

# Temperature vs Heat

**Place your hand on  
your notebook**



**Now place your hand on  
the leg of your chair.**

**Which one is warmer?**

**Temperature** The average kinetic energy of the molecules of a substance.

Units: Celsius, Fahrenheit, Kelvin

$$T_C = \frac{5}{9} (T_f - 32) \quad T_f = \frac{9}{5} T_C + 32$$

$$T_K = T_C + 273 \quad \Delta T_C = \Delta T_K$$

**Heat** The energy that transfers from one object to another due to a temperature difference between them.

Units: Joules