

## Key Terms

**absolute zero** lowest possible temperature; the temperature at which all molecular motion ceases

**Celsius scale** temperature scale in which the freezing point of water is 0 °C and the boiling point of water is 100 °C at 1 atm of pressure

**condensation** phase change from gas to liquid

**conduction** heat transfer through stationary matter by physical contact

**convection** heat transfer by the movement of fluid

**degree Celsius** unit on the Celsius temperature scale

**degree Fahrenheit** unit on the Fahrenheit temperature scale

**Fahrenheit scale** temperature scale in which the freezing point of water is 32 °F and the boiling point of water is 212 °F

**freezing** phase change from liquid to solid

**heat** transfer of thermal (or internal) energy due to a temperature difference

**heat capacity** amount of heat necessary to change the temperature of a substance by 1.00 °C

**Kelvin** unit on the Kelvin temperature scale; note that it is never referred to in terms of “degrees” Kelvin

**Kelvin scale** temperature scale in which 0 K is the lowest possible temperature, representing absolute zero

**latent heat** heat related to the phase change of a substance rather than a change of temperature

**latent heat of fusion** amount of heat needed to cause a phase change between solid and liquid

**latent heat of vaporization** amount of heat needed to cause a phase change between liquid and gas

**melting** phase change from solid to liquid

**phase change** transition between solid, liquid, or gas states of a substance

**plasma** ionized gas that is a combination of the negatively charged free electrons and positively charged ions

**radiation** energy transferred by electromagnetic waves

**specific heat** amount of heat necessary to change the temperature of 1.00 kg of a substance by 1.00 °C

**sublimation** phase change from solid to gas

**temperature** quantity measured by a thermometer

**thermal energy** average random kinetic energy of a molecule or an atom

**vaporization** phase change from liquid to gas