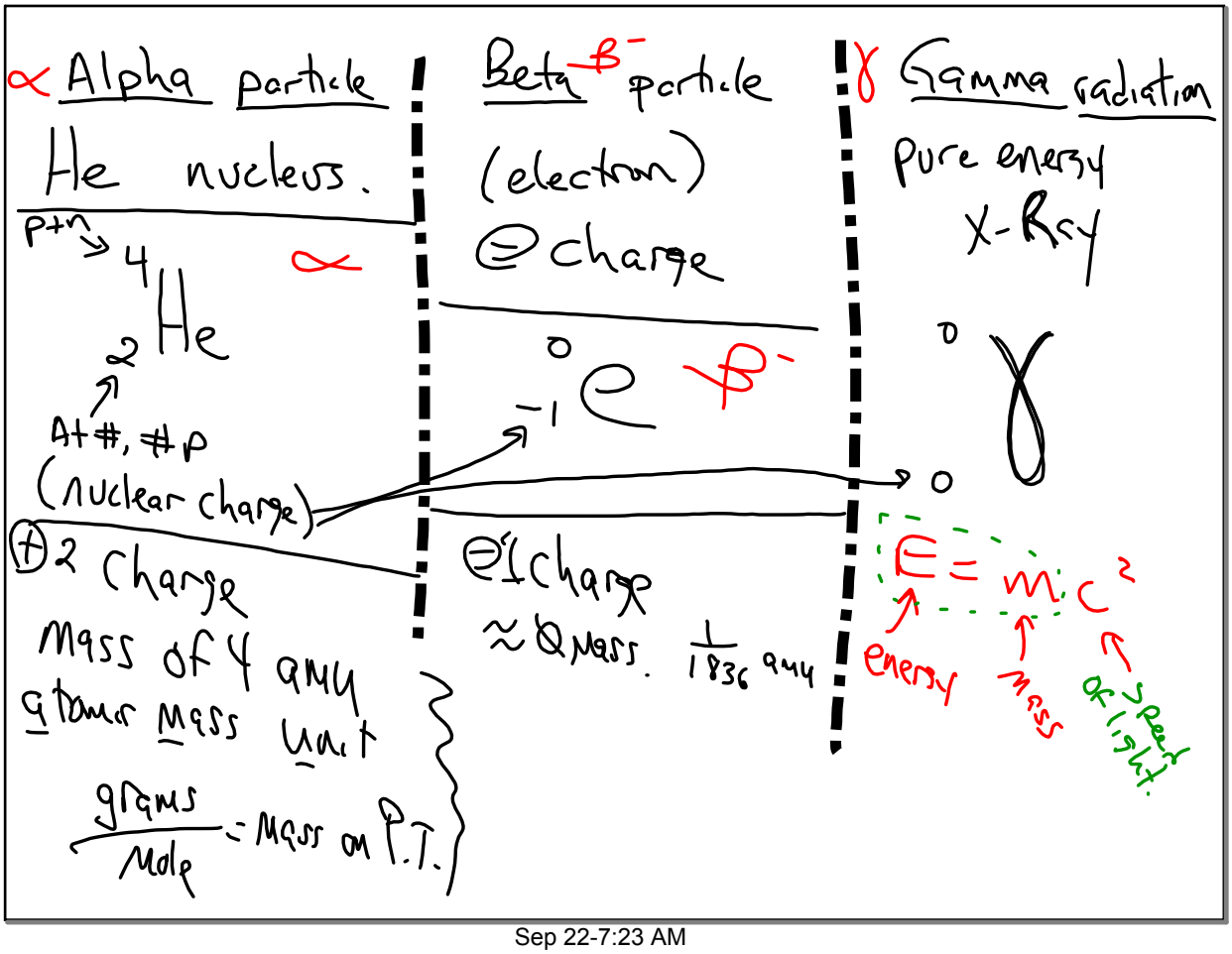


Sep 22-7:23 AM

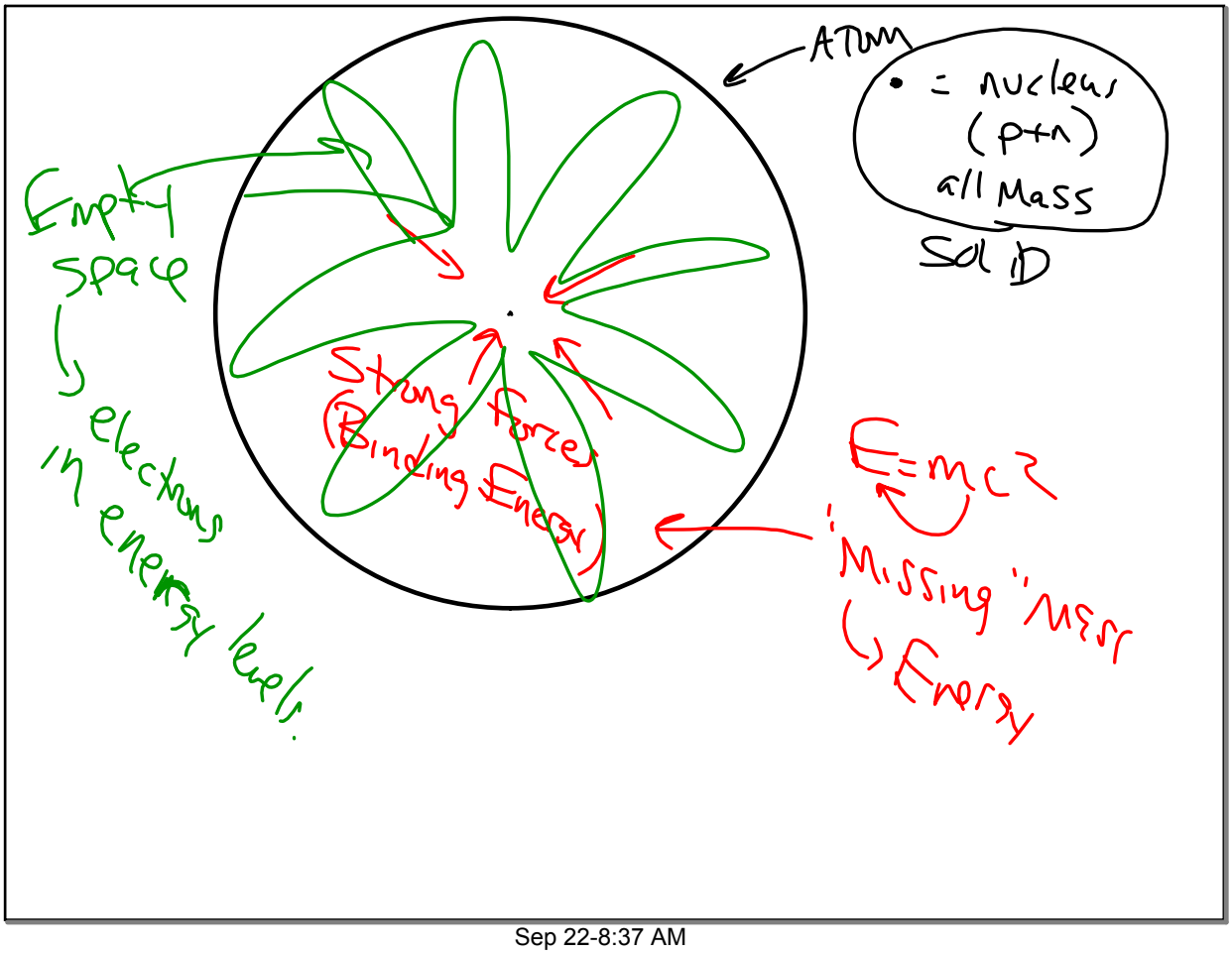
$E = mc^2$

Lose Mass → Energy

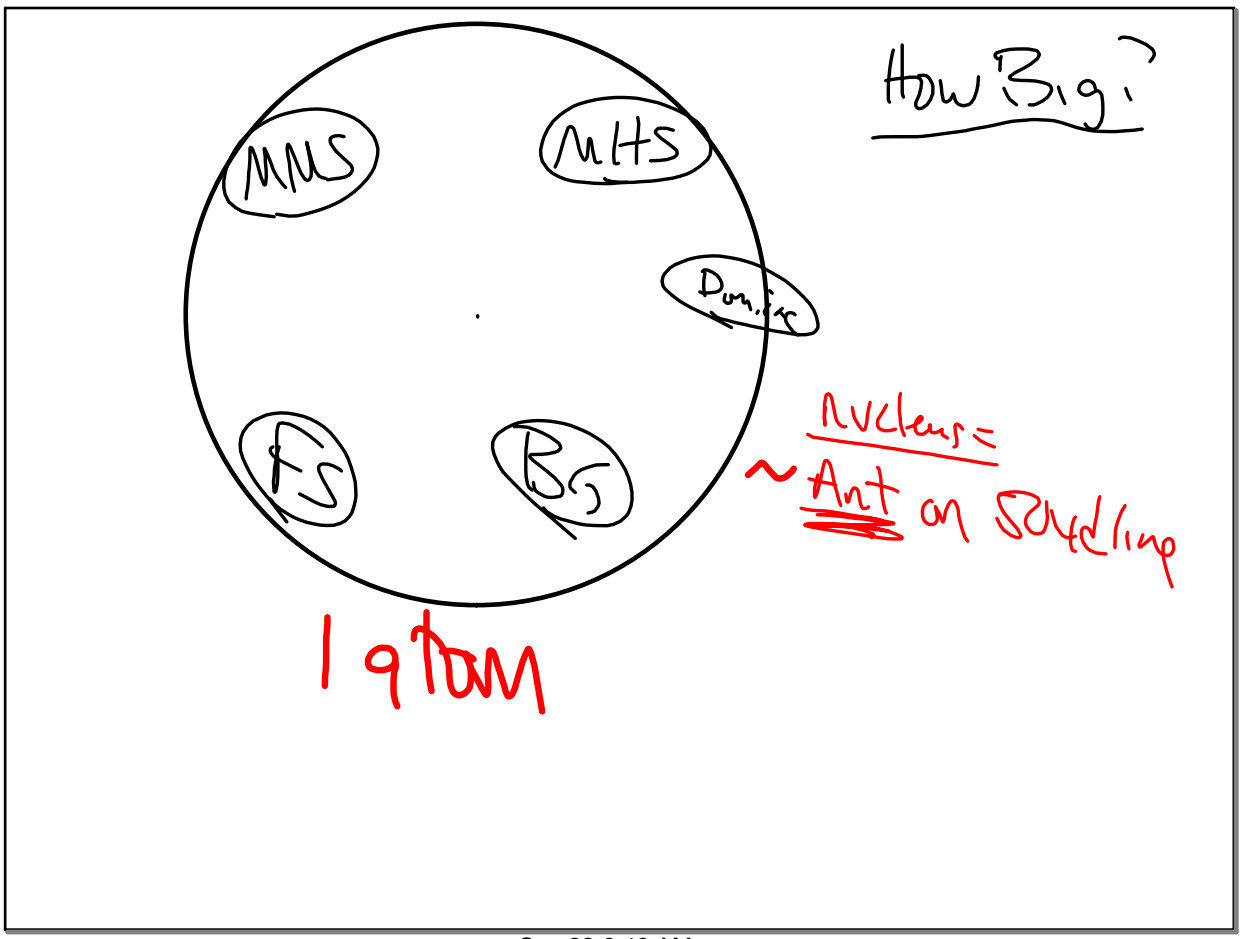
Binding Energy.

Holds the nucleus together.

Sep 22-8:36 AM



Sep 22-8:37 AM



Sep 22-8:46 AM

Δ Protons → new element

Δ electrons → lose e⁻ → ⊕ ion (LEO, OIC) → Cations — Metals (Na^+)

gain e⁻ (GER, RIG) → ⊖ ion → anions — non-metals (O^{-2})

Δ neutrons ⇒ Isotope

Sep 22-8:56 AM

$^{12}_{6}C$ = 12.011g on P.T.

6p ← 1.0073 amu

6n ← 1.0087 amu

= 12

?

↳ Weighted average of all the naturally occurring isotopes

Sep 22-8:58 AM

$^{12}_{6}C$ 99% + $^{13}_{6}C$ 0.2% + $^{14}_{6}C$ 0.8%

12.000 amu 13.000 amu 14.000 amu

Weighted avg = 12.011

(Regular Math = 13 ← $\frac{12+13+14}{3}$)

$0.99(12) + 0.002(13) + 0.008(14) = 12.018$

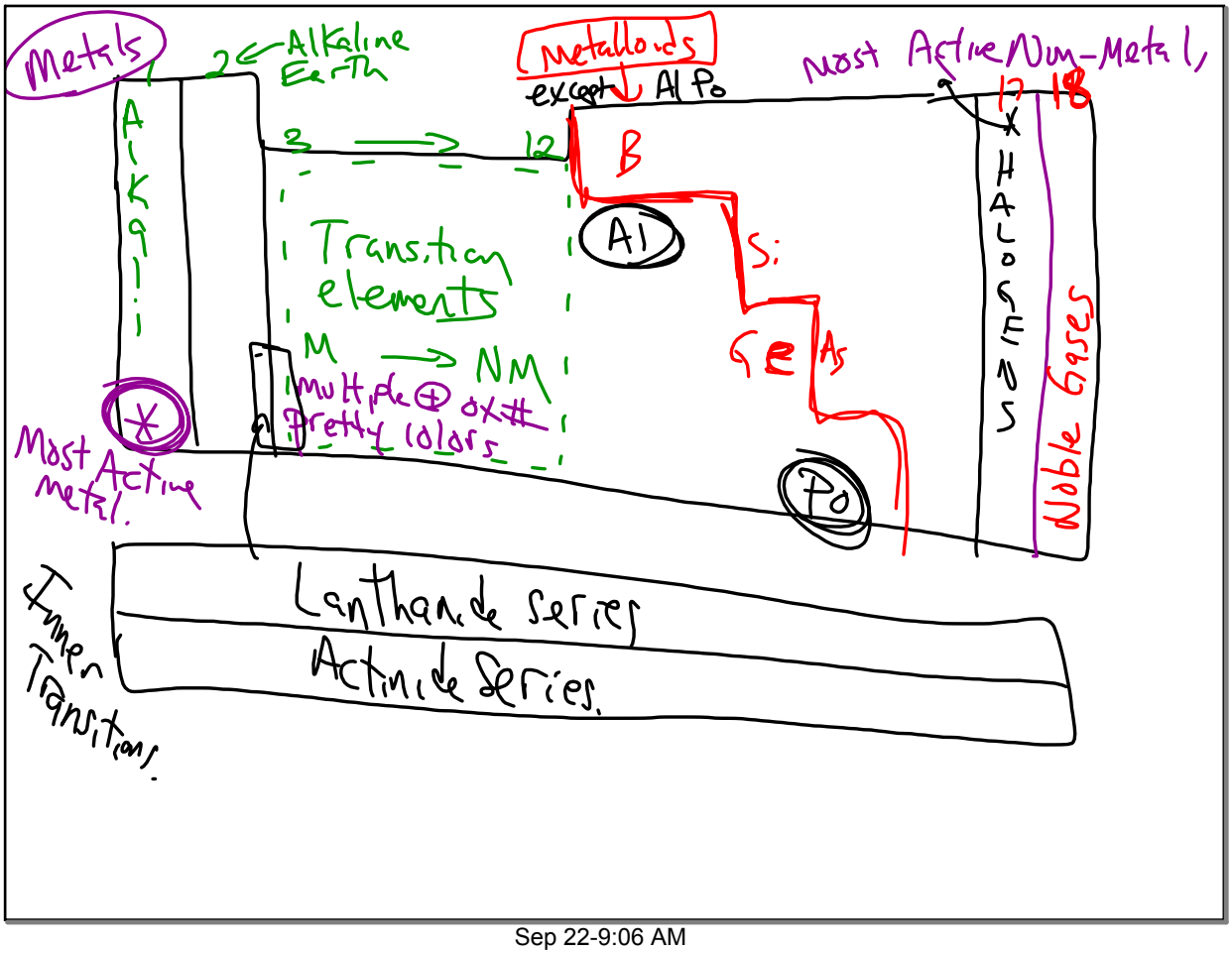
Sep 22-8:59 AM

Class	% abundance	Grade Av
Exams	65%	94%
labs	25%	90%
HW/Quiz	10%	85%
	100%	

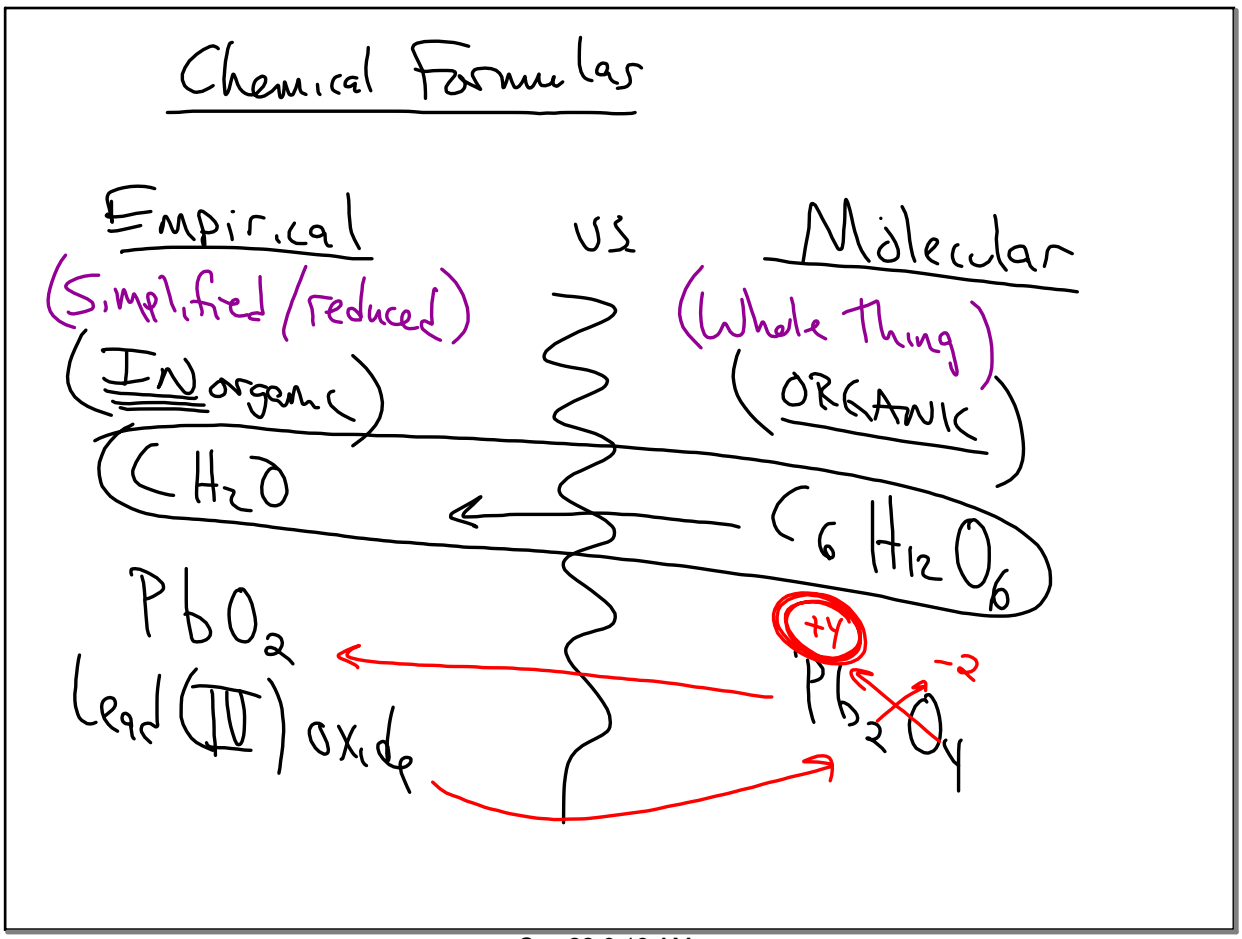
$0.65(94) + 0.25(90) + 0.10(85) = 92.1$

(exams, labs, HW/Q.)

Sep 22-9:01 AM



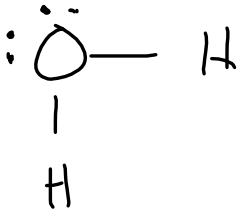
Sep 22-9:06 AM



Sep 22-9:18 AM

Structural formulas

H_2O



Bent.

Shows shape

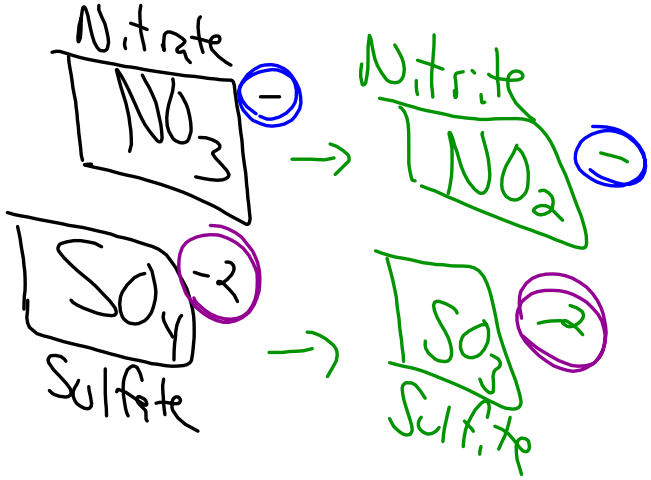
Sep 22-9:22 AM

Ions

Cations → ⊕

Anions → ⊖

Polyatomic ions → group that acts as a SINGLE UNIT



Sep 22-9:23 AM

Names of Polyatomic

ClO^- ← hypochlorite

ClO_2^- ← chlorite

ClO_3^- ← chlorate

ClO_4^- ← hy perchlorate

Sep 22-9:26 AM

HW

2/ 25, 31, 43

Sep 22-9:29 AM