equal *annual temperature, summer* and *winter temperature.** But this primitive condition, which, in its simplicity, would lend itself admirably to a mathematical theory, to an exact science of climatology, is largely modified by the unequal distribution of land and water over the surface of the terrestrial globe, by the capricious relief of the solid crust above and below the seas, and by the varying chemical constitution of the masses which compose that mineral crust. The interposition of the waters also effects a considerable variation in the atmospheric temperature. The water is much cooler at its surface than the earth, because the quantity of caloric necessary to raise a bed of water only one degree of temperature is much more considerable than that which suffices to raise to an equal amount a similar mass of earthy matter. In the water the heat evolved from the sun penetrates to a great depth, instead of being concentrated on

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* Let us explain what is meant by the *mean temperature* of a place. If we observe the thermometer regularly every day, at longer or shorter intervals, and then take the mean of those observations—that is, the sum of the figures observed divided by the number of observations—we shall obtain the mean daily temperature. If the thermometer, observed at London, for example, at six o'clock A.M., should give 55°; at nine A.M., 60°; at three P.M., 65°; and at midnight, 50°; the mean of the daily temperatures will be—

$$\frac{55° + 60° + 65° + 50°}{4} = 57°\ 75$$

If, at the end of several years of observation, we add together the means of temperature of a given day, say May 5th, we shall obtain the mean general temperature for that day of the year. In the same manner we can ascertain the mean temperature of every month; and, finally, by summing up the temperatures of the twelve months, and taking their mean, we shall gain the *mean temperature* of the place of observation.

Take, for example, the station of Paris. After observations extending over a period of fifty years, and by taking the monthly measurements of the maximum, minimum, and mean temperatures, we procure the results shown in the following table :—

MONTHS.	MAXIMUM.	MINIMUM.	MEAN.
January,	+ 5°0	— 0°9	+ 2°1
February,	7°3	+ 0°7	4°0
March,	10°0	3°1	6°6
April,	13°1	6°5	9°8
May,	18°4	10°7	14°5
June,	21°1	13°6	17°3
July,	22°7	15°4	19°0
August,	22°4	14°6	18°5
September,	18°0	12°1	15°5
October,	14°6	7°3	11°0
November,	9°7	3°9	6°8
December,	6°0	0°3	3°6
Annual Mean,	14°2	7°3	10°7

These figures refer to the Centigrade thermometer. + signifies above, and — below freezing-point.