

Resources for Teaching Light and Color

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4111 Connecticut Trail
Crystal Lake, IL 60012
815-455-0399
fizzforfun@aol.com

Demonstration and Laboratory Apparatus

Anamorphic Art

“Magic Mirror” Anamorphic Art Book (\$3.95/book of 24 pictures) from either of these sources:

Arbor Scientific
P.O. Box 2750
Ann Arbor, MI 48106-2750
1-800-367-6695
www.arborsci.com

Dover Publications, Inc.
31 East 2nd Street
Mineola, NY 11501
doverpublications.com

Anamorphic Art grid at www.arborsci.com/CoolStuff/cool9.htm

Color Filters

Arbor Scientific
P.O. Box 2750
Ann Arbor, MI 48106-2750
1-800-367-6695
www.arborsci.com

Grand Stage Lighting
630 West Lake Street
Chicago, IL 60661-1465
(312) 332-5611

Scientifics
60 Pearce Avenue
Tonawanda, NY 14150-6711
1-800-828-3299
www.scientifics.com

Note: If ordering from Grand Stage, ask for:

Lee Filters (~\$6.00/ sheet for class of 30)

Dark Blue - #119
Primary Red - #106
Forest Green - #327
Medium Blue Green - #116
Deep Straw - #015
Bright Pink - #128

or

ROSCULENE (~\$6.00 sheet per class of 30)

Blue - #863
Red - #823
Green - #874
Cyan - #877
Yellow - # 806
Magenta - #837

Chemical Light Sticks

Arbor Scientific
P.O. Box 2750
Ann Arbor, MI 48106-2750
1-800-367-6695
www.arborsci.com

Educational Innovations, Inc. (ultraviolet detecting beads, T-shirts, nail polish)

362 Main Avenue
Norwalk, CT 06851
203-229-0730
www.teachersource.com

Diffraction Glasses

Arbor Scientific
P.O. Box 2750
Ann Arbor, MI 48106-2750
1-800-367-6695
www.arborsci.com

“Laser Amazers” - # NB2514 – 50 glasses/\$13.50; 100glasses/\$26
Kipp Brothers, Inc.
240 – 242 South Meridian Street
Indianapolis, Indiana 46206
1-800-428-1153
www.kippbro.com

Rainbow Symphony, Inc.
6680 Canby Avenue
Suite 120
Reseda, CA 91335
800-821-5122
Fax: 818-708-8470
www.rainbowsymphonystore.com

Holograms

Arbor Scientific
P.O. Box 2750
Ann Arbor, MI 48106-2750
1-800-367-6695
www.arborsci.com

Integraf
P.O. Box 586
Lake Forest, IL 60045
847-234-3756
Fax: 847-615-0835
www.holokits.com

Royal Holographic Art gallery
122 Market Square
560 Johnson Street
Victoria, BC Canada V8W 3C6
Tel/Fax: 250-384-0123 www.holograms.bc.ca/indexnew.html

Holographic Diffraction Gratings

Arbor Scientific
P.O. Box 2750
Ann Arbor, MI 48106-2750
1-800-367-6695
www.arborsci.com

Learning Technologies
40 Cameron Avenue
Somerville, MA 02144
(order PS-08A - 9" x 5" sheet: \$8.00; PS-08B - 6' x 5" roll: \$36.00)

Rainbow Symphony, Inc.
6680 Canby Avenue
Suite 120
Reseda, CA 91335
800-821-5122
Fax: 818-708-8470
www.rainbowsymphonystore.com

Kaleidoscope Kits

EA7-GP50 – 25 kits/\$21.99
S&S Worldwide
PO Box 513
Colchester, CT 06415-0513
1-800-243-9232

These kits use reflective Mylar in lieu of glass mirrors. Images satisfactory, but certainly not as good as those produced by glass mirrors.

Kaleidoscope Materials

Mirror tiles – hardware stores
Beads – crafts stores

Lasers

All Electronics Corp.
P.O. Box 567
Van Nuys, CA 91408
FAX: 818-781-2653
www.allelectronics.com

Arbor Scientific
P.O. Box 2750
Ann Arbor, MI 48106-2750
1-800-367-6695
www.arborsci.com

Meredith Instruments
5035 North 55th Avenue
Suite 5
Glendale, AZ 85301
602-934-9387

MWK Industries
1269 W. Pomona
Corona, CA 91720
909-278-0563
Fax: 909-278-4887

Scientifics
60 Pearce Avenue
Tonawanda, NY 14150-6711
1-800-828-3299
www.scientifics.com

Light Boxes

Arbor Scientific
P.O. Box 2750
Ann Arbor, MI 48106-2750
1-800-367-6695
www.arborsci.com

Light Wave Communications System

*All products with reference numbers are from RadioShack
(www.RadioShack.com)*

- 1 - Jumbo Super-Bright Red LED - 276-086
- 1 - 9V Battery Snap Connectors (Pkg. of 5) - 270-325
- 1 - 470-Ohm Resistors (Pkg. of 5) – 271-1317
- 1 - Solar Cell – 276-124
- 1 - Mini Amplifier/Speaker 277-1008C
- 2 – 6-ft Audio Cable, 1/8” mini plug to alligator clips – 42-2421
- 2 – 9v batteries

Schematic for assembly of light wave communications system at
www.arborsci.com/CoolStuff/cool9.htm

Mirrors (flexible and solid plastic)

grafixplastics.com (100 sheets of 0.005” silvered ‘DuraLar’ flexible reflective polyester costs \$44.00. There’s a \$100.00 minimum on orders.)

McMaster-Carr www.mcmaster.com (search for polycarbonate mirror and find 36”x 48”, 1/8” thick, stock number 2912K95 for \$135.18 a sheet)

Optics Kits

Optics Discovery Kit. Optical Society of America, 2010 Massachusetts Avenue, NW,
Washington, DC 20036-1023; 202-416-1907; FAX 202-416-6130; email
www.custserv@osa.org

Persistence of Vision Demonstrations

E:Writer Computerized Flying Disc
GCDC Marketing, Inc.
1-800-4PROMOS
www.1-800-4PROMOS.com

Phosphorescent “Lite Film”

Arbor Scientific
P.O. Box 2750
Ann Arbor, MI 48106-2750
1-800-367-6695
www.arborsci.com

Hanovia
825 Lehigh Avenue
Union, NJ 07083
1-908-810-3732
1-800-229-3666
www.hanovia-uv.com
Contact person: Jeff Andrews
jsandrews@hanovia-uv.com

Educational Innovations, Inc.
362 Main Avenue
Norwalk, CT 06851
203-229-0730
www.teachersource.com

Polarizing Materials

Arbor Scientific
P.O. Box 2750
Ann Arbor, MI 48106-2750
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Fax: 818-708-8470
www.rainbowsymphonystore.com

Scientifics
60 Pearce Avenue
Tonawanda, NY 14150-6711
1-800-828-3299 www.scientifics.com

Reversed Mask Illusion

Arbor Scientific
P.O. Box 2750
Ann Arbor, MI 48106-2750
1-800-367-6695
www.arborsci.com

Scientifics
60 Pearce Avenue
Tonawanda, NY 14150-6711
1-800-828-3299
www.scientifics.com

Ultraviolet-Sensitive Beads

Educational Innovations, Inc. (ultraviolet detecting beads, T-shirts, nail polish)
362 Main Avenue
Norwalk, CT 06851
203-229-0730
www.teachersource.com

Rainbow Symphony, Inc.
6680 Canby Avenue
Suite 120
Reseda, CA 91335
800-821-5122
Fax: 818-708-8470
www.rainbowsymphonystore.com

Reference Materials

A Demonstration Handbook for Physics
By G.D. Frier and F.J. Anderson
American Association of Physics Teachers
One Physics Ellipse
College Park, MD 20740
301-209-3300
www.aapt.org

A Potpourri of Physics Teaching Ideas: Selected Reprints

from The Physics Teacher, April 1963 – December 1986

Donna Berry Conner, editor
American Association of Physics Teachers
One Physics Ellipse
College Park, MD 20740
301-209-3300
www.aapt.org

Conceptual Physics (9ed.)
By Paul Hewitt
Addison Wesley
San Francisco, CA
www.awl.com

Deck the Halls
By Joe Pizzo
American Association of Physics Teachers
One Physics Ellipse
College Park, MD 20740
301-209-3300
www.aapt.org

Eye and Brain
By Richard L. Gregory
Princeton University Press
41 William Street
Princeton, NJ 08540

How Things Work: The Physics of Everyday Life
By Louis Bloomfield
John Wiley & Sons
New York, NY

Invitations to Scientific Inquiry
By Tik L. Liem
Science Inquiry Enterprises
14358 Village View Lane
Chino Hills, CA 91709
909-590-4618
jmkris@scienceinquiry.com

Light Science: Physics and the Visual Arts

By Thomas D. Rossing and Christopher J. Chiaverina
Springer-Verlag
New York NY

Seeing the Light

By David Falk, Dieter Brill, and David Stork
John Wiley & Sons
New York, NY
www.wiley.com

Square Wheels

By Don Rathjen and Paul Doherty
Exploratorium
3601 Lyon Street
San Francisco, CA 94123
www.exploratorium.edu

The Dick and Rae Physics Demo Book

By Richard B. Minnix and D. Rae Carpenter, Jr.
Dick and Rae, Inc.
VMI Mallory Hall,
Lexington, VA 24450

Teaching Light and Color

By Thomas D. Rossing and Christopher J. Chiaverina
American Association of Physics Teachers
One Physics Ellipse
College Park, MD 20740
301-209-3300
www.aapt.org

“Walter Wicks Optical Tricks”

Educational Innovations, Inc.
362 Main Avenue
Norwalk, CT 06851
203-229-0730
www.teachersource.com

Web Resources for Teaching Light and Color

Arbor Scientific's CoolStuff Newsletter Volume 9

www.arborsci.com/CoolStuff/Archives.htm

Exploratorium's Science Snacks (inventive activities that are sure to engage your students)

www.exploratorium.edu/snacks/snackintro.html

Illusion Works (the most comprehensive collection of optical and sensory illusions on the world-wide web)

<http://psylux.psych.tu-dresden.de/i1/kaw/diverses%20Material/www.illusionworks.com/>

New Trier High School's Connections Project (museum-quality interactive displays created by students and their teachers)

<http://nths.newtrier.k12.il.us/academics/math/Connections/connections.htm>

Optical Society of America's Optics for Kids (a wonderful collection of optics activities for kids of all ages)

<http://www.opticsforkids.org/>

Virtual Physics Laboratory (a great source of shadow, pinhole, mirror, lens, and color simulations)

<http://www.phy.ntnu.edu.tw/ntnujava/viewforum.php?f=6>

Shadow formation simulation

<http://www.phy.ntnu.edu.tw/ntnujava/viewtopic.php?t=59>

Pinhole simulation:

<http://www.phy.ntnu.edu.tw/ntnujava/viewtopic.php?t=55>

Bob Miller's Light Walk

http://www.exploratorium.edu/light_walk/index.html