

**Predicting Trends – Periodic Table WS**

- By what property did Mendeleev arrange the elements?
- By what property did Moseley suggest that the periodic table be arranged?
- List, by number, both the period and group of each of these elements.

<u>Name</u>	<u>Symbol</u>	<u>Period</u>	<u>Group</u>
beryllium			
	Fe		
lead			

- Which of the following pairs of elements belong to the same period? (choose one)
  - Na and Cl
  - Na and Li
  - Na and Cu
  - Na and Ne
- Which of the following pairs of elements belong to the same group? (choose one)
  - H and He
  - Li and Be
  - C and Pb
  - Ga and Ge
- Would you expect strontium to be, chemically, more similar to Ca or Rb and WHY?
- Give the name of the following groups:
  - Group 1
  - Group 2
  - Group 17
  - Group 18
- Which of these elements has the highest first ionization energy: Sn, As, or P?
- List some properties of metals.
- List some properties of nonmetals.
- List the following atoms in order of increasing electronegativity: O, Al, Ca
- Why does fluorine have a higher ionization energy than iodine?
- Circle the element with the lowest ionization energy in each set:
  - Be, Ca, Sr, Mg
  - Ar, Cl, Na, P, Mg
  - Se, S, Te, O
  - As, K, Br, Ca, Kr
- Circle the element with the largest atomic radius in each set:
  - Li, K, Na, H, Rb
  - Be, N, Li, F, B
  - Kr, Ar, Xe, He, Ne
  - Ar, Cl, Na, P, Mg
- Circle the element with the lowest metallic character in each set:
  - Be, Ca, Sr, Mg
  - Ar, Cl, Na, P, Mg
  - Se, S, Te, O
  - As, K, Br, Ca, Kr
- Match each of the following properties to the appropriate type of element:
 

a. Metal	b. Nonmetal
_____ shiny	_____ ductile
_____ good conductors of heat	_____ poor conductors of electricity
_____ malleable	_____ brittle solid, liquid or gas
_____ does not react with acid	
- Circle the smaller atom in the following pairs:
  - Na or Al
  - Sr or Sn
  - N or P
  - F or Ga
  - C or Pb
  - Mg or Cl

