

## 23.2: Introduction

---

The specific heat capacity of a material is the amount of heat required to change the temperature of the material. The higher the heat capacity, the more energy the material must gain or lose to have a change in the temperature of that material. A material that has a relatively high specific heat capacity will tend to resist temperature change. Objects and materials that are placed into contact will reach thermal equilibrium after a time. The heat lost by one material is gained by the other material, as long as the system is isolated, until both materials are at the same temperature. While the heat energy exchanged may be equal, the temperature changes may be very different if the two materials have very different values of specific heat capacity.

### Heat Energy Equation:

$$Q = cm\Delta T$$

### Transfer of Energy:

$$Q_{lost} = Q_{gained}$$

### Contributors and Attributions

- Template:ContribCCPhySc101L

---

23.2: Introduction is shared under a [CC BY](#) license and was authored, remixed, and/or curated by LibreTexts.