

oratories, in a conspicuous place. Test it regularly, recharging if necessary, to assure proper functioning at all times.

10. When inserting glass tubing into a stopper, lubricate the tubing and wrap the tubing in cloth to help prevent injury in event of breakage.

11. Cleanliness of work area and materials is essential.

12. Lab equipment should be constructed of fire-resistant materials.

13. A well-stocked first aid kit is essential in the home laboratory. Know the location of your school's first aid station.

Thirteen common sense rules are "unlucky" only if they are not followed religiously.

Home chemistry sets often are a youngster's first introduction to science. These contain comparatively harmless chemicals, and the accompanying manual usually gives complete directions for numerous experiments using only the materials provided. If directions are followed, no danger is likely. It is the parents' responsibility to aid their children in the proper use of such a chemistry set. Even without a chemical background, parents can review the safety

instructions in the manual and make certain their children clearly understand and follow the safety rules.

Most children interested enough in science to perform experiments and work on science projects probably belong to a science club or are taking a science course in school. Teachers and science club sponsors should show safety films and review safety precautions in class or club meetings.

Three suggested films are "Safety in the Chemical Laboratory," a 16mm sound-color 20-minute film available from the Manufacturing Chemists Association, 1825 Connecticut Avenue, N.W., Washington, D.C. 20009; "Safety in the Chemical Lab," also a 16mm sound-color film, available through the Safety Officer, National Institutes of Health, Bethesda, Md.; and "Take Your Choice," a 15-minute film available through the Detroit Society for the Prevention of Blindness, 1401 Ash St., Detroit 8, Mich.

Safety is an integral part of the scientific attitude. Without the scientific attitude, you should not be experimenting. Danger can be avoided, minimized, eliminated. It should never be ignored.

• Science News Letter, 89:90 February 5, 1966

GENERAL SCIENCE

China's Science Growing

► RED CHINA has been strengthening its scientific and engineering muscles by pushing thousands of students through colleges and universities.

Yet these masses of young scientists are getting less comprehensive training than older generations of scientists, according to a 588-page report on scientific and engineering manpower in Communist China from 1949 to 1963. The young scientists also lack sufficient experience to engage in top-level research, states Dr. Chu-yuan Cheng, formerly with the Institute of Far Eastern Studies at Seton Hall University and now with the University of Michigan.

Since the Red Chinese Government has not issued any major statistical reports or communiques since 1960, Dr. Cheng has based much of his investigation on hundreds of newspapers, periodicals and scientific journals published on the Chinese mainland, as well as on a number of Russian and Japanese publications.

In 1963, many of China's leading scientists were 60 or 70 years old, engaged in basic and creative research. Now with China's desire to become a leading world scientific power, quality has been sacrificed for quantity.

The success or failure in bridging the gap between the mass of young scientists and the older scientists will determine whether China will become a scientifically advanced power in the next decade or two, believes Dr. Cheng, who has been conducting the Chinese studies with a grant from the National Science Foundation.

Since the beginning of the Communist regime in 1949, China has also been mobilizing its women into scientific and engineering fields. Enrollment of women students has expanded fivefold in institutions of higher education where thousands of these women are studying science and engineering.

China has also stepped up her participation in new branches of science since 1949. The country entered the nuclear age with Soviet assistance in 1958 with the installation of a 7,000 to 10,000 kilowatt heavy-water-type experimental reactor, a 25-million electron-volt cyclotron and more than 10 types of accelerators. With its successful nuclear explosions of October 1964 and May 1965, Communist China ranks among the countries holding nuclear capability, marking a new era in Chinese science and technology. Research is strongly concentrated in fields where immediate production was possible—in radioelectronics, in meteorology, and in chemical, steel, and other metallurgical industries.

The full use of China's potential scientific and engineering manpower has been hampered by the subordination of scientific training to political dogmatism, states Dr. Cheng. It has also been hampered by rigid party control over scientific enterprises, by a persistent suspicion of the old scientists, and by the choice of more than 10,000 capable middle-aged scientists and engineers to remain in the United States or other Western countries where they received their training.

• Science News Letter, 89:91 February 5, 1966

Do You Know?

Cold blooded pets such as turtles, chameleons and alligators, may be potential carriers of bacteria of the genus *Salmonella* and infect children.

Jets of water under very high pressure are being used in some Soviet mines to cut *anthracite*, an extremely hard type of coal.

• Science News Letter, 89:91 February 5, 1966

SCIENCE BARGAINS

NEW! SCIENCE FAIR PROJECT KITS

Edmund Kits are carefully planned to give any boy or girl the fun and excitement of discovering science facts. Such carefully planned projects can lead the student to awards or scholarships. Adults too will find them an excellent introduction to the various fields of science. Write for Free Bulletin 47-Q "Your Science Project" covering all phases of Science Fair Projects.



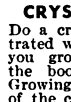
MINIATURE WATER PUMP

Wonderful for experiments, miniature waterfalls, fountains, HO gage railroad backdrops, etc.; Tiny (2 1/4" x 1 3/4") electric motor and pump, ideal for hobbyists, labs, schools. Pumps continuous flow of water at rate of one pint per minute at a 12" head. With 2 D Batteries in series will pump to 24" high. Runs 48 hours on battery. Works in either direction. Self-priming. Stock No. 50,345-Q \$2.25 Postpaid



BUILD A SOLAR ENERGY FURNACE

A fascinating new field. Build your own Solar Furnace for experimentation—many practical uses. Easy! Inexpensive! Use scrap wood! We furnish instructions. This sun powered furnace will generate terrific heat—2000° to 3000°. Fuses enamel to metal. Sets paper aflame in seconds. Use our Fresnel Lens 11" sq. F.L. 19". Stock No. 70,533-Q \$6.00 Postpaid



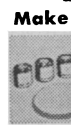
CRYSTAL-GROWING KIT

Do a crystallography project illustrated with large beautiful crystals you grow yourself. Kit includes the book "Crystals and Crystal Growing" and a generous supply of the chemicals you need to grow large display crystals of potassium aluminum sulfate (clear), potassium chromium sulfate (purple), potassium sodium tartrate (clear), nickel sulfate hexahydrate (blue-green) or heptahydrate (green), potassium ferricyanide (red), and copper acetate (blue-green). Stock No. 70,338-Q \$9.50 Postpaid



WAR SURPLUS ELECTRIC GENERATOR

Brand-new Signal Corps Generator for endless experiments, electrical uses, demonstrations. Generates up to 90 volts by turning crank. Use in high impedance relays. Charge ground and bring up night crawlers for fishing bait. Has 2 Alnico Magnets. Wt. 2 lbs. Cost Govt. \$15. Stock No. 50,225-Q \$6.95 Ppd. Same type generator, mounted with light, as electricity demonstrator. Stock No. 50,385-Q \$11.95 Ppd.



Make Your Own Astronomical Telescope

GRIND YOUR OWN MIRROR

Kits contain mirror blank, tool, abrasives, diagonal, mirror and eyepiece lenses. You build instruments ranging in value from \$75.00 to hundreds of dollars. Stock No. 70,003-Q 4 1/4" 3/4" \$ 7.50 Ppd. 70,004-Q 6" 1" 11.95 Ppd. 70,005-Q 8" 1 1/2" 18.50 Ppd. 70,006-Q 10" 1 3/4" 30.75 f.o.b. 70,007-Q 12 1/2" 2 1/8" 59.95 Barrington

SCIENCE TREASURE CHESTS

For Boys—Girls—Adults! Science Treasure Chest—Extra-powerful magnets, polarizing filters, compass, one-way-mirror film, prism, diffraction grating and lots of other items for hundreds of thrilling experiments, plus a Ten-Lens Kit for making telescopes, microscopes, etc. Full instructions included. Stock No. 70,342-Q \$5.50 Postpaid. Science Treasure Chest Deluxe—Everything in Chest above plus exciting additional items for more advanced experiments, including crystal-growing kit, electric motor, molecular models sets, first-surface mirrors, and lots more. Stock No. 70,343-Q \$10.50 Postpaid.



WOODEN SOLID PUZZLES

12 Different puzzles that will stimulate your ability to think and reason. Here is a fascinating assortment of wood puzzles that will provide hours of pleasure. Twelve different puzzles, animals, and geometric forms to take apart and reassemble, give a chance for all the family, young and old, to test skill, patience and, best of all, to stimulate ability to think and reason while having lots of fun. Order yours now. Stock No. 70,205-Q \$3.00 Postpaid.



Order by Stock No.—Send Check or M.O. Shipment same day received—Satisfaction or money back.

TEACHERS: Write for Educational Catalog Q-2 Edmund Scientific Co., Barrington, N. J.

MAIL COUPON for FREE CATALOG "Q"

EDMUND SCIENTIFIC CO.
Barrington, New Jersey 08007
Completely new 1966 Edition. 148 pages. Nearly 4500 BARGAINS.
Please Rush Free Catalog "Q"
Name.....
Address.....
City.....State.....Zip.....

