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