Study guide for Chemistry unit final:

* Difference between physical and chemical changes and physical and chemical properties of matter
* Classification of matter (element, compound, types of heterogeneous mixtures, etc.)
* Scientists who contributed to atomic theory and what they did
* Atomic number, atomic mass
* Calculating neutrons, electrons and protons
* Families versus periods on the periodic table
* Difference between metals, non-metals, and metalloids
* Understanding the difference in characteristics of ionic versus molecular compounds
* Naming and formula writing for ionic compounds
	+ Ide ending on second element
	+ Balance charges using periodic table
* Naming and formula writing for molecular/covalent compounds
	+ Using latin prefixes for first and second element (just not mono- for first element)
		- Mono means one
		- Di means two
		- Tri means three
		- Tetra means four
		- Penta means five
		- Hexa means six
		- Hepta means seven
		- Octa means eight
* What are the reactants and products in a given chemical reaction that is shown using chemical formulas or words
* Conservation of mass in a chemical reaction
	+ The mass of all reactants added up is equal to the mass of all products added together🡪 no mass is created or destroyed in a chemical reaction
* Law of definite composition
* Matching the number atoms with their numbers and identity in a chemical formula and molecular picture
* Understanding the reactions of corrosion and combustion
	+ Know the reactants and projects
	+ Understand what would speed up and slow down each of the reactions
* What is a manipulated variable in an experiment
* What speeds up a reaction rate?
	+ Surface area of reactants (ie. Powder form more than solid mass)
	+ Concentration of a reactant or adding more reactants (this means there less water and more concentration of chemicals in the solution🡪 think about making a powdered energy drink- a higher concentration means more powder, so sweeter)
	+ Higher temperature
	+ Stirring/mechanical mixing and movement
	+ Catalysts- chemicals added into a reaction that only speed up the reaction, don’t participate in the reaction