

How hot is hot? How scientists came up with a cool way to measure temperature

If you jump into a swimming pool on a hot summer's day, the water will feel cold. But on a cold day, the same water will feel quite warm! The human body is very good at picking up on quick changes in temperature through nerves in the skin, but when the temperature stays the same, everybody feels differently. Some children might shiver going to school without a jacket in springtime, while their friends would feel too hot wearing one; what's warm to one person might be cold to another. Therefore, to find the true temperature, people had to develop a way of measuring it.

The earliest instruments used for measuring temperature—called thermometers—were invented by the ancient Romans and looked at the way water reacted to heat. But it wasn't until 1714 that a more reliable way was invented by the German physicist Daniel Gabriel Fahrenheit.

Fahrenheit replaced water with quicksilver, a liquid metal that expands when it gets warm. His temperature scale refers to a mix of ice, water, and salt for 0 Fahrenheit, the melting point of water at 32 Fahrenheit, and the temperature of the human body at 96 Fahrenheit.



Most nations, however, have adopted a different system: Celsius (degree Celsius or °C), named after the Swedish scientist Anders Celsius. In 1742, Celsius invented a scale that started with 100 degrees for the freezing point of water and went down to 0 degree for the boiling point of water. These two points were flipped later on to how we use them today. Because Celsius is much easier to use than Fahrenheit, it became the more popular system.

The rule of thumb to convert from Fahrenheit to Celsius: Take the number in Fahrenheit, subtract 30, divide the result by 2, and you will get Celsius.

Later, the Fahrenheit scale was changed to set the freezing point of water at 32 Fahrenheit and the boiling point of water at 212 Fahrenheit—a difference of 180 degrees. In the United States and a handful of other countries, the Fahrenheit (degree Fahrenheit or °F) is still used to measure temperature.



Even though Fahrenheit was German, Germans use Celsius to measure temperature, like almost everybody else.

