside a multi-faceted diamond. Glass equilateral prism is 2" (50mm) long with 1" (25mm) faces. Black plastic mount is 3" x 1 1/4" x 1 1/4". **NQ38,400 \$8.95**

## IT'S EASY TO ORDER WITH OUR FRIENDLY SERVICE

**BY PHONE: 1-609-547-8880**  
 Mon.-Fri. 8AM-8PM; Sat. 9AM-4PM (EST)  
**BY FAX: 1-609-573-6295**  
 24 HOURS A DAY, 7 DAYS A WEEK  
**BY MAIL: enclose check or by credit card**  
 NJ Residents add 6% sales tax

**WE ACCEPT CREDIT CARDS**  
 Visa, MasterCard, American Express, Optima, Discover, Diners Club or Carte Blanche accepted  
 Be sure to indicate the credit card being used, card number and expiration date (with MasterCard please include bank name and ID number).  
**ALL ORDERS SHIPPED POSTPAID**



## FREE CATALOG

Science and fun come together in our new, 104 page 'SCIENTIFICS' color catalog, a special collection featuring over 5,000 scientific, educational and entertaining products that can be adapted for science fair projects.  
**Write, call or fax us today for your FREE copy.**

**You Must Be Pleased! - Money Back Guarantee**  
 If you are not completely satisfied with your purchase, return the merchandise in its original package and we will cheerfully refund your money in full.  
**We Back Our Products!** Our 45 day unconditional means you take no risk on any products you buy from us.



**Edmund Scientific**  
 Dept. 16D2, C915 Edscorp Bldg., Barrington, NJ 08007



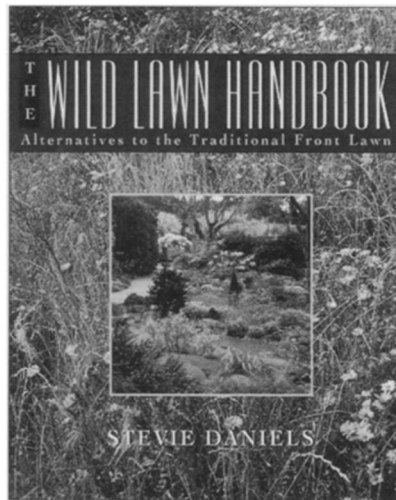
Order by phone  
for faster service!

**1-800-544-4565**

(Visa or MasterCard only)

In D.C. area: 202-331-9653

Macmillan, 1995, 223 pages,  
7 1/2" x 9 1/2", hardcover, \$22.00



More than 24 million acres of suburbia are planted in lawn. Each year \$7.5 billion is spent on the care of that lawn, including more than 67 million pounds of pesticides. In addition, the average lawn requires about 10,000 gallons of water over the course of a summer to keep it that emerald green.



But there is a groundswell of homeowners who are questioning the ecological and financial costs of maintaining a traditional lawn. More and more people are digging up their lawns (or starting with patches of it) and turning them over to low-maintenance alternatives—wildflowers and prairie and ornamental grasses, ground covers and spreading perennials, moss and shade plants.

*The Wild Lawn Handbook* contains hundreds of interesting plant alternatives to high-maintenance lawn grass, both natives and nonnatives and tells you exactly how to do it. It offers specific advice on evaluating your present situation, determining the wild lawn alternative that's likely to work best, eradicating your lawn, and maintaining your new lawn. You'll hear firsthand suggestions from people around the country who have rejected "tradition" in favor of a diverse, ever-changing landscape that can provide interest all year round and attract backyard wildlife. — from Macmillan

Science News Books  
1719 N Street, NW,  
Washington, DC 20036

WildLawnHdbkH

Please send me \_\_\_\_\_ copy(ies) of **The Wild Lawn Handbook**. I include a check payable to Science News Books for \$22.00 plus \$2.00 postage and handling for each book (total \$24.00). Domestic orders only.

Name \_\_\_\_\_

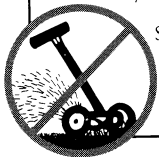
Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_ Zip \_\_\_\_\_

Daytime Phone \_\_\_\_\_

(used only for problems with order) RB2454

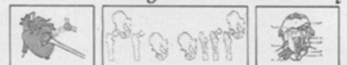


# THE SURGERY BOOK

An Illustrated Guide to 73 of the Most Common Operations

- |                    |                    |
|--------------------|--------------------|
| • Hernia repair    | • Hysterectomy     |
| • Mastectomy       | • Hip replacement  |
| • Cosmetic surgery | • Cataract repair  |
| • Vasectomy        | • Biopsies         |
| • Prostatectomy    | • Cesarean section |
|                    | • Disk repair      |
|                    | • Heart bypass     |

What the surgeon does and why



Robert M. Youngson, M.D.,  
with The Diagram Group

Nothing is more daunting than facing the prospect of surgery. Whether the patient is yourself or a loved one, you are bound to have many questions about the operation the doctor has recommended — concerns that even the most attentive and thorough doctor might be too busy to address completely.

*The Surgery Book* is a dependable, comprehensive sourcebook that answers these important medical questions. Designed for the layperson, the book explains the seventy-three most common surgical operations, delivering the information that every well-informed patient needs to know in a clear, easy-to-understand format. For each operation, it answers these crucial questions:

- Why is the operation necessary?
- What does the surgeon hope to accomplish?
- How is the operation performed?
- How long will post-operation recovery take, and will there be pain or other side effects?

The book also explains what every patient should know about each of the most common diagnostic and surgical tests. It also covers blood transfusion, tissue and organ transplantation, and bone marrow transplant, in addition to giving readers a thorough introduction to operating-room procedures, staff, and equipment.

Written by a leading surgeon and thoroughly illustrated with more than 350 step-by-step drawings, *The Surgery Book* allays patients' fears and anxieties, and helps them become fully informed about their upcoming experience in the operating room.

—from *St. Martin's Press*

To order by Visa or MasterCard

Call 1-800-544-4565

In D.C. Area: 202-331-9653

St. Martin's Press, 1993, 448 pages, 6 1/4" x 9 1/2", hardcover, \$27.95

Science News Books

SurgeryBookH

1719 N Street, NW, Washington, DC 20036

Please send \_\_\_\_\_ copy(ies) of *The Surgery Book*. I include a check payable to Science News Books for \$27.95 plus \$2.00 postage and handling (total \$29.95) for each copy. Domestic orders only.

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_ Zip \_\_\_\_\_

Daytime Phone \_\_\_\_\_

(used only for problems with order)

RB2455