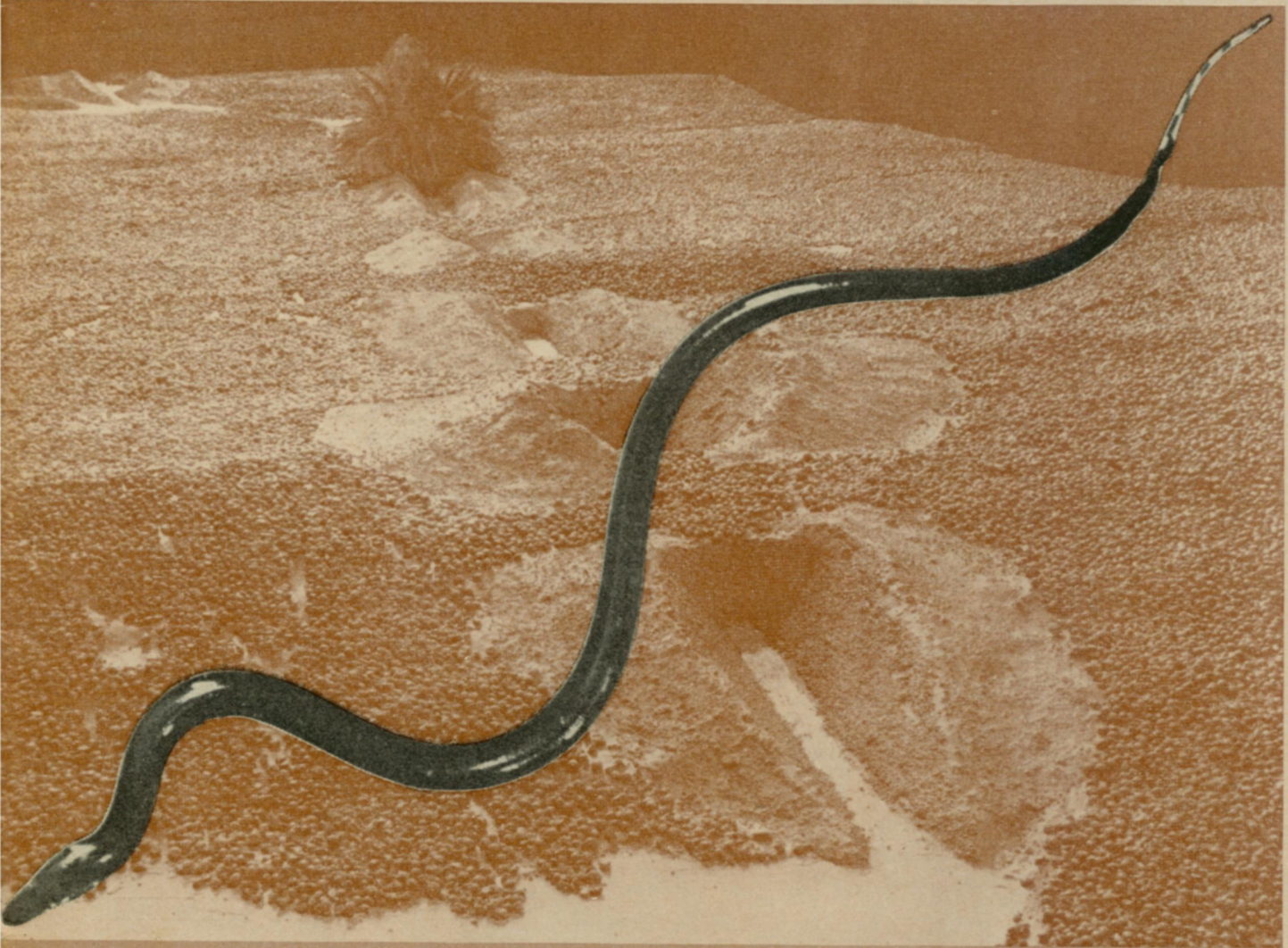


SCIENCE NEWS

7 December, 1968 **25c**
vol. 94 no. 23, p. 561-584



Ecologists Race the New Canal

Sandage down under
pursuing the big bang

Letter from London
technological malaise

DOES EDUCATION have to be expensive?

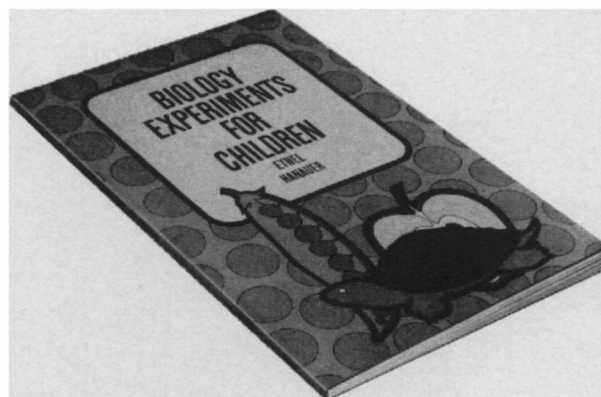
No! Demonstrate fundamentals of the sciences with scrap materials, odds & ends.

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Do you have to spend from \$5 to \$15 for a crystal-growing set? Of course not. All you really need is a glass of water, a string, and some rock salt or rock candy you can buy from your druggist for less than 25c. Did you know that you can make a microphone out of dead flashlight batteries and other miscellaneous junk? that you can demonstrate the nature of a magnetic field with paper clips? tell time with a compass?

With four new books, you can actively or passively help or watch your children learn the fundamentals of the physical sciences from a series of experiments that make learning seem like the most fascinating pastime imaginable. The experiments range in difficulty from demonstrating surface tension of liquid to constructing a crystal radio set or Geiger counter. All are safe. Except for Biology Experiments, where approximately half the experiments require a microscope, almost all the materials can be found around the house or bought for a few cents from a drug or hardware store.

The experiments stick to fundamentals; you won't find gimmicky tricks that have only a vague relationship to the way modern physical science is taught. Demonstrated are basic essentials that give upper grade school and junior high school students a real head start: dynamics of light, heat, sound, electricity; basic elements of chemistry, chemical engineering, biochemistry, photography; principles of magnetism, electricity, electronics, atomic topics; data on photosynthesis, protozoa, generalized life cycle, the circulatory system, and other elements basic to the natural sciences. For each experiment, a conclusion explains clearly though simply why the phenomena demonstrated have occurred.



PHYSICS EXPERIMENTS, Muriel Mandell. Simple means demonstrate air has weight; specific gravity; heat conduction. Thread-spool pulleys... bottle-cap gears... a stethoscope... a sound amplifier—in all 103 things to do. Formerly "Science for Children." Over 100 ills. 96pp. 6½ x 9¼. 22033-8 Paperbd. \$1.25

CHEMISTRY EXPERIMENTS, Virginia L. Mullin. Measure amount of oxygen in air, make a fire extinguisher, illustrate osmosis, create light-sensitive paper and make lensless photos; bend glass. Formerly "Chemistry for Children." Over 100 ills. 96pp. 6½ x 9¼. 22031-1 Paperbd. \$1.25

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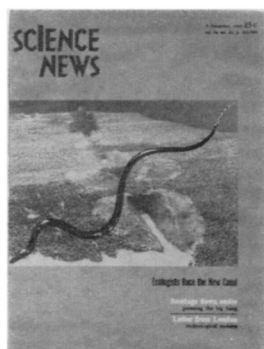
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The venomous sea snake, *Pelamis platurus*, may find the proposed sea level Panama canal a convenient way to colonize the tropical Atlantic. So may a variety of other species, with as-yet unpredictable consequences for the ecology of two oceans. p. 578 (Snake: Smithsonian. Canal model: Lawrence Radiation Lab.)

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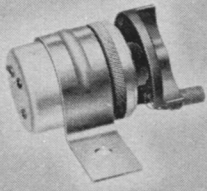
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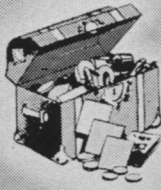
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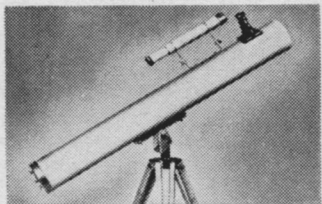
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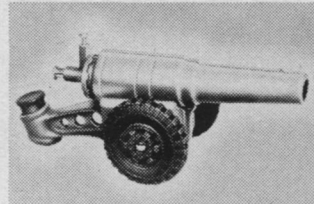
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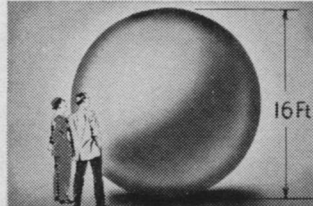
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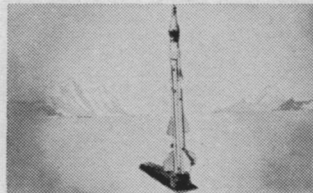
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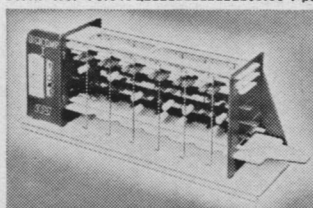
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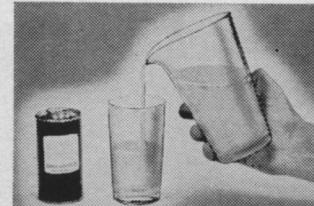
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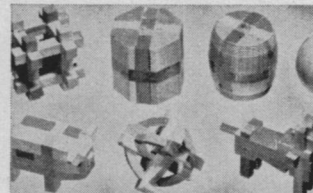
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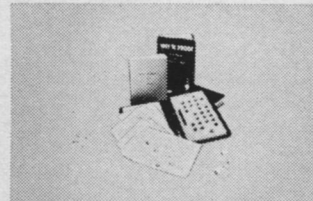
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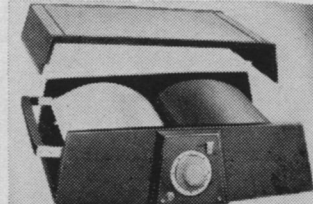


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