**Vocabulary: Boyle’s Law and Charles’s Law**

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**Vocabulary**

* Absolute zero – the coldest possible temperature.
  + Absolute zero is equivalent to -273.15 °C, or -459.67 °F.
  + At absolute zero, the molecules in a substance do not move.
* Boyle’s law – at a constant temperature, the volume of a fixed amount of gas varies inversely with pressure on the gas.
  + As pressure increases, the volume of the gas decreases.
  + As pressure decreases, the volume of the gas increases.
* Charles’s law – with pressure on the gas held constant, the volume of a gas varies directly with temperature.
  + As temperature increases, the volume of the gas increases.
  + As temperature decreases, the volume of the gas decreases.
* Gay-Lussac’s law – at a constant volume, the pressure of a fixed amount of gas varies directly with temperature.
  + As temperature increases, the pressure of the gas increases.
  + As temperature decreases, the pressure of the gas decreases.
* Kelvin scale – a temperature scale that begins at absolute zero.
  + On the Kelvin scale, water freezes at 273.15 K, and water boils at 373.15 K.
* Pressure – force applied to a surface.
  + Pressure is calculated by dividing the force by the area of the surface.
  + The SI unit of pressure is the *pascal* (Pa), or newton per square meter.
  + Normal atmospheric pressure (air pressure) is 101,325 pascals at sea level.