

Behavior of Gases

Chapter 3.2

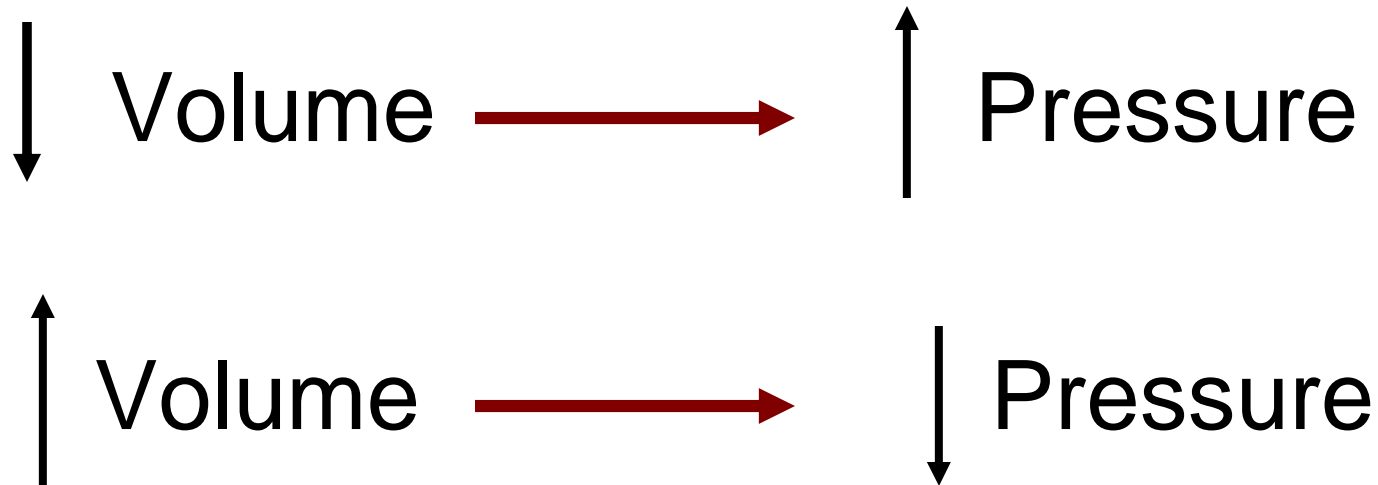
3 Factors Affect Gas Behavior

- 1. Temperature:** A measure of how fast the particles in an object are moving.
(Units: °C, °F)
- 2. Volume:** the amount of space an object takes up. (Units: cm³, mL, gallons)
- 3. Pressure:** The amount of force applied to a given amount of surface area.
(Units: lbs/in², N/m²)

Gas Behavior Laws

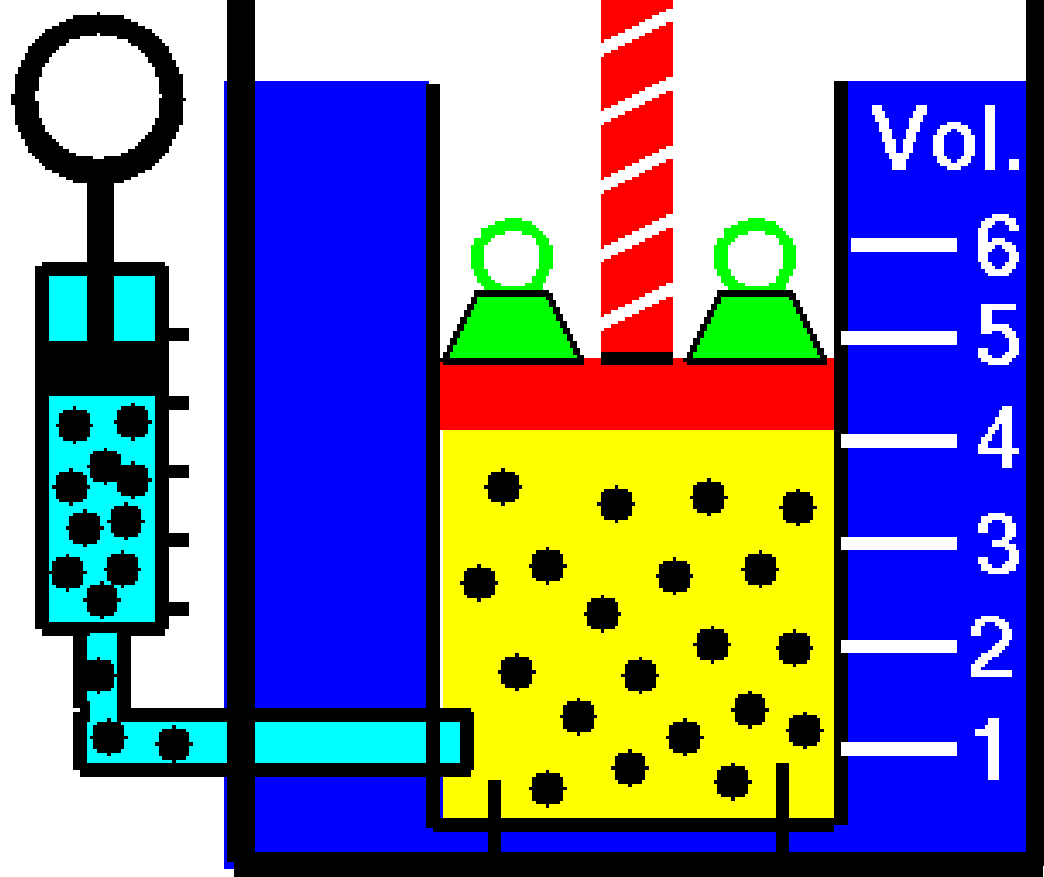
Boyle's Law:

Temperature is constant

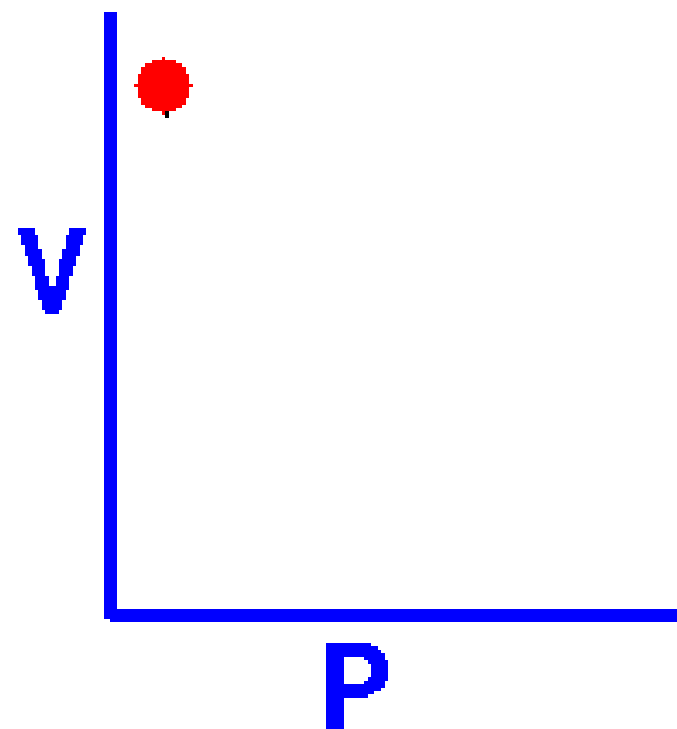


Inversely Proportional

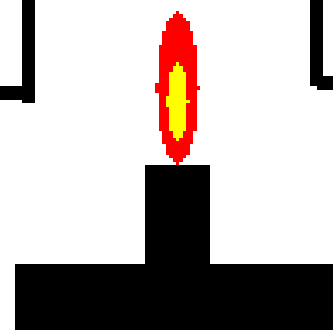
Mass



Frozen: Mass & Temp.



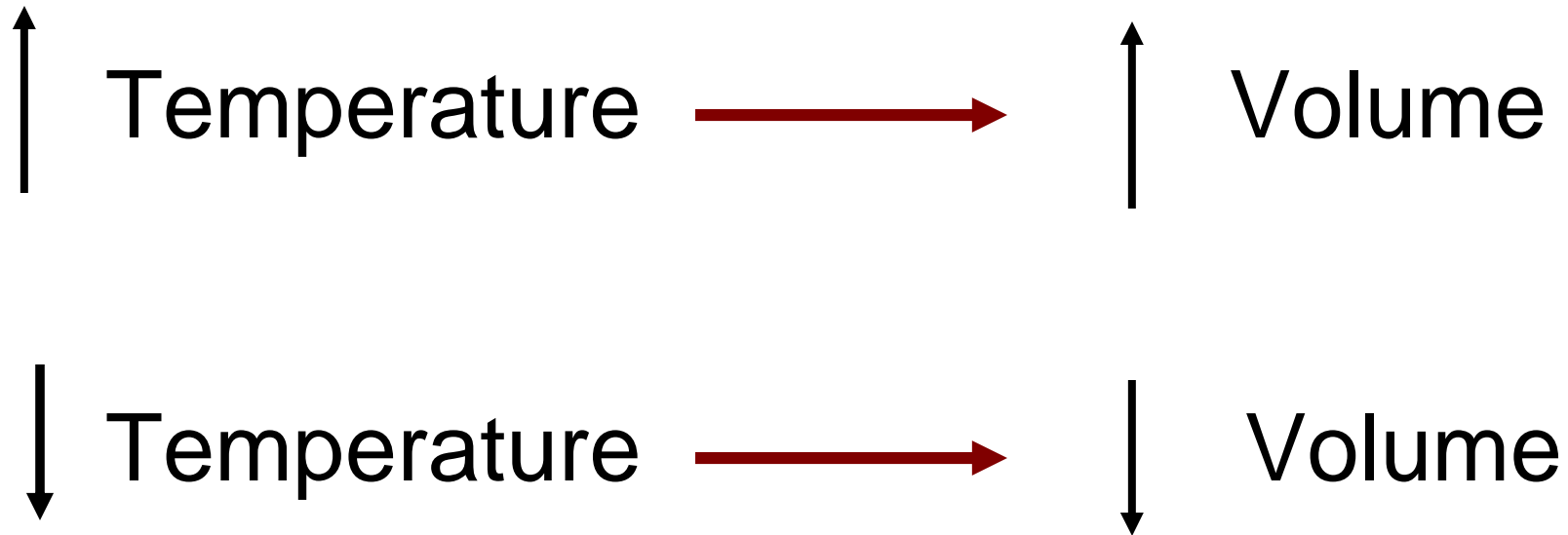
Press.



Temp.

Charles's Law:

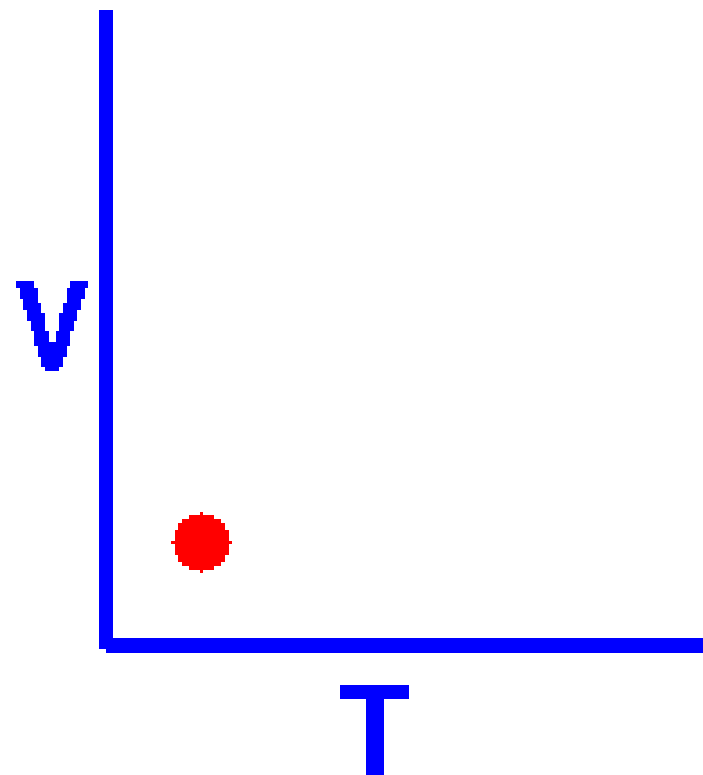
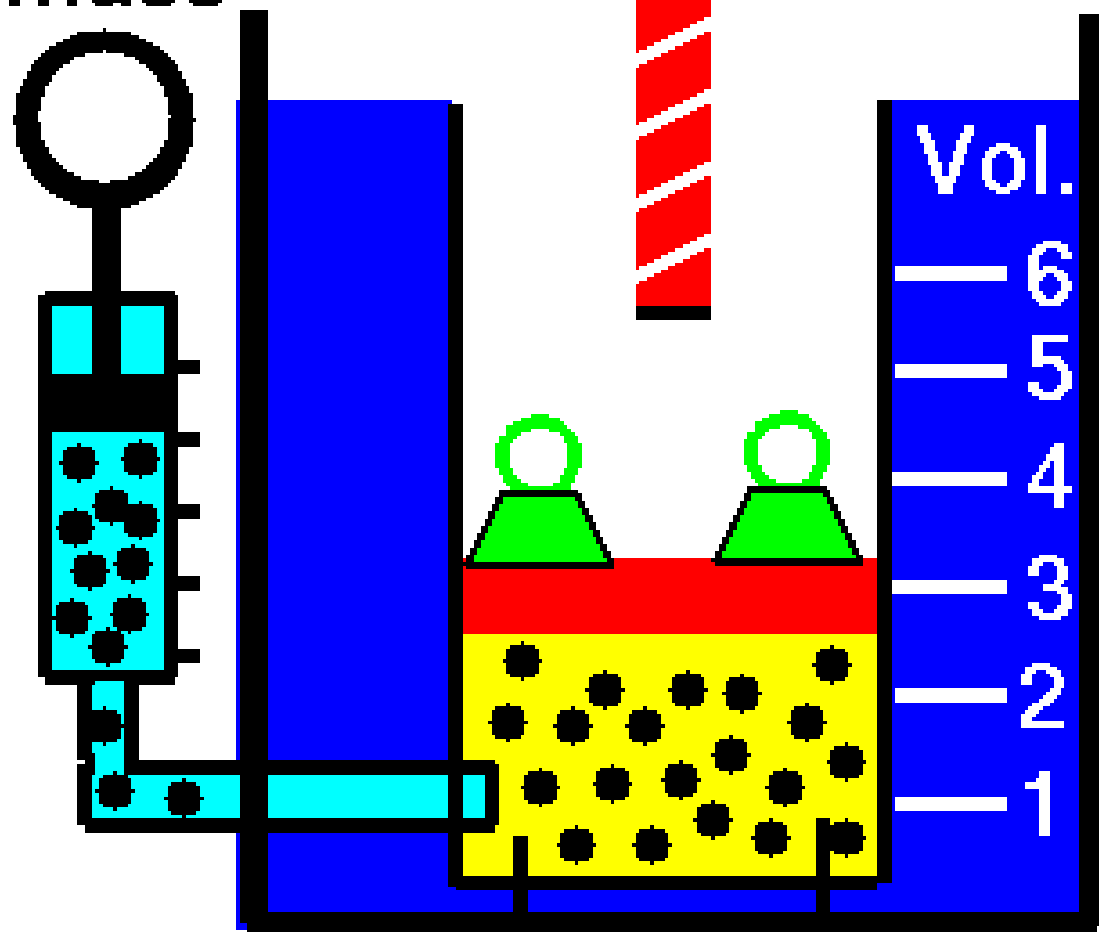
Pressure is constant



Directly Proportional

Mass

Frozen: Mass & Press.



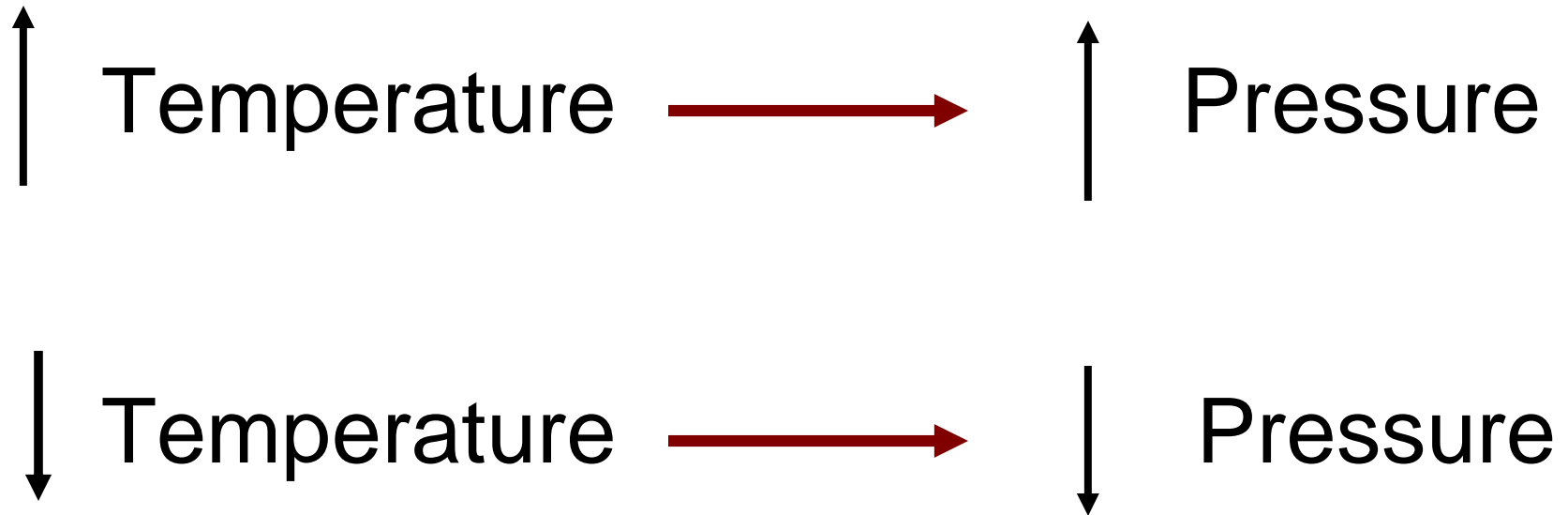
Press.



Temp.

Adams' Law:

Volume is constant



Directly Proportional

Self-check

1. Use each of the following terms in the same sentence: temperature, pressure, volume.
2. Boyle's Law describes the relationship between Volume and Pressure.
3. What will happen to a balloon if you take it outside on a cold day?