Getting To Know the Periodic Table

Objective: To be able to use the periodic table to identify and classify elements and to use the periodic table to predict the behavior of elements

Procedure:

1. Number the groups 1-18.
2. Number the periods 1-7.
3. Draw a heavy lack line between the metals and nonmetals.
4. Write the name of each of the following groups above the number:
   - Group 1 alkali metals
   - Group 2 alkaline earth metal
   - Group 3-12 (collectively) transition metals
   - Group 17 halogens
   - Group 18 Noble gases
5. Write the names of the two rows at the bottom of the chart: lanthanides and actinides. Collectively they are called the inner transition elements.
6. Write the symbol of each element that exists as a gas at ordinary conditions in RED.
7. Write the symbol of each element that is a solid at ordinary conditions in BLACK.
8. Write the symbol of each element that is a liquid at ordinary condition in BLUE.
9. Write an asterisk after each element that is a man-made element.
10. Place the atomic number for each element above the symbol.
11. Use the following chart to color the periodic table.
   - Halogen blue
   - Noble gases yellow
   - Alkali metals purple
   - Alkaline earth metals red
   - Transition elements green
   - Lanthanides orange
   - Actinides light blue
12. Outline the symbol’s box in dark green if it is RADIOACTIVE in its most common form.
13. Write the electron configuration for Li, Na, and K (either orbital or electron configuration notation). What do you notice? What would you expect to be the end of the configuration for Rb?
14. Write the electron configuration for F & Cl. What would you predict for the end of the configuration for Br?
15. What is an abbreviated electron configuration?
16. Write the abbreviated electron configuration for Li, Na, K, Rb, and Fr.
17. Write the abbreviated electron configuration for F, Cl, Br, and I.