



**VISUALIZING THEOREMS**—Geometry can now be fun, thanks to simple but interesting new kits which have been prepared to let you actually see the problems of triangles.

stick the nail somewhere on the top line, well to the right of C. Does the three-sided figure, made by the elastic and the dotted line AB, seem to have about the same area as triangle ABC?

Try sticking the pin at other points along the upper of the two parallel lines, which is a cute way of being sure that all the triangles have the same altitude. Notice that when the pin is placed far to the right, the triangle is quite elongated; when it is placed near C, it becomes short and fat. In all cases, however, the triangle is equal to ABC in area.

Only one line need be printed on the model that might well be called: "Midpoints of Sides." From your colored cardboard cut a rectangle three by five inches. In the lower left-hand corner start a straight line segment that slopes inward and extends

almost to the top of the cardboard rectangle. Mark the upper end-point of the line segment "A," the lower end-point "B," and the exact middle of the line segment "M." Back the rectangle with corrugated board.

To prepare the other leg of the triangle, split in half the stub remainder of a used pencil. A stub about three inches long would be best. This will be easier to do if you slip off the cap holding the eraser, scrape off the paint along the edges where the two halves of wood are glued together and soak in water. Remove the center lead, and paint the wood black.

About a quarter inch from each end of the wood bore holes large enough to take the elastic. To avoid splitting the wood, start the hole with a small nail and complete with a tiny screw. Now bore a third hole midway between these two.

At B and M punch small holes. Thread a piece of elastic five inches long through B and through the hole at the lower end of the wooden stick, and knot.

Thread another piece of elastic three and a half to four inches long through M and through the hole at the midpoint of the

stick, pushing it into the wood from the same side as the longer elastic and knot both ends.

Stick a carpet nail through the third hole, and punch it through the cardboard and corrugated board at A. With a pair of pliers bend the end of the nail so it does not pull loose. Rotate the wooden piece to be sure it pivots easily around the nail.

One piece of elastic now forms the base of the triangle and the other connects the midpoints of the other two sides. As you rotate the stick, the elastic lines get closer and closer together, but always remain parallel.

Some geometry kits have been reserved for readers by Science Service.

The four models, all dealing with triangles, may be easily assembled from the materials included. A leaflet suggests a wide variety of experiments to be performed with them, and gives full details for making large demonstration models.

To get one of the kits, send 50 cents to Science Service, 1719 N Street N. W., Washington 6, D. C. Just ask for Geometric Models Kit.

Science News Letter, May 7, 1949

#### PALEOBOTANY

## No Eden-Like Climate

► PICTURES of an earlier, Eden-like earth with a warm, balmy climate evenly distributed all over it and palm trees waving in the Arctic, were declared all wrong at the meeting of the National Academy of Sciences in Washington, by Prof. Ralph W. Chaney of the University of California.

Fifty or sixty million years ago, in the time geologists call early Tertiary, the climate of the whole earth was warmer than it is now, Prof. Chaney stated; but there was marked zonation just the same. Plant fossils collected in the Far North show that it had a temperate climate like that of the central and northern United States, while in what is now the Pacific Northwest conditions were subtropical.

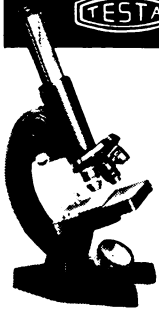
In between these two great vegetational regions there was an intermediate zone. In this there were trees and shrubs representative of the regions on either side, but the dominant tree was the "dawn redwood" or Metasequoia, living representatives of which have recently been found surviving in China. Interestingly enough, the present Chinese Metasequoias also occupy an intermediate position, with cool-temperate trees to the north and warm-climate forests to the south.

The land bridge between North and South America now known as the Isthmus of Panama has been carrying two-way traffic for the past 5,000,000 years, Dr. W. P. Woodring of the U. S. Geological Survey told the Academy. The traffic at first was unevenly divided, with more animal migrants going south than there were going north, he added.

Fossil records show that the very first users of the bridge in both directions were small animals; and Dr. Woodring suggested that these did not even wait for the bridge to be completed, but made their way from island to island, "using still-separated spans and completed piers as stepping stones."

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