

Definitions and Concepts for CAIE Physics A-level

Topic 15: Ideal Gases

Avogadro Constant: The number of particles that make up one mole of any gas.

Boltzmann Constant: A constant relating the average kinetic energy of the particles in a gas, to the gas' temperature.

Boyle's Law: As volume decreases the pressure on a gas at a constant temperature increases.

Charles' Law: As temperature increases the volume of a gas at constant pressure increases.

Ideal Gas: A hypothetical gas that has molecules with no interactions and occupies negligible space so it obeys the ideal gas law.

Ideal Gas Law: A combination of Boyle's, Charles' and the Pressure Law that describes the relationship between pressure, volume and temperature of an ideal gas.

Pressure Law: As temperature increases the pressure of a gas of constant volume increases.

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