

# Questions

**ANTHROPOLOGY**—Why are scientists particularly interested in the two skeletons of primitive man found in Iraq? p. 227.

□ □ □

**MEDICINE**—What is the value of administering penicillinase to patients who have received penicillin? p. 229.

□ □ □

**PUBLIC HEALTH**—What kind of isotopes do not appear to cause radiation damage when swallowed? p. 235.

□ □ □

**ROENTGENOLOGY**—How can scientists discover if there is a possibility that an infant may be mongoloid? p. 238.

□ □ □

Photographs: Cover, Smithsonian Institution, p. 227, U. S. Navy; p. 229, Yomiuri Shimbun; p. 231, Illinois Institute of Technology; p. 234, Eli Lilly & Co.; p. 240, E. I. DuPont de Nemours.

## CHEMISTRY

### Gamma Rays Slow Oleo Manufacture

➤ **GAMMA RADIATION** slows down rather than speeds up the vital process of hydrogenation used in the manufacture of oleomargarine and vegetable shortening from cottonseed oil.

This is the finding of Profs. Lyle F. Albright and Alexander Sesonke, and graduate student Lawrence J. Harrison, of the School of Chemical Engineering, Purdue University, reported to the American Oil Chemists Society meeting in Cincinnati, Ohio.

Using Purdue's 900-curie cobalt-60 source, they hydrogenated cottonseed oil in several runs with radiation and several without. The hydrogenation occurred at slower rates under irradiation.

Previous research on similar processes with other oils, acids and plastics showing gamma radiation speeds up some polymerization reactions has led chemists to expect the same finding with any number of reactions.

Apparently, the gamma rays degrade some of the cottonseed oil into substances that poison the nickel catalyst necessary to the process, according to Prof. Albright. These substances probably include free fatty acids and possibly carbonyls.

Science News Letter, October 12, 1957

## Do You Know?

Large doses of *vitamin A* can result in toxic symptoms.

Every one of the 800 to 1,000 strands of silk on a corn cob represents the possible development of one kernel of *corn*.

*Helium*, a non-reactive gas, will help boost the first man-made earth satellite beyond the pull of gravity by pressurizing the rocket fuel tanks.

## OPTICAL BARGAINS

## EXCELLENT FOR CHRISTMAS GIFTS!

### Photographers!

Adapt your camera to this Scope for excellent Telephoto shots and fascinating photos of moon!



This is an actual photograph of the moon taken through our Astronomical Telescope by a 17-year-old student.

### See the Stars, Moon, Planets Close Up!

## 3" ASTRONOMICAL REFLECTING TELESCOPE

ASSEMBLED and READY TO USE!

### Famous Mt. Palomar-Type

### 60 & 120 Power — An Unusual Buy!

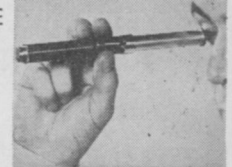
You'll see the Rings of Saturn, the fascinating planet Mars, huge craters on the Moon, Star Clusters, Moons of Jupiter in detail, Galaxies! This is a fine quality, American-made telescope engineered and built for clear definition and resolution. Equatorial mount with lock on both axes—you automatically follow stars across the heavens. Aluminized and overcoated 3" diameter high-speed f/10 mirror. Each mirror focally tested. Telescope comes equipped with a 60X eyepiece and a mounted Barlow Lens, giving you 60 & 120 power. Accessory eyepieces available for powers up to 250. An Optical Finder Telescope, always so essential, is also included. Sturdy, hardwood, portable tripod.

Free with scope: Valuable STAR CHART and 272 page "Astronomy Book."  
Stock No. 85,050-Q ..... \$29.50 f.o.b. Barrington, N. J.  
(Shipping wt. 10 lbs.)

### New! 2 in 1 Combination Pocket-Size

### 50 POWER MICROSCOPE and 10 POWER TELESCOPE

ONLY \$4.50 p.p.d.



Useful Telescope and Microscope combined in one amazing, precision instrument. Imported! No larger than a fountain pen. Telescope is 10 Power. Microscope magnifies 50 Times. Sharp focus at any range. Handy for sports, looking at small objects, just plain snoping.

Send Check or M.O. Satisfaction Guaranteed

Order Stock No. 30,059-Q ..... \$4.50

### NEW! STATIC ELECTRICITY GENERATOR



See a thrilling spark display as you set off a miniature bolt of lightning. Absolutely safe and harmless—perfect for classroom experimentation. Ideal for Science Clubs. Sturdily made—stands 14" high. Turn the handle and two 9" plastic discs rotate in opposite directions. Metal collector brushes pick up the static electricity, store it in the Leyden jar type condenser until discharged by the jumping spark. Countless tricks and experiments. 24-page instruction booklet included.

Stock No. 70,070-Q ..... \$10.95 Postpaid

### MAKE YOUR SCHOOL A POWERFUL ASTRONOMICAL TELESCOPE

Grind Your Own Astronomical Mirror Complete Kits Including Blank, Tool and Abrasives



All over America amateurs are grinding their own mirrors and making expensive Telescopes cheaply. You can do the same using our Kits. These contain mirror blank, tool, abrasives, diagonal mirror and eyepiece lenses. You build instruments ranging in value from \$245 to thousands of dollars.

Stock No.	Dia. Mirror	Thickness	Price
70,003-Q	4 1/4"	1 1/2"	\$ 7.50 postpaid
70,004-Q	6"	1 1/2"	11.95 postpaid
70,005-Q	8"	1 1/2"	19.50 postpaid
70,006-Q	10"	1 1/2"	30.75 postpaid
70,007-Q	12"	2 1/2"	54.75 postpaid

### INSTRUCTION BOOKLETS

Easy to follow—accurate 8 1/2 x 11 page size—many illustrations. Do-it-yourself—Save! and have Fun!

How to Build Projectors	Stock No.	Price Postp.
Homebuilt Telescopes	9014-Q	30¢
Method to Clean Precision Optics	9006-Q	40¢
Homebuilt Riflescopes	9024-Q	15¢
All About Telephoto Lenses	9018-Q	40¢
How to Condense and Project Light with Lenses	9036-Q	60¢
Reticles and Their Uses	9044-Q	75¢
ULTRA CLOSE-UP Photography	9039-Q	45¢
Infra-red Light and Its Uses	9042-Q	60¢
Homemade Stereo-Adapters	9040-Q	75¢
Photo Micrography with Pen Microscope	9032-Q	30¢
Dummy Cameras	9034-Q	30¢
Collimating Systems	9029-Q	10¢
"Building a Condenser Enlarger"	9035-Q	20¢
"Fun with Optics"	9047-Q	35¢
	9038-Q	40¢
	9050-Q	50¢

### SIMPLE LENS KITS!

Fun for adults! Fun for children! Kits include plainly written, illustrated booklet showing how you can build lots of optical items.

Stock No. 2-Q—10 lenses ..... \$ 1.00 Postpaid

Stock No. 5-Q—45 lenses ..... \$ 5.00 Postpaid

Stock No. 10-Q—80 lenses ..... \$10.00 Postpaid

### STEREO MICROSCOPE

American-Made Instrument at Over 50% Saving. Up to 3" Working Distance—Erect Image—Wide 3-Dimensional Field. Used for inspections, examinations, counting, checking, assembling, dissecting. 2 sets of objectives on rotating turret. Standard pair of wide field 10X Kellner Eyepieces give you 23 power and 40 power. Helical rack and pinion focusing. 10-DAY TRIAL . . . complete satisfaction or your money back. Order

Stock No. 85,056-Q. Full price, \$99.50 f.o.b. Barrington, N. J. (Shipping wt. approx. 11 lbs.)  
Send Check or M.O.

### BUILD A SOLAR ENERGY FURNACE

Wonderful Geophysical Year School Project

Build your own Solar Furnace for experimentation—many practical uses. It's easy—inexpensive. Use your scrap wood. We furnish instruction sheet. This sun powered furnace will generate terrific heat—2000° to 3000°. Fuses enamel to metal. Sets paper aflame in seconds. Use our Fresnel Lens—1 1/4" diameter . . . f.l. 14".

Stock No. 70,130-Q pkg. of 1 . . . \$ 6.00 Postpaid  
Stock No. 70,131-Q pkg. of 2 . . . 11.00 Postpaid  
Stock No. 70,132-Q pkg. of 4 . . . 20.00 Postpaid

### INFRARED SNIPERSCOPE TELESCOPE & Parts

Schools Can Now Delve Into Infrared

See in the dark—without being observed. War surplus Sniperscope M-2. Gov't cost about \$1200. Used for experiments; infrared photography; spectroscopy, etc. Instrument complete, ready to use. Includes Power Pack, infrared light source. Will operate from 6 V auto battery. Battery or transformer available. Stock No. 85,053-Q. \$150.00 f.o.b. Barrington, N.J. Shpg. Wt. approx. 12 lbs.

Save still more money! Build your own Sniperscope! We furnish instructions—parts, including Power Packs, 1P25A image tubes, light units, filters, etc. For details—request FREE Bulletin A-26-Q.

GET FREE CATALOG #Q—World's largest variety of Optical Items. Bargains galore . . . War Surplus—Imported—Domestic! Microscopes, Telescopes, Satellite Telescopes, Infrared Items, Prisms, Lenses, Reticles, Mirrors and dozens of other hard-to-get Optical Items. Ask for FREE CATALOG #Q.

ORDER BY STOCK NUMBER . SEND CHECK OR MONEY ORDER . SATISFACTION GUARANTEED!

EDMUND SCIENTIFIC CO., BARRINGTON, N. J.