

Temperature and Thermometers Notes

Temperature is the measure of the average energy of the particles in a substance.

In a warm drink...

- some of the particles have a lot of *energy* and are moving *fast*
- some of the particles have very little energy and are moving *slowly*
- most of the particles are somewhere in between

The actual temperature will be an average of all of that energy in the substance.

A Thermometer is a device used to measure temperature.

The temperature scale used in Canada to measure temperature is the Celsius Scale. It is named after Anders Celsius, the Swedish scientist who invented it.

He used the *freezing* point and *boiling* point of *water* at sea level for his measurements of zero

and 100. He then divided the area between these two points equally. He calibrated, or set, his thermometer this way so that he, and others, could accurately and repeatably measure temperature.

The temperature scale used in the United States is the Fahrenheit scale (symbol °F) which is calibrated differently. The Fahrenheit scale based on one proposed in 1724 by the German physicist Daniel Gabriel Fahrenheit (1686–1736), after whom the scale is named. He chose 0°F based on the coldest day in his home town.

The Kelvin scale (symbol K) is a temperature scale that use absolute zero as its lowest measuring point, the temperature at which all motion stops.

The Kelvin scale is named after the Belfast-born, Glasgow University engineer and physicist William Thomson, 1st Baron Kelvin (1824–1907).