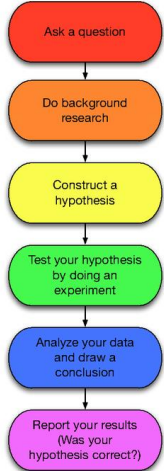

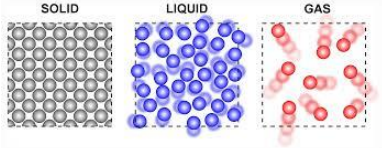
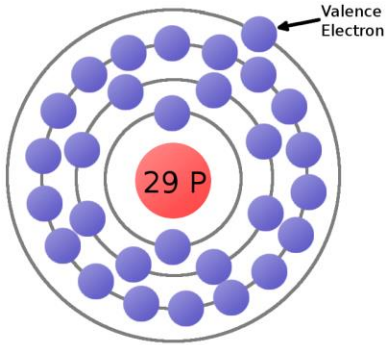
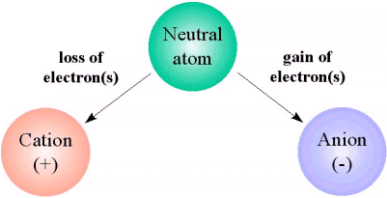





Term, Phrase, or Expression	Simple Definition	Comprehension Support
Scientific Method	A process by which a natural phenomenon is investigated.	<p style="text-align: center;">The Scientific Method</p>  <pre> graph TD A[Ask a question] --> B[Do background research] B --> C[Construct a hypothesis] C --> D[Test your hypothesis by doing an experiment] D --> E[Analyze your data and draw a conclusion] E --> F[Report your results (Was your hypothesis correct?)] </pre>
Matter	Anything that has mass and takes up space	
Mass	A measure for the amount of matter	
Phase of Matter	Matter can be a solid, liquid or gas.	
Properties	Quantitative and qualitative measures for matter	

Valence Electron	Electrons in an atom's highest energy sublevels.	
Ion	An atom that has gained or lost electrons to fulfill its octet. Has a (+) or (-) charge.	
Accuracy	A measure of how close a data is to an accepted value	
Error	The degree of or cause for data to not be accurate.	$\%Error = \frac{ Actual - Theoretical }{Theoretical} \times 100$ $\%Error = \frac{ 10.256 - 0.258 }{0.258} \times 100$ $\%Error = 0.89\%$
Reliability	The degree of consistency or confidence in a measure.	
Energy	Directly related to heat and measured in Joules.	
Reactant	Chemicals that begin a chemical reaction	$H_2 + O_2 \rightarrow H_2O$ <div style="display: flex; justify-content: space-around; width: 100%;"> <div style="border: 1px solid black; width: 100px; height: 15px; margin-bottom: 5px;"></div> <div style="border: 1px solid black; width: 100px; height: 15px; margin-bottom: 5px;"></div> </div> <div style="display: flex; justify-content: space-around; width: 100%; color: red;"> reactants products </div>
Products	Chemicals that result from a chemical reaction	$H_2 + O_2 \rightarrow H_2O$ <div style="display: flex; justify-content: space-around; width: 100%;"> <div style="border: 1px solid black; width: 100px; height: 15px; margin-bottom: 5px;"></div> <div style="border: 1px solid black; width: 100px; height: 15px; margin-bottom: 5px;"></div> </div> <div style="display: flex; justify-content: space-around; width: 100%; color: blue;"> reactants products </div>

Chemical Reaction Equation	Displays the formulas of the chemicals as reactants change into products. Additionally the ratio between products and reactants are shown by coefficients.	$H_2 + O_2 \rightarrow H_2O$ <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; width: 100px; height: 20px; margin-bottom: 5px;"></div> <div style="border: 1px solid black; width: 100px; height: 20px; margin-bottom: 5px;"></div> </div> <div style="display: flex; justify-content: space-around; align-items: center;"> reactants products </div>
Mole	A measure of matter where 6.022×10^{23} atoms = 1 mole	
Molarity	A measure of concentration where $\frac{\text{moles}}{\text{Liters}} = \text{Molarity}$	<div style="border: 2px solid green; padding: 10px; text-align: center;"> $\text{molarity} = \frac{0.09 \text{ mol}}{0.8 \text{ L}}$ $= 0.1125$ $= \mathbf{0.11 \text{ M NaCl}}$ </div>
Mole Ratio	A ratio that relates products and reactant	$2H_2 + 1O_2 \rightarrow 2H_2O$ <div style="display: flex; justify-content: center; align-items: center; margin-top: 10px;"> <div style="text-align: center; margin-right: 20px;"> $\frac{2 \text{ moles } H_2}{1 \text{ mole } O_2}$ </div> \Rightarrow <div style="text-align: center; margin-left: 20px;"> $\frac{1 \text{ mole } O_2}{2 \text{ moles } H_2}$ </div> </div>
Acid	A chemical that donates an H^+	
Base	A chemical that accepts an H^+	
Heat	A direct measure of energy in a chemical reaction	<p style="color: blue;">Heat Transfer</p> 
Enthalpy	The change in heat energy for a reaction.	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <div style="border: 1px solid black; border-radius: 50%; width: 60px; height: 60px; margin: 0 auto;"></div> <p style="font-size: small;">enthalpy increases</p> <div style="color: blue; font-size: 2em;">↑</div> <p style="font-size: x-small;">heat energy in</p> </div> <div style="text-align: center;"> <div style="border: 1px solid black; border-radius: 50%; width: 60px; height: 60px; margin: 0 auto;"></div> <p style="font-size: small;">enthalpy decreases</p> <div style="color: red; font-size: 2em;">↓</div> <p style="font-size: x-small;">heat energy out</p> </div> </div>

