

Chapter 5- The Periodic Table

5.1 Development of the Periodic Table

Dmitri Mendeleev is given credit for assembling the first modern periodic table. How did he organize the elements?

How did Mendeleev's periodic table differ from his predecessors?

How did Henry Moseley contribute to the development of the periodic table?

What is periodic law?

5.2 Reading the Periodic Table

List the location of the following family names within the periodic table:

Name	Group (Family)
Alkali metals	
Alkaline earth metals	
Halogens	
Noble gases	

Fill in the following table:

Type of Element	Characteristics	General Location within Periodic Table
Metal		
Nonmetal		
Semimetals		

Why do family of elements have similar properties?

Define the following terms used in writing abbreviated electron configurations:

Valence electrons-

Noble gas inner core-

Fill in the following table on the *block* elements:

Block	Orbital Type	Number of Families	Maximum # of Electrons	Alternative Name
<i>s</i> -block				
<i>p</i> -block				
<i>d</i> -block				
<i>f</i> -block				

5.3 Periodic Trends

How is atomic radii measured?

Define the following terms:

Ionization Energy-

2nd and 3rd Ionization Energies-

Electron Affinity-

Electronegativity-

Fill in the following table:

Property	Periodic Trend from Top to Bottom	Periodic Trend from Left to Right
Atomic Radius		
	Reason	Reason
Ionic Size		
	Reason	Reason
Ionization Energy		
	Reason	Reason
Electron Affinity		
	Reason	Reason
Electro-negativity		
	Reason	Reason

**Sample problem and practice problems on p. 179*

