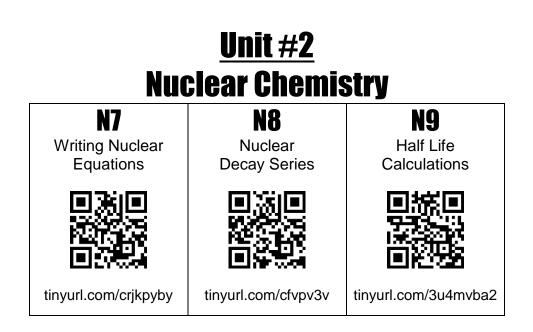
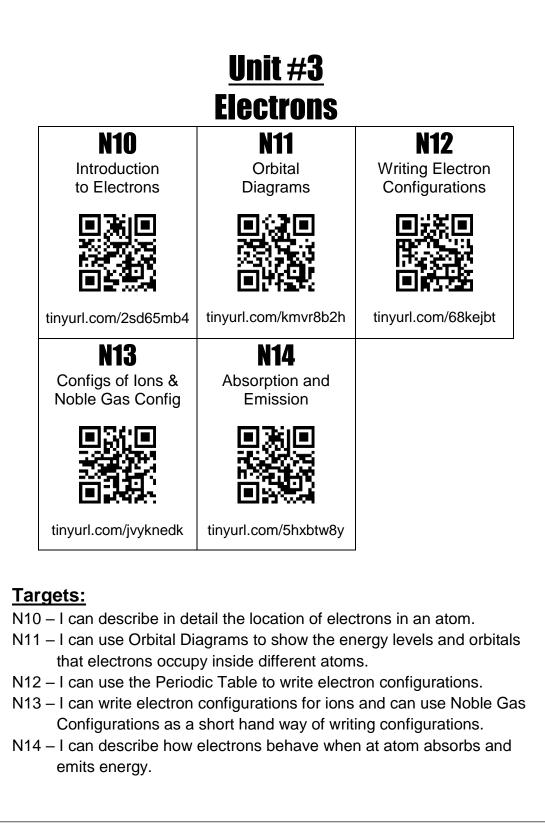


- N1 I can perform metric conversions and use scientific notation.
- N2 I can use Dimensional Analysis to show unit conversions.
- N3 I can use Significant Figures to ensure reliability in measurements.
- N4 I can describe types of matter and changes that matter goes through.
- N5 I can determine how many sub atomic particles different atoms have.
- N6 I can calculate the average mass of an element, accounting for all the different isotopes that exist.



- N7 I can balance nuclear equations to ensure the Laws of Conservation of Matter, Charge, and Energy are being followed.
- N8 I can track the series of steps that radioactive substances sometimes have to go through in order to reach stability
- N9 I can use half-life calculations to find values related to how fast a radioactive substance decays.



# <u>Unit #4</u> The Periodic Table

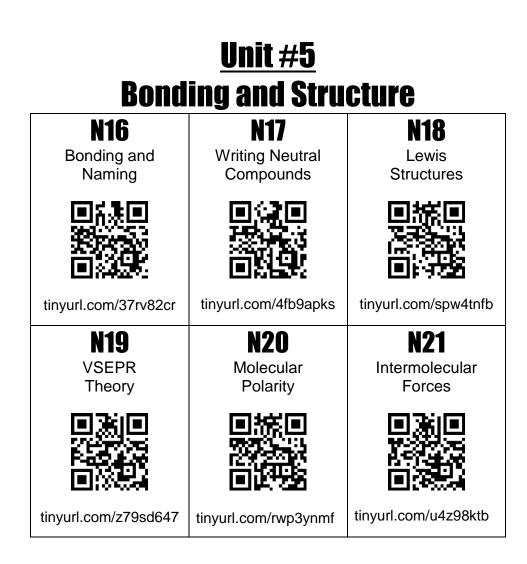


tinyurl.com/49842uaf

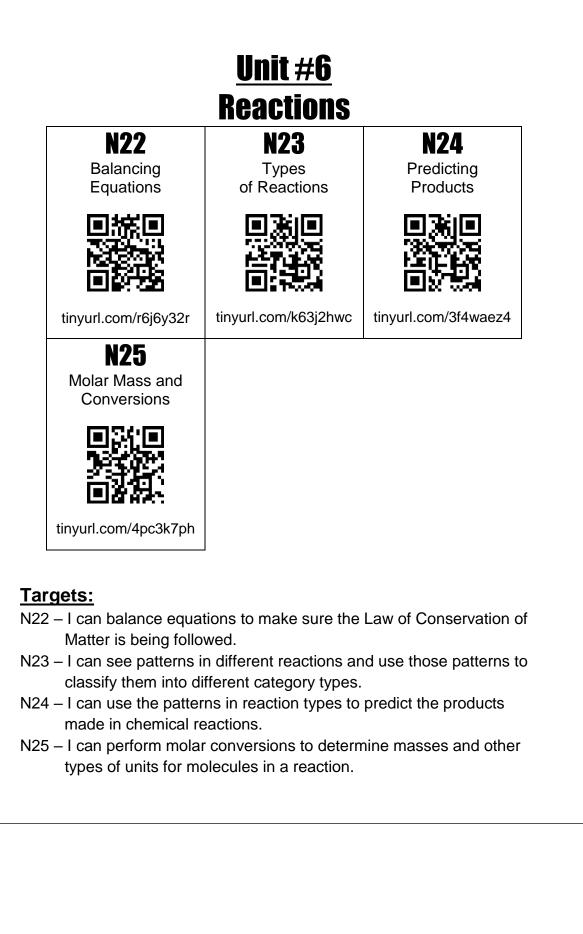
\*This is one pretty big PowerPoint that we usually do over a few days. It is all one topic so I don't like to break it into separate files. So technically there is only one set of notes for this chapter.

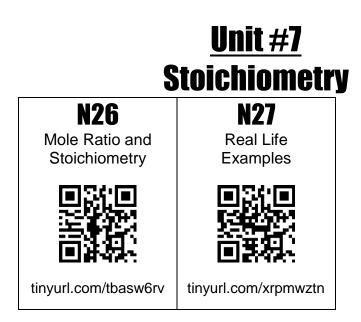
## Targets:

N15 – I can use the Periodic Table's structure to see a variety of physical and chemical properties of the elements. I can utilize the patterns seen on the Periodic Table to compare/rank/explain properties of different elements.

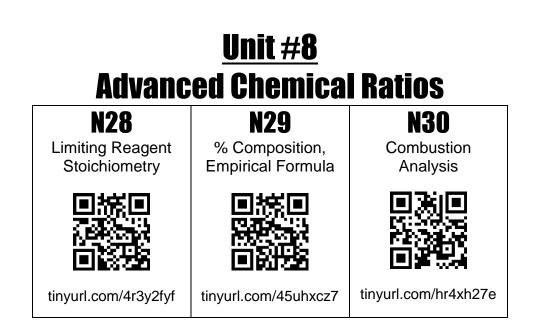


- N16 I can name ionic and covalent compounds and molecules.
- N17 I can write neutral formulas for covalent molecules.
- N18 I can draw the structures of molecules.
- N19 I can determine the three dimensional shape of molecules.
- N20 I can describe how the molecular shape and electron distribution around the molecule determines the polarity.
- N21 I can describe how the polarity of a molecule affects various properties, and I can compare/rank/explain how different molecules compare to each other.

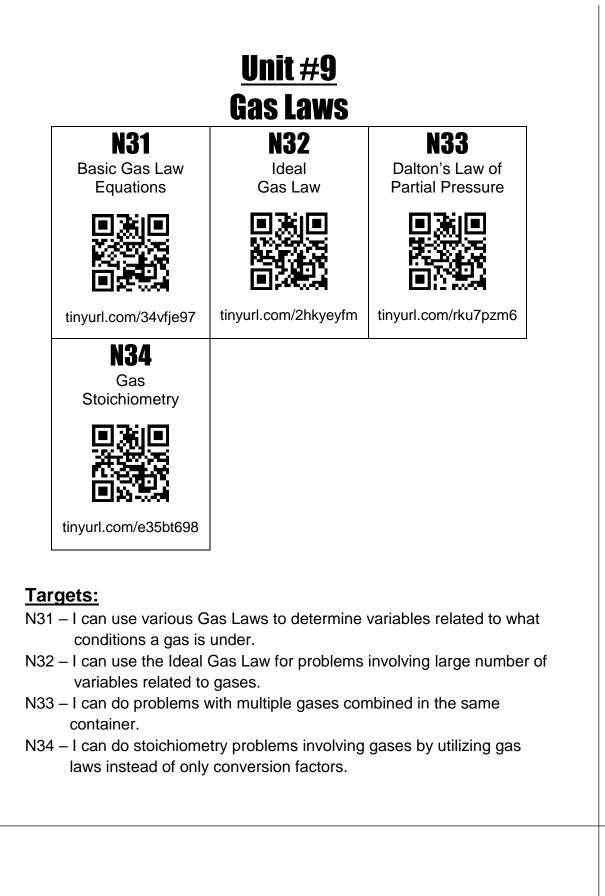


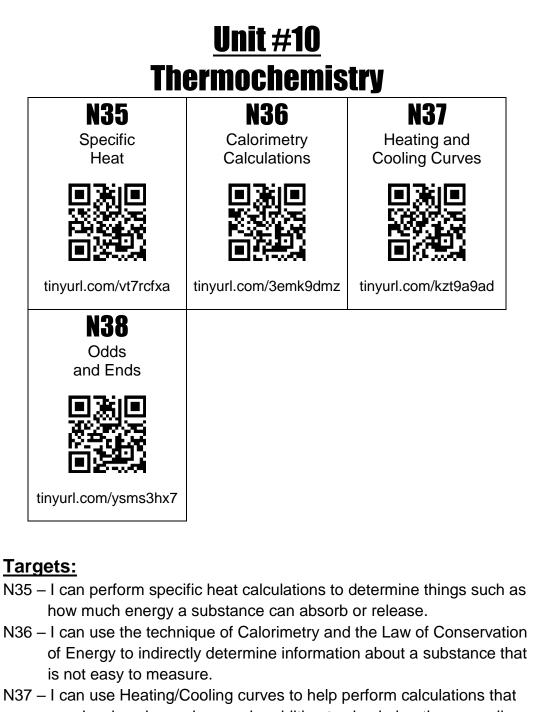


- N26 I can perform stoichiometry calculations to determine the quantities of chemicals involved during a reaction.
- N27 I can apply stoichiometry to problems that have real life context.

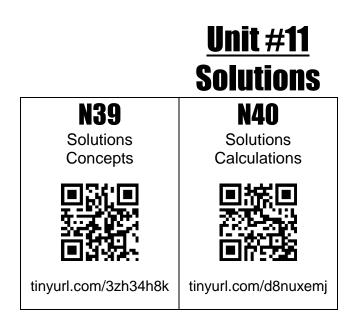


- N28 I can perform Limiting Reagent Stoichiometry calculations to determine which substance will run out first during a reaction.
- N29 I can determine the % composition of different elements in a molecule and use that information to determine the empirical formula.
- N30 I can determine the formula for an unknown compound by using combustion analysis data.

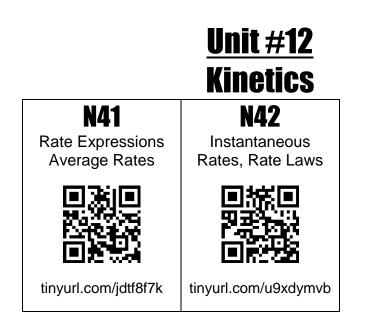




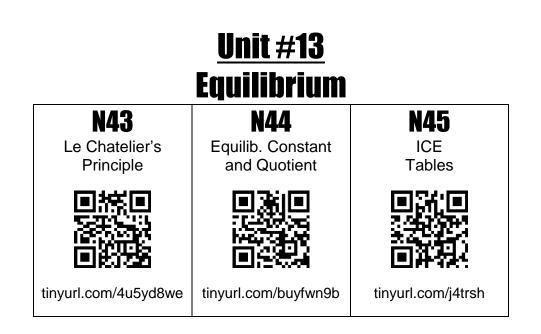
- may involve phase changes in addition to simple heating or cooling. N38 – I can extend my knowledge of Thermochemistry into smaller
  - subtopics that are closely related to the things I already learned.



- N39 I can learn some characteristics and terms for aqueous solutions.
- N40 I can perform various calculations to represent the concentrations of solutions in different ways.



- N41 I can see how various factors affect the rate of a reaction and can express and calculate that average rate in different ways.
- N42 I can calculate the rate at a specific moment in time, and write a Rate Law to express how the rate changes when changing the concentration of reactants.



- N43 I can predict how a reaction will respond when a "stress" is applied.
- N44 I can use calculations to predict if a reaction will be product favored or reactant favored once it reaches equilibrium.
- N45 I can use ICE Tables to organize data related to what the concentrations of chemicals are once a reaction is at equilibrium.

