

**Thermodynamics is a funny subject. The first time you go through it, you don't understand it at all. The second time you go through it, you think you understand it, except for one or two small points. The third time you go through it, you know you don't understand it, but by that time you are so used to it, it doesn't bother you any more.**

**Arnold Sommerfeld**



**Arizona State University**  
**SES 194**

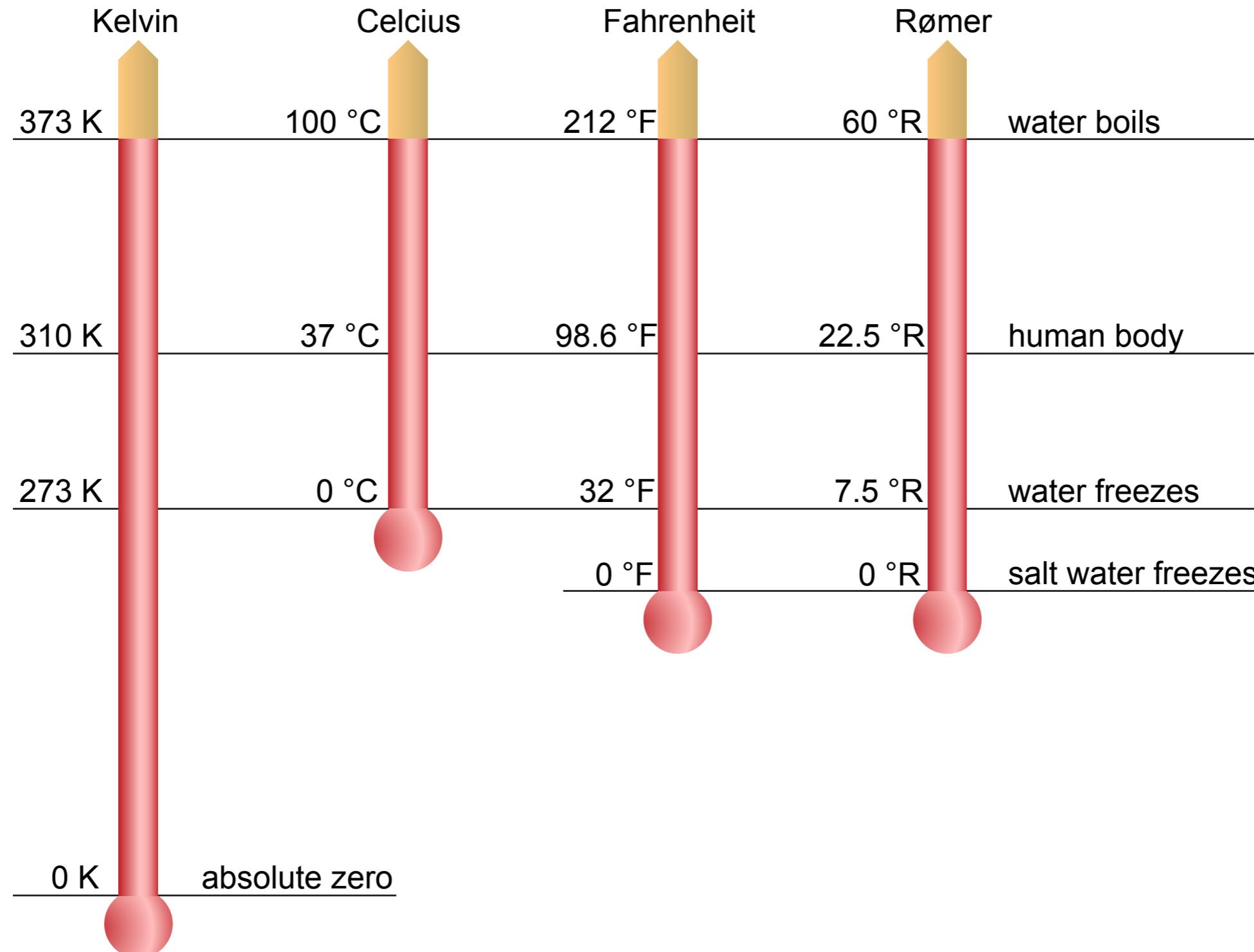
# **Energy in Everyday Life**

**Temperature Scales:**  
**Andres' and William's**

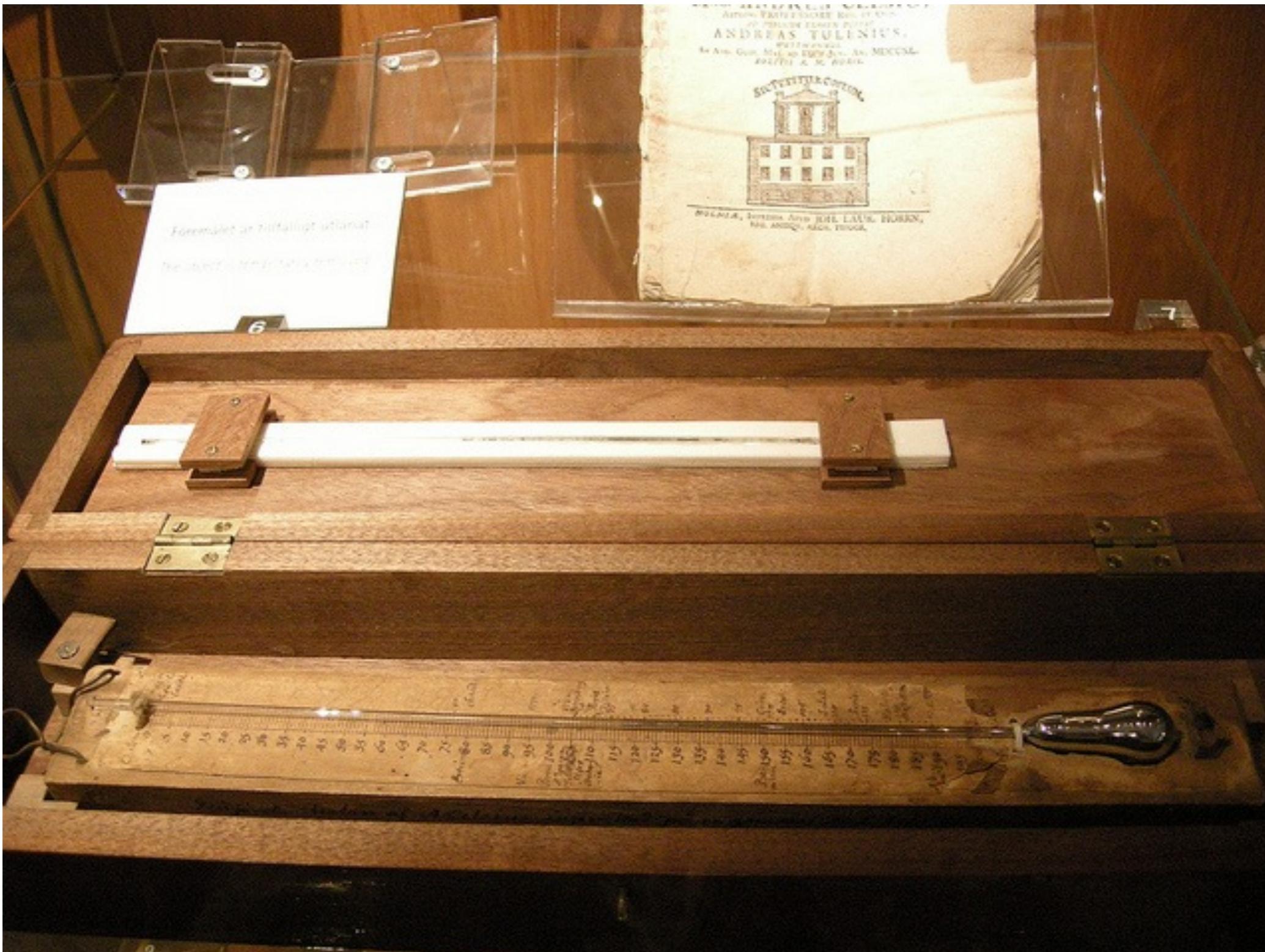
**Frank Timmes**

**[ftimmes@asu.edu](mailto:ftimmes@asu.edu)**

**Swedish astronomer Anders Celsius came up with another scale in 1742, setting the freezing and boiling points of water at 0 °C and 100 °C, with 100 divisions in between.**



Curiously, Celsius had insisted on setting the freezing point of water at 100 °C and the boiling point at 0 °C. This was later reversed after his death.

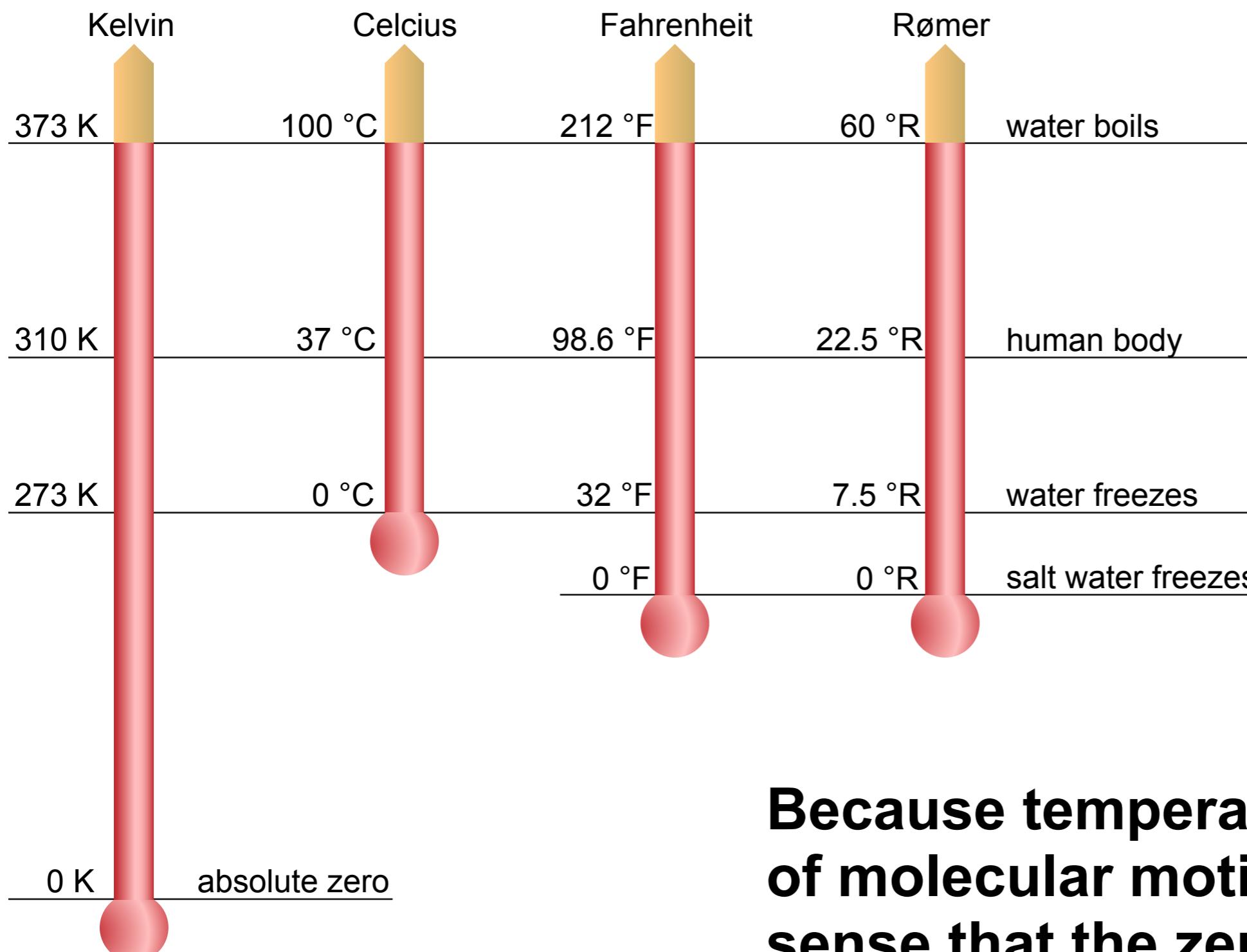


**Most countries that have adopted the metric system use this temperature scale, as it is conveniently broken down into units of 10.**



**Anders Celcius**

**The scientific scale in use today is the absolute temperature scale devised by William Thomson (Lord Kelvin) in 1848.**



**Because temperature is a measure of molecular motion, it makes sense that the zero point be where molecular motion stops.**

**The size of the Kelvin degree is the same the Celsius degree, but ...**



...the Kelvin scale is cumbersome for everyday use since the freezing point of water is 273.15 K and the boiling point is 373.15 K, but in science and engineering it reigns supreme.

