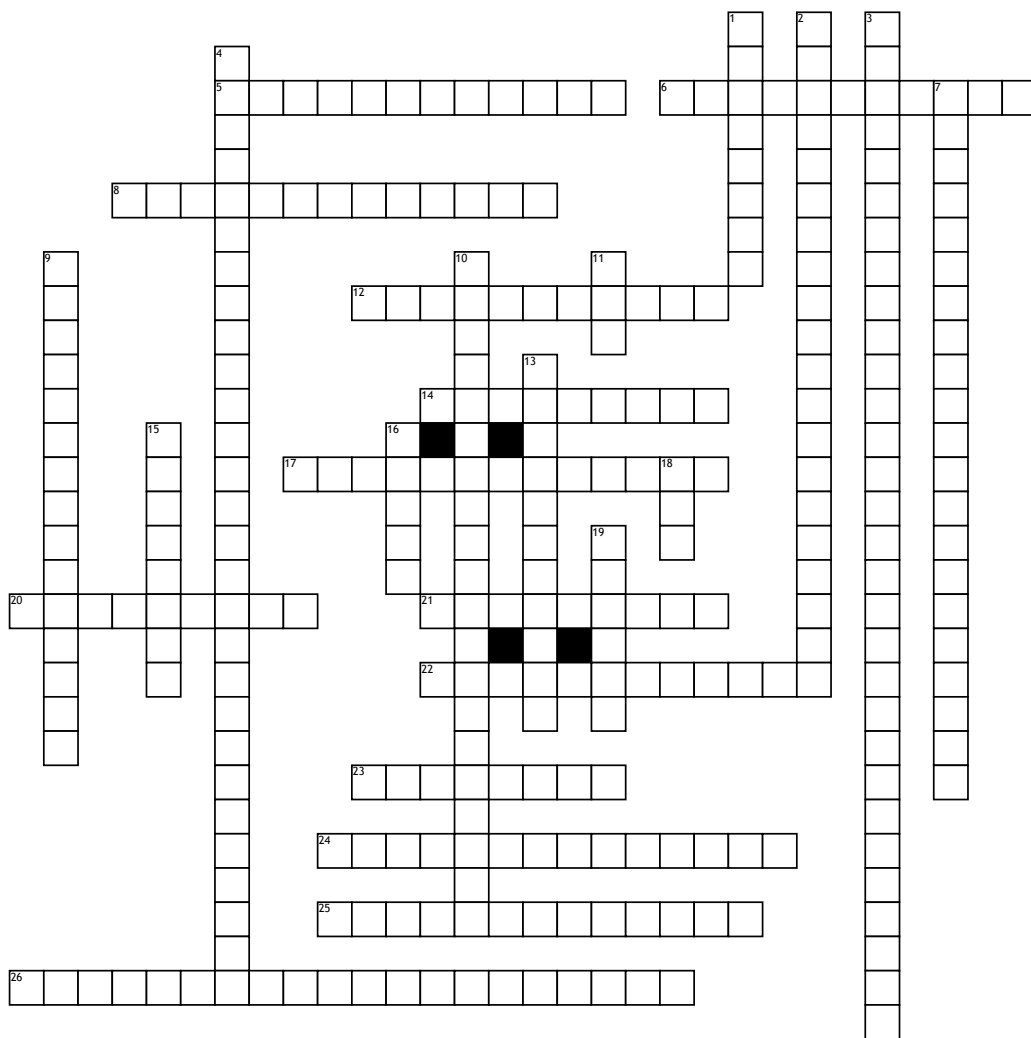


Chapter 11 Summary



Across

- 5. law of gas behavior stating that the volume of gas, maintained at a constant temp and pressure, is directly proportional to the number of moles of the gas (6.022×10^{23})
- 6. gas law that relates pressure, volume, and temp and amount for an ideal gas ($PV=nRT$)
- 8. pressure exerted by a vapor in equilibrium with its solid or liquid state at a specified temp
- 12. gas law stating that when the pressure on a sample of dry gas is held constant, the K temp and the volume are directly proportional ($V/T=k$)
- 14. an apparatus that measures atmospheric pressure by allowing it to support a column of liquid
- 17. gas law stating that the pressure of a confined gas is directly proportional to temp in K, provided that its volume is held constant ($P/T=k$)
- 20. spontaneous, uniform spreading and mixing of particles caused by particle motion
- 21. gas law stating that the volume of a fixed quantity of a confined gas is inversely proportional to its pressure when its temperature is held constant. ($PV=k$)

- 22. measure of how easily a fluid can move through the spaces between particles in a substance
- 23. when gas moves through tiny opening
- 24. $P_1V_1/T_1=P_2V_2/T_2$
- 25. limitless ability of a gas to expand in an environment of lower pressure
- 26. ($R=PV/nT$) constant that relates the units of pressure, volumes, temp, and quantity.

Down

- 1. hypothetical gas whose behavior follows the kinetic-molecular theory exactly
- 2. unit of pressure derived from normal atmospheric pressure at sea level that can support a 760 mm high column of Hg
- 3. value used when measuring gases. (273 K, 1 atm, or 760 torr)
- 4. $P=P_1+P_2+P_3...+P_N$
- 7. law stating that a chemical system may reach a point at which the ratio of the concentration of the products to that of the reactants is constant at a fixed temp
- 9. ability of a substance (usually a gas) to decrease its volume under pressure

- 10. gas law that states that the rate of effusion is inversely proportional to the square root of its molar mass
- 11. unit of pressure that equals to 6.895×10^3
- 13. volume that a mole of gas occupies if it is at standard temp and pressure
- 15. force exerted per unit of area. (units= pascal, torr...)
- 16. substance that can flow to take the shape of its container; a liquid or a gas
- 18. unit of pressure equal to the normal atmospheric pressure at sea level
- 19. the SI unit of pressure, defined as a force of one newton exerted on an area of one square meter

Word Bank

- | | | | |
|--------------------------|--------------------------|-----------------------------------|------------------------|
| molar volume | combined gas law | permeability | ideal gas |
| law of combining volumes | ideal gas law | standard temperature and pressure | millimeters of mercury |
| Gay-Lussac's law | expansibility | pascal | fluid |
| Charles's Law | Graham's law of effusion | Dalton's law of partial pressures | compressibility |
| vapor pressure | barometer | psi | Avogadro's law |
| atm | universal gas constant | Boyle's Law | pressure |
| effusion | diffusion | | |