Gas Laws

Boyle’s Law: the volume of a gas is inversely proportional to the pressure applied to it as long as the temperature remains constant.

**As the pressure of a gas goes up the volume goes down.**

**Example: Pushing in on a balloon.**

**Equation:**

**P1 x V1 = P2 x V2**

**P1 = initial pressure, V1 = initial volume, P2 = final pressure, V2 = final volume.**

Charles’ Law: the volume of a gas is directly proportional to the temperature as long as the pressure remains constant.

**As the temperature of a gas goes up the volume will as well.**

**Example: Taking a balloon with helium in it outside when it is cold.**

**Equation:**

**T1 x V2 = T2 x V1**

**T1 = initial temperature, V2 = final volume, T2 = final temperature, V1 = initial volume.**