

One-fourth, 25.2%, were started at home by their parents or other family members, family activities, attitudes and expeditions.

Various sorts of self-generated drive launched 12.2% who described irresistible curiosity, imaginative speculation, compelling need to know "why" and similar traits as having been their prime movers.

Science equipment that provided opportunities to explore for themselves captured the interest of 10.5%.

Reading books, magazines, newspapers, scientific journals and papers, advertisements, encyclopedias and textbooks started 7.7%.

PSYCHOLOGY

Factor X of Leadership

► THERE IS a mysterious "factor X" essential for leading men.

Regardless of circumstances, from leadership of an infantry squad in battle, handling a field army, to directing an office project, success depends to a considerable degree on the amount of this factor an individual has. Special traits are required for each kind of leadership, but underlying all is "factor X."

Determination of its nature and distribution is the objective of several psychological research projects now underway that were reported at a conference at the U.S. Naval Academy in Annapolis, Md., by Dr. Luigi Petruccio of the Office of Naval Research, sponsor of the conference.

The old idea that leadership ability was a combination of intelligence, courage and capacity to plan ahead, the "great man" theory of history, no longer can be accepted, as an adequate explanation, Dr. Petruccio said.

All these qualities are important, to dif-

Science clubs and science fairs stimulated 6.1% to want to know more about a specific subject or about science in general.

The final 4.6% reported a miscellany of "first causes" such as museums, national parks, professional laboratories, planetarium programs, television productions, community activities, etc.

Such guideposts as these suggest many different routes that may be made freely accessible to children and young scientists. If they then choose to travel these roads, the destination of some of them may well be the scientific community.

• Science News Letter, 79:282 May 6, 1961

ferent degrees in different situations, he pointed out, but any combination of them still does not define factor X. The brave, intelligent, understanding man still may be a poor leader of other men.

Summation of all these qualities, he said, "still is far smaller than the part contributed by some unknown factor X." The object of contemporary research is exploration of the composition of this factor. Traditional methods and concepts are being systematically applied, but do not promise solution. From somewhere must come new concepts.

"We know some of the characteristics of factor X. First, it is dynamic and organic, it follows principles of growth and development. Second, it is dependent on persons, situations and interactions. It is purposive and dualistically oriented towards tasks and persons.

"A new leadership theory must incorporate the old characteristics as a minimum."

• Science News Letter, 79:283 May 6, 1961

MEDICINE

Cancer Mistaken in X-Ray

► DIAGNOSIS of lung cancer may be difficult or impossible from X-ray pictures alone.

A study of ten different shadow forms lung cancer may take on an X-ray plate was shown at the American Academy of General Practice scientific assembly in Miami Beach, Fla.

Dr. Robert W. Jamplis of the Palo Alto, Calif., Clinic warned in the exhibit that masquerades may take the form of simple pneumonia, tuberculosis, obstructive emphysema such as might be experienced from a peanut becoming lodged in the windpipe, and other diseases. A dark round spot may go unnoticed because it looks like a nickel or a quarter in a shirt pocket.

Correct diagnosis should be made promptly by other methods, Dr. Jamplis reported, because any benign-appearing lesion must be suspect. Early surgery is the best treatment for lung cancer.

The economics of medicine was discussed in a panel on the pros and cons of social security methods of financing medical care.

Dr. John S. DeTar of Milan, Mich., moderator of the panel, told SCIENCE SERVICE that the Academy was in general agreement with the American Medical Association, although probably no official stand will be taken.

"Both the AMA and the AAGP are in favor of the individual doing as much as he can for his own medical care," Dr. DeTar said. "Next, the community, then the state, and as a last resort the Federal Government should step in."

Standing virtually alone in favor of social security methods of financing medical care was Leonard Woodcock of Detroit, Mich., who is vice president of the United Auto Workers.

Representing the American Farm Bureau Federation was Roger Fleming, secretary-treasurer and director of the Washington, D.C., office. The Farm Bureau policies for 1961 are that the "need for medical insurance should be met by expansion of existing private insurance programs without Federal subsidy."

• Science News Letter, 79:283 May 6, 1961

SCIENCE BARGAINS

Order by Stock No.—Send Check or M.O.—
Satisfaction or Money Back!

BE THE FIRST ATOMIC GARDENER IN YOUR NEIGHBORHOOD



Take part in the "anything can happen" planting adventure of the century. Plant atomic energized flower and vegetable seeds—indoors or out. Kits include 8 seed packets—4 energized with gamma rays and 4 untreated. Energized seeds are absolutely safe—completely unpredictable—may produce plants and flowers that are larger, more productive, different shapes, unusual colors—just about anything. Normal plants provide comparison. Vegetables: tomato, corn, lettuce, radish. Flowers: petunia, zinnia, marigold, aster. Complete with charts, pictures, instructions.

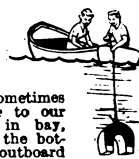
Stock No. 70,421-Q Vegetable Kit . . . \$3.95 Postpd.
Stock No. 70,422-Q Flower Kit . . . \$3.95 Postpd.

ATTENTION TEACHERS!

Elementary through college! New 96-page CATALOG of useful classroom learning and teaching aids. Science, math, physics, astronomy, biology, etc. Request EDUCATIONAL CATALOG—"Q".

'FISH' WITH A MAGNET

Go Treasure Hunting
on the Bottom



Great idea! Fascinating fun and sometimes tremendously profitable! Tie a line to our 5-lb. Magnet—drop it overboard in bay, river, lake or ocean. Troll it along the bottom—your "treasure" haul can be outboard motors, anchors, fishing tackle, all kinds of metal valuables. 5-lb. Magnet is war surplus—Alnico V Type—a terrific bargain. Lifts over 125 lbs. on land—much greater weights under water. Order now and try this new sport.

Stock No. 70,183-Q. 5-lb. Magnet . . \$9.95 Postpaid

WHIRLING WONDERS WONDERFUL WORLD OF WHIRLING WHEELS



Here's a new adventure in optical impressions—created by the magical effect of these fascinating, rotating discs. In addition to weird shapes and fantastic "after images" this kit demonstrates "stop motion" stroboscopic principles—"off center" focus and even hypnotism. Kit includes 13 discs, approx. 5" in dia. battery holder, rheostat, small motor mounted on bracket, bulb, socket, plug and complete booklet of instructions and experimental use.

Stock No. 70,414-Q . . . \$9.95 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 or 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

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—14" diameter . . . f.l. 14".

Stock No. 70,130-Q, Fresnel Lens, \$6.00 Postpaid

FREE CATALOG-Q

144 Pages! Over 1000 Bargains!

America's No. 1 source of supply for Science experimenters, hobbyists. Complete line of Astronomical Telescope parts and assembled Telescopes. Also huge selection of lenses, prisms, war surplus optical instruments, parts and accessories—Telescopes, microscopes, binoculars, infrared sniperscopes, items for making "Science Fair" projects, math learning and teaching aids. Request Catalog Q.



TEACHERS! Write for Educational Catalog Q-2

EDMUND SCIENTIFIC CO.
BARRINGTON, NEW JERSEY