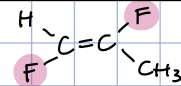
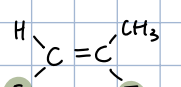
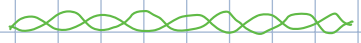

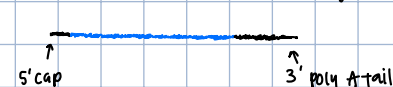


Erikson's	Freud	Piaget	Kohlberg
1. T+M, Trust vs Mistrust	Oral: mouth — 1	Sensorimotor	Preconventional: Avoid Punishment + seek Reward
2. A+S, Autonomy vs Shame	Anal: anus — 2	Pre-operational	Conventional: Conform + follow the rules
3. I+G, Initiative vs Guilt	Phallic: genitals — 3	Concrete Operational	Post-conventional: Do the right thing + Universal ethics
4. I+I, Industry vs Inferiority	Latent: peer interactions — 4	Formal Operational	"Avoid Sea Creatures From Rivers Upstate"
5. I+C, Identity vs role conflict	Genital: mature sexual interest — 5-8	"Some People Can Fly"	
6. I+I, Intimacy vs Isolation	"Old Age People Love Grandchildren"		Disaccharides
7. G+S, Generativity vs Stagnation			Sucrose: GLUCOSE + FRUCTOSE
8. I+D, Integrity vs Despair	Enzyme classification		Lactose: GLUCOSE + GALACTOSE
"Hope will purposely compete for love (she) can't win"	Oxidoreductase: redox rxns		"Super Glowing Frogs Leave Gardens Glowing"
	Transferase: transfer groups from one molecule to another		
	Hydrolase: catalyze hydrolysis; break using H ₂ O		Myopia and Hyperopia
	Isomerase: catalyze isomerization; one type of isomer → another type of isomer		Myopia: Nearsightedness, myopia, diverging lens
	Ligase: link two molecules together via condensation (H ₂ O produced)		Hyperopia: Farsightedness, hyperopia, converging lens
	Lyase: break + form bonds w/o H ₂ O or redox rxns		"Need Medical Doctors For Homeless Children"

5, 10, 15, 20 Rule - pKa
 ↓ pKa = ↓ pH
 • Carboxylic acids: pKa = 5
 • Phenols: pKa = 10
 • Alcohols: pKa = 15
 • Alpha hydrogens off carbon fuels: pKa = 20

E-Z Notation For Double Bonds
 • E is for **Enemy** (opposite sides)

 • Z is for **Zame Side** (same sides)


Introns and Exons
 DNA 
 ↓ transcription
 Pre-mRNA 
 ↓ Pre-mRNA processing
 mRNA 
 "Exons are Expressed"
 "Introns in Trash"

Strong Acids

So	H ₂ SO ₄
I	HI
Brought	HBr
NO	HNO ₃
Clean	HCl
Clothes	HClO ₄

"So I Brought No Clean Clothes"

Diatomic Elements	Trigonometry
Have H ₂ (g)	0°
NO N ₂ (g)	30°
Fear F ₂ (g)	45°
Of O ₂ (g)	60°
Ice I ₂ (s)	90°
Cold Cl ₂ (g)	
Beer Br ₂ (l)	

Sodium Potassium Pump
 • 2 K⁺ in (two characters)
 • 3 Na⁺ out (three characters)

Electromagnetic spectrum	lowest F / LONG λ
Raging Radiowaves	
Martians Microwaves	
Invaded Infrared	
Venus Visible	
using Ultraviolet	
X-ray X-ray	
Guns Gamma Ray	HIGHEST F / SHORT λ

Metric Prefixes

Terribly	Tera (T)	10 ¹²	1 · 10 ⁻¹² Tm
Gigantic	Giga (G)	10 ⁹	1 · 10 ⁻⁹ Gm
Monsters	Mega (M)	10 ⁶	1 · 10 ⁻⁶ Mm
Killed	Kilo (K)	10 ³	0.001 Km
1	—	10 ⁰ = 1	1 meter
Million	Milli (m)	10 ⁻³	1000 mm
Men	Micro (μ)	10 ⁻⁶	1 · 10 ⁶
Napping	Nano (n)	10 ⁻⁹	1 · 10 ⁹
Peacefully	Pico (p)	10 ⁻¹²	1 · 10 ¹²

Missense + Nonsense Mutations

• AUG - UGU - AUU - ACU
 M C A T

• AUG - UGA - AUU - ACU
 M STOP

"STOP the nonsense!"

• AUG - UGU - AUU - AAU
 M C A N

"Missense is misspelled"

Stages of Sleep + Waves

• Awake (eyes open): β

• Awake (eyes closed): α

• Non-REM (1): theta

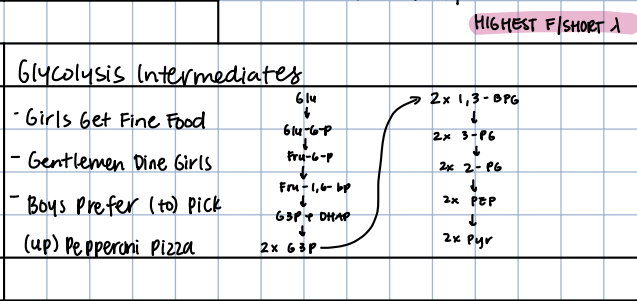
• Non-REM (2): theta, SS, K

• Non-REM (3): delta

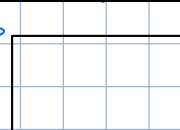
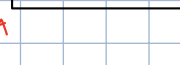
• REM: β "BATS DRINK BLOOD"

Standing Waves
 • Frequency of standing waves in pipes that are open/closed @ both ends
 $f_n = \frac{nv}{2L}$ "I envy your tool"

STOP Codons
 STOP Codons: UAA, UGA, UAG
 UAA: U ARE ANNOYING
 UGA: U GO AWAY
 UAG: U ARE GONE



Periodic Trends

B  E - Basicity
 - Electronegativity, e⁻ Affinity
 Ionization Energy
 A  R - Acidity (donate H⁺)
 - Radius

Pyrimidines + Purines
 Pyrimid: CUT (1) Pur: AG (2)
 Krebs Cycle Intermediates
 Citrate Is Krebs Special Substrate For Making OAA