



Click on various items around the classroom and explore. Hint: 8



They make up everything.

They make up everything.

Rocket Strong!



STAAR CHEMISTRY REFERENCE MATERIALS		
ATOMIC STRUCTURE		
Speed of light = (frequency)(wavelength)		$c = \lambda \nu$
Energy = (planck's constant)(frequency)		$E_{\text{photon}} = h\nu$
Energy = (planck's constant)(speed of light)(wavelength)		$E_{\text{photon}} = \frac{hc}{\lambda}$
MOLEFRACTION OF GASES		
Total volume of a gas = (total volume of the individual gases)		$V_{\text{total}} = V_1 + V_2 + V_3 + \dots$
(mole fraction)(volume) = (mole fraction)(molar volume)		$X_i V_{\text{total}} = X_i V_m$
(molar pressure)(total volume) = (total pressure)(total volume)		$P_i V_{\text{total}} = P_{\text{total}} V_m$
(partial volume)(total volume) = (total volume)(partial volume)		$V_i V_{\text{total}} = V_m V_i$
(partial pressure)(partial volume) = (total pressure)(partial volume)		$P_i V_i = P_{\text{total}} V_i$
IDEAL GASES		
(ideal volume) = (ideal volume) (ideal temperature)		$V_i = V_m \frac{T_i}{T_m}$
(ideal volume) = (ideal volume) (ideal pressure)		$V_i = V_m \frac{P_m}{P_i}$
(ideal volume) = (ideal volume) (ideal moles)		$V_i = V_m \frac{n_m}{n_i}$
IDEAL GASES		
Molarity = (moles of solute) / (volume of solution)		$M = \frac{n}{V}$
Concentration constant of molar = (hydrogen ion concentration) (hydroxide ion concentration)		$K_w = [H^+][OH^-]$
(volume × molarity of solute) = (volume of solution × molarity of solute)		$V_1 M_1 = V_2 M_2$
ACID-BASE		
pH = -log[H ⁺] (average ion concentration)		$pH = -\log[H^+]$
MOLEFRACTION OF GASES		
Total pressure of a gas = (total volume) (change in volume) (total pressure)		$P_{\text{total}} = \frac{V_{\text{total}}}{V_m} P_{\text{total}}$
Enthalpy of reaction = (enthalpy of products) - (enthalpy of reactants)		$\Delta H = \Delta H_{\text{products}} - \Delta H_{\text{reactants}}$

**Mrs.
Lanzas**



Periodic Table of Elements

The periodic table is organized into groups and periods. Elements are color-coded by their physical state at room temperature: Solids (pink), Liquids (orange), Gases (yellow), and Unknown (purple). The table is divided into Metals (left), Nonmetals (right), and Metalloids (center). The elements are arranged in order of increasing atomic number from left to right and top to bottom.

For elements with no stable isotopes, the mass number of the isotope with the longest half-life is in parentheses.

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**ONCE, I TOLD A
CHEMISTRY JOKE**



**THERE WAS NO
REACTION**

WE HAVE A GAS LAW LAB TO DO

I THINK I'M GOING TO BE UNDER PRESSURE