

**Worksheet 4-2****Electron Arrangements***Glencoe Chemistry pp. 135-141, 150-162*

Name \_\_\_\_\_

Period \_\_\_\_\_

- Describe what each of the following contributed to the development of the modern periodic table.
  - Newlands \_\_\_\_\_
  - Meyer & Mendeleev \_\_\_\_\_
  - Moseley \_\_\_\_\_
- Identify each element as a metal, metalloid, or nonmetal.
 

a. fluorine	_____	d. phosphorus	_____
b. germanium	_____	e. lithium	_____
c. zinc	_____	f. oxygen	_____
- Circle the transition metals below.  
 magnesium          titanium          chromium          mercury          aluminum
  - Which block (s, p, d, or f) are the transition metals found? \_\_\_\_\_
- Give two examples of elements for each category.
 

a. noble gases	_____
b. halogens	_____
c. alkali metals	_____
d. alkaline earth metals	_____
- What is an atomic orbital? How are s orbitals different from p orbitals?
- Briefly discuss the difference between an orbit in Bohr's model of the atom and an orbital in the quantum mechanical view of the atom (Schrodinger's model).
- What are valence electrons?
  - Explain how an atom's valence electron configuration determines its place on the periodic table.
  - List the number of valence electrons for the following atoms:  
 potassium \_\_\_\_\_ magnesium \_\_\_\_\_ carbon \_\_\_\_\_ oxygen \_\_\_\_\_
- Explain why the s-block of the periodic table is two groups wide, the p-block is six groups wide, and the d-block is ten groups wide.
- Why do the elements potassium and sodium have similar chemical and physical properties?