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? WHY THE WEATHER ? Mailed July 28, 1933

WEATHER INSTRUMENTS

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Centuries ago philosophers observed the weather but had no accurate means of measuring it. Nowadays there are instruments for measuring almost every kind of atmospheric phenomenon, and many of these instruments are equipped with apparatus for making a continuous automatic record of the phenomena observed.

How many weather instruments are you acquainted with? Of course you are familiar with the ordinary thermometer, which measures the temperature of the air, but have you ever seen the maximum thermometer and the minimum thermometer? These instruments record, respectively, the highest and the lowest temperatures that occur between the times they are set. The thermograph traces a record of the temperature on a moving sheet of paper.

You know the aneroid barometer, and perhaps also the more accurate and less conveniently portable mercurial barometer. The barograph is a barometer that writes its own record. It shows you at a glance whether and how rapidly the atmospheric pressure is rising or falling, and what its ups and downs have been during the day. The microbarograph registers minute variations in pressure.

The scientific wind-vane is a much more trustworthy instrument than the vane on the church steeple. There are several kinds of anemometer for measuring the speed or force of the wind, including the very sensitive pressure-tube anemometer which registers every little gust and lull. There are hygrometers and hygrographs to show how much invisible water vapor is present in the air. There are many varieties of rain-gauge and snow-gauge, some of which make automatic records, and there are even dew-gauges -- though most meteorologists have never seen one. There are new devices for measuring sunshine, daylight, evaporation, atmospheric dust -- and a great many things besides.

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