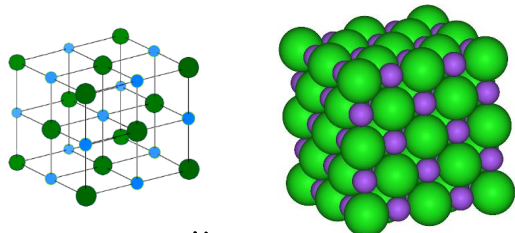
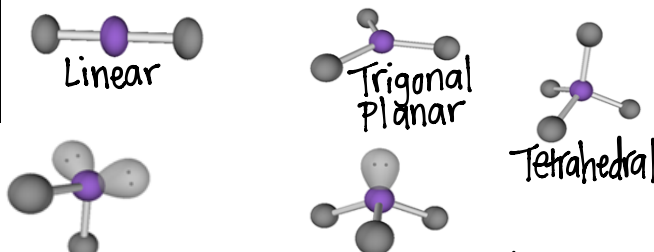


	Ionic	Covalent/Molecular	
1. Types of Elements	metal + Nonmetal	Nonmetal + Nonmetal	
2. Naming Rules	<ul style="list-style-type: none"> - NO prefixes - nonmetal ends in "-ide" - transition metal (roman numeral) 	<ul style="list-style-type: none"> - use prefixes (mono-, di-, tri-, etc.) - 2nd element ends in "-ide" - Mono can be used only w/ the 2nd element when applicable 	
3. Chemical Formula Rules	<ol style="list-style-type: none"> 1. assign charge to each ion 2. sum of charges must equal zero <ol style="list-style-type: none"> a. If sum = 0, then subscripts = 1 b. If sum \neq 0, then criss-cross & reduce to get subscripts 3. place polyatomic ions in (parentheses) 	1. prefixes = subscripts	
4. Properties	<ul style="list-style-type: none"> - electrolytes in solution (ions are "free") - high melting/boiling pts. 	<ul style="list-style-type: none"> - nonelectrolytes - do not conduct electricity - low melting/boiling pts. 	
5. What are the Electrons Doing?	transfer of e^- from metal to nonmetal	Polar Bond unequal sharing of e^-	Nonpolar Bond equal sharing of e^-
6. Electronegativity Difference	greater than 1.7	Polar Bond 0.3 - 1.7	Nonpolar Bond 0 - 0.3

	Ionic		Covalent/Molecular			
7. Show Bonding Using Electron Dot Diagrams	<div>$\begin{array}{c} \cdot\text{Mg}\cdot \quad \cdot\ddot{\text{Cl}}\cdot \\ \curvearrowright \\ \cdot\ddot{\text{Cl}}\cdot \end{array} \Rightarrow [\text{Mg}]^{2+} [\ddot{\text{Cl}}:]_2^- \Rightarrow \text{MgCl}_2$</div> <div>$\begin{array}{c} \cdot\text{Ca}\cdot \quad \cdot\ddot{\text{N}}\cdot \\ \curvearrowright \\ \cdot\text{Ca}\cdot \quad \cdot\ddot{\text{N}}\cdot \\ \curvearrowright \\ \cdot\text{Ca}\cdot \quad \cdot\ddot{\text{N}}\cdot \end{array} \Rightarrow [\text{Ca}]_3^{2+} [\ddot{\text{N}}:]_2^{3-} \Rightarrow \text{Ca}_3\text{N}_2$</div>		<div>$\cdot\ddot{\text{Cl}}-\ddot{\text{Cl}}\cdot \text{ single bond}$</div> <div>$\cdot\ddot{\text{O}}=\ddot{\text{O}}\cdot \Rightarrow \cdot\ddot{\text{O}}=\ddot{\text{O}}\cdot \text{ Double bond}$</div> <div>$\cdot\ddot{\text{N}}\equiv\ddot{\text{N}}\cdot \Rightarrow \cdot\ddot{\text{N}}\equiv\ddot{\text{N}}\cdot \text{ Triple bond}$</div>			
8. Structure/ Shapes	<div></div> <div>crystalline solid</div>		<div></div> <div>Linear Bent Trigonal Planar Trigonal Pyramidal Tetrahedral</div>			
9. Types of attractions between particles			(Hint: Intermolecular Forces)			
10. Strength of attractions between particles	Strongest	1.	2.	3.	4.	Weakest
	Highest boiling & melting points					Lowest boiling & melting points