No. 52

July 11

A Science Service Feature

? WHY THE WEATHER ?

Dr. Charles F. Brooks,
Secretary, American Meteorological Society,
tells of:

TIMING THUNDERSTORM'S ARRIVAL

When a thunderstorm is seen in the distance directly approaching, then the moment when the observer will feel the first gust of cool wind and the first big splashes of rain may be approximated quite closely. He must accept two averages, the one the height of the thundercloud base as one mile, the other the speed of travel as 25 miles an hour. These are close enough for ordinary purposes.

Hold a rule or pencil in the right hand, supported vertically between the thumb nail and the bend of the forefinger. Holding the pencil at full arm's length keeping head erect, get someone to measure with a yardstick the distance from the eye to the pencil, which, with most adults, is between 20 and 24 inches.

When the thunderstorm comes into view hold out the pencil, and shift it up and down until the distance from its upper end to the thumb nail covers the space between the base of the cloud and the horizon line, which, if the actual horizon is concealed, as it usually is in rolling or hilly country, may be taken as the level of the eye.

Accepting the height of the base of the thundercloud as one mile, its distance in miles is the ratio of the height-of-pencil distance to the eye-to-pencil distance. If, for example, the height-of-pencil distance is 3 inches and the eye-to-pencil distance 24 inches, the ratio is 3 to 24 or 1 to 8, and the distance of the approaching storm is 8 miles. If the height-of-pencil distance is 2 inches, the ration is 1 to 12, the distance of the storm being 12 miles.

Accepting the average speed of the approaching storm as 25 miles an hour, if it is 8 miles away it is due to arrive in 20 minutes; if 12 miles away, in about half an hour. Of course, these results are only roughly approximate. But in any case, the simple method will tell whether the storm is close at hand or a long way off.

(Tomorrow: Timing Distant Thunderstorms.)

Science Service,
1115 Conn. Ave., Washington, D.C.