

The Weekly Newsmagazine of Science

# SCIENCE NEWS

October 29, 1994  
Vol. 146, No. 18  
Pages 273-288

**Can You See  
the Real Me?**







# 54th Westinghouse Science Talent Search

*\$205,000 in scholarships will be awarded to high school seniors in the 54th Westinghouse Science Talent Search for research projects in science, mathematics and engineering*

|        |                      |                                 |
|--------|----------------------|---------------------------------|
| One    | \$40,000 scholarship | (\$10,000 per year for 4 years) |
| One    | \$30,000 scholarship | (\$7,500 per year for 4 years)  |
| One    | \$20,000 scholarship | (\$5,000 per year for 4 years)  |
| Three  | \$15,000 scholarship | (\$3,750 per year for 4 years)  |
| Four   | \$10,000 scholarship | (\$2,500 per year for 4 years)  |
| Thirty | \$ 1,000 scholarship | (payable upon matriculation)    |

**Basic Requirements** — Entrants must be high school seniors during the 1994-95 school year. Primary emphasis is placed on a written report of an independent research project in the physical sciences, behavioral and social sciences, engineering, mathematics, or biological sciences (excluding live vertebrate experimentation). The research project must be the work of a single individual. Group projects are not eligible. An Entry Form, designed to elicit evidence of creativity and interest in science, is also required, along with an official high school transcript, available standardized test scores, and statements and recommendations from teachers and/or supervising scientists.

**Winners Selection** — Three hundred semifinalists are selected from entries received (usually about 1,500) after careful evaluation by a team of 20 evaluators and judges specializing in a variety of scientific disciplines. Forty finalists are then selected from the semifinalists and invited to Washington, D.C. in March 1995, for final judging by a board of eight distinguished scientists.

**The Rewards** — Three hundred semifinalists benefit in the following ways: (1) recommendations to colleges and universities for admission and financial assistance, (2) certificates of achievement for students and teachers, (3) a sense of accomplishment and a measure of self-esteem that comes from finishing a difficult assignment. The 40 finalists, selected from the semifinalists, are also awarded a trip to Washington for the five-day, all-expense-paid Science Talent Institute for final judging and a chance to share \$205,000 in scholarships.

**Sponsors** — Since its inception in 1942, the Science Talent Search has been funded by Westinghouse Electric Corporation and administered by Science Service, a Washington-based nonprofit organization.

## **Deadline — December 1, 1994**

**Entries for the 54th Westinghouse Science Talent Search  
(1994-95 school year)**

*Entries must be received by 11:59 p.m. on Thursday, December 1, 1994, at Science Service, 1719 N Street, NW Washington, DC 20036. If the judging process has not been completed, late entries will be accepted ONLY if (1) metered in a U.S. Post Office by November 24, 1994, or (2) sent by a carrier that guaranteed delivery in writing by the deadline. Entries may NOT be sent by telefax.*

*We strongly recommend early entries to avoid any disappointment or delivery delays. NOTE: The U.S. Postal Service's Registered or Certified Mail is for tracking purposes only, and is NOT the same as Express Mail, which delivers overnight. Priority mail DOES NOT GUARANTEE IN WRITING delivery in two days.*

NOW AVAILABLE  
SEEKING — and Finding —  
SCIENCE TALENT

### ***A 50-Year History of the Westinghouse Science Talent Search***

Author Tom K. Phares provides a comprehensive history of the Westinghouse Science Talent Search from its inception in 1942. Entertaining prose leads you from the meeting of the two founders of the STS at the World's Fair in 1939; to the accomplishments of past winners — five of whom went on to become Nobel Laureates; to the dedicated individuals behind the winners; through the arduous judging and evaluation process; to the educational opportunities that open up to STS finalists. Also included as appendices in this informative review is a list of the finalists' names from 1942 to 1990; lists of major honors received by former winners; and a list of the 32 high schools which have produced the most winners. (Published by Westinghouse Electric Corporation, 1990; paperback; 122pp.)

*To obtain a copy, send \$3 (to cover postage and handling) to STS History, Science Service, 1719 N Street, NW, Washington, DC 20036.*

WRITE OR CALL FOR MORE INFORMATION, OFFICIAL RULES AND ENTRY FORM

WESTINGHOUSE SCIENCE TALENT SEARCH, c/o SCIENCE SERVICE, DEPT. STS, 1719 N STREET, NW, WASHINGTON, DC 20036  
(TELEPHONE: 202/785-2255)

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The classic weighing instrument provides accurate weights year after year. Rugged construction, weigh anything (100-550, 10-100, 0-10 grams) have center readings, sliding poises. 610 gram capacity. Stainless 6" platform 18x6x6". SB71,695 \$95. Acc. Wt. Set, expands scale to 2,610 cap. including 1-500 and 2-1000 gram wts. SB41,766 \$26.00



**Exciting Books For Science Fair Projects - "700 Science Experiments For Everyone"**

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. 251 pages, featuring optical projection, electricity, chemistry, astronomy, magnetism, geology, physiology and more. Describes experiments with easy-to-follow instructions and diagrams. SB9301 \$13.95



**Giant Stand Magnifier, Ideal For Classroom Demonstrations!**

A great teaching aid. Features a giant 4" diameter optical glass lens and a 2X magnification. Mounted in a heavy duty plastic stand, measures 7 1/8" H x 6 1/2" L x 5 1/4" W, and folds to a compact 15 1/2" unit. The base has both a 4" and a 100mm measuring scale molded into the frame. Working distance is 6 1/2" field of view is 7". SB38,599 \$9.75



**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. Face is 25mm. 75mm, SB31,797 \$5.75. 25mm, SB39,124 \$4.45. 100mm, SB31,798 \$6.85. 50mm, SB31,801 \$5.35. 150mm, SB31,799 \$9.25



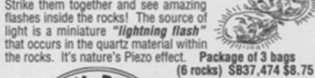
**Fun And Intriguing! You'll Play For Hours With These Colorful Magnetic Magic Marbles.**

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! 20 marbles per package. SB34,968 (Package of 20) @ \$3.95 Ea. (5 Packages or more) @ \$3.70 Ea. (10 Packages or more) @ \$3.20 Ea.



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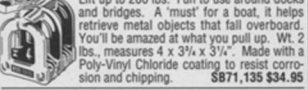
**The Hoberman Sphere™ Snaps Together, Transforming A Globe That Expands In Volume 30 Times.**

The Hoberman Sphere™ is a unique system of plastic links that snap together easily to form a sphere 10" in dia. which transforms into a 2 1/2 ft. geodesic globe when the outer edges are pulled apart. This is a replica of the 18 foot geodesic sphere on exhibit at the Liberty Science Center. The geometric technology employed in changing a shape and size creates a magical effect. Kit includes parts, pulley for hanging and detailed instructions. No tools required. Ages 12 to adult. SB52,783 \$69.95




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**Can You Tell Which Ball Is A Happy Bouncer, And Which Ball Is Not?**

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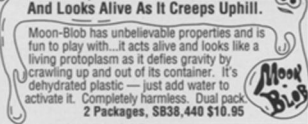
**Have You Ever Seen The Inside Of Your Eye?**

Eyescopes 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 inside the normal eye, how the iris works, kinds of floaters and fixed objects, how to inspect contacts. SB83,538 \$29.95



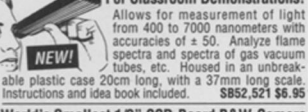
**Moon-Blob. It Crawls Out Of Containers And Looks Alive As It Creeps Uphill.**

Moon-Blob has unbelievable properties and is fun to play with...it acts alive and looks like a living protoplasm as it defies gravity by crawling up and out of its container. It's dehydrated plastic - just add water to activate it. Completely harmless. Dual pack. 2 Packages, SB38,440 \$10.95



**Measure Light With The Spectrometer, Ideal For Classroom Demonstrations!**

Allows for measurement of light from 400 to 700 nanometers with accuracies of ± .50. Analyze flame spectra and spectra of gas vacuum tubes, etc. Housed in an unbreakable plastic case 20cm long, with a 37mm long scale. Instructions and idea book included. SB52,521 \$9.95



**World's Smallest 1/3" CCD Board B&W Camera Offers Challenge For Electronic Hobbyists.**

Shown Actual Size!



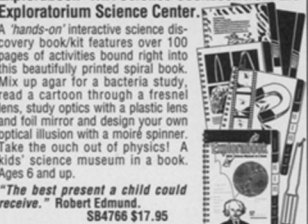
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Our miniature breadboard-type CCD B&W camera (1.26" x 1.26" x 0.75" thick) for machine vision, instrumentation and OEM applications can open doors for your creative imagination. Unit features a 3.7mm pinhole lens built into the breadboard assembly. Wired for 9 volt DC input and video output, with an automatic electronic shutter. Field of view is 45° (V) x 60° (H) with 32mm x 32mm dimensions. You can observe miniature details on a TV monitor (not incl.) from a range of only inches away to up to 15 feet with a 0.5 Lux minimum illumination. Many applications - limited only by your imagination - from home or office security, viewing hard-to-see areas, robotics, machine vision, etc. SB52,569 \$195.00



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**COMPACT LASER POINTER**

**Our Lowest Price Ever!**

This bank automatically separates, stacks and counts coins. Just drop in 1 to 15 coins and watch the motor automatically turn on. The conveyor begins to pulse, coins march and pulse as they flip from heads to tails, then magically are stacked and counted into proper columns. Holds full rolls of pennies, nickels, dimes and quarters (\$17.50 total). Requires 1 "C" battery (not incl.). Made in the USA. SB52,622 \$24.95



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**Radiometer...A Space Age Sphere.**

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. Works from direct sunlight or artificial light. An attractive conversation piece. SB60,082 \$6.95



**A Bird Watchers Delight... Wild Bird Feeder.**

Now you can have hours of fun watching wild birds feed in your backyard. It's easy, just recycle a 2-liter plastic soda bottle into a bird feeder by making a hole for the wire hanger on both sides of the bottle. Fill bottle with bird seed and twist 8" to 10" long on the cast zinc adapter. It can be hung or mounted on a pole. SB52,431 \$13.95



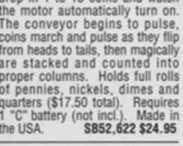
**MotORIZED COIN BANK Factory Makes Saving Money Fun.**

This bank automatically separates, stacks and counts coins. Just drop in 1 to 15 coins and watch the motor automatically turn on. The conveyor begins to pulse, coins march and pulse as they flip from heads to tails, then magically are stacked and counted into proper columns. Holds full rolls of pennies, nickels, dimes and quarters (\$17.50 total). Requires 1 "C" battery (not incl.). Made in the USA. SB52,622 \$24.95



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A classic science experiment demonstrates the properties of air, namely after the scientists Rene Descartes, Air has weight, exerts pressure, and can be squeezed or compressed. The Cartesian Diver demonstrates all three properties. The diver will float or sink in the bottle of water depending on the water level; the water level inside of the diver rises because the pressure squeezes the air into smaller space. Place the Hook into the bottle. Squeeze the bottle and Hook the Sinker! Pkg. of 2 Divers SB52,665 \$6.25



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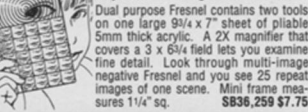
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