$\qquad$

## Gas Laws



## Across

2. the ability or tendency to float in water or air or some other fluid
3. the process in which molecules move from a higher concentration to a lower concentration
4. a gas whose pressure $P$, volume $V$, and temperature T are related by the ideal gas law PV = nRT,
5. an instument used to messure atmospheric pressure
6. something is compressed and particles move around bouncing off the sides of the container (trying to escape and expand)
7. variable definition - the space not filled by an atom
8. the quantity of three-dimensional space occupied by a liquid, solid, or gas
9. to be able to be compressed into a solid mass or smaller space
10. an experimental gas law which describes how the pressure of a gas tends to decrease as the volume of a gas increases
11. the hypothetical pressure of that gas if it alone occupied the volume of the mixture at the same temperature
12. related by inverse variation
13. the SI derived unit of pressure used to quantify internal pressure, stress, Young's modulus and ultimate tensile strength

## Down

1. the lowest temperature that is theoretically possible, at which the motion of particles that constitutes heat would be minimal
2. a law stating that the volume of an ideal gas at constant pressure is directly proportional to the absolute temperature 6. a volume that encloses little or no matter
3. a combination of gases that surround a planet, room, etc
4. the volume occupied by one mole of a substance at a given temperature and pressure. It is equal to the molar mass (M) divided by the mass density
5. used to explain the behavior of gases and is based upon the following postulates: Gases are composed of a many particles that behave like hard spherical objects in a state of constant, random motion
6. indicates the direction in which energy flows when two objects are in thermal contact
