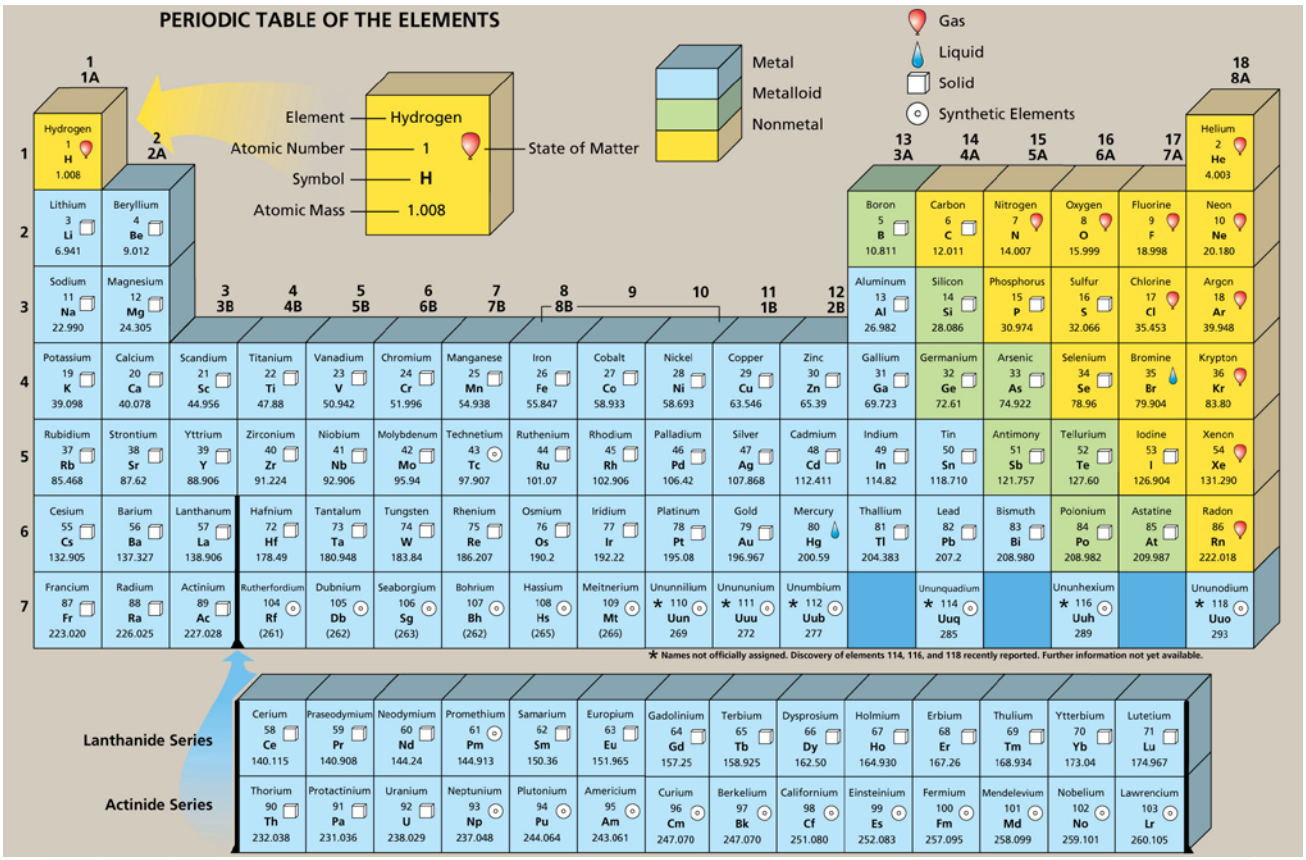
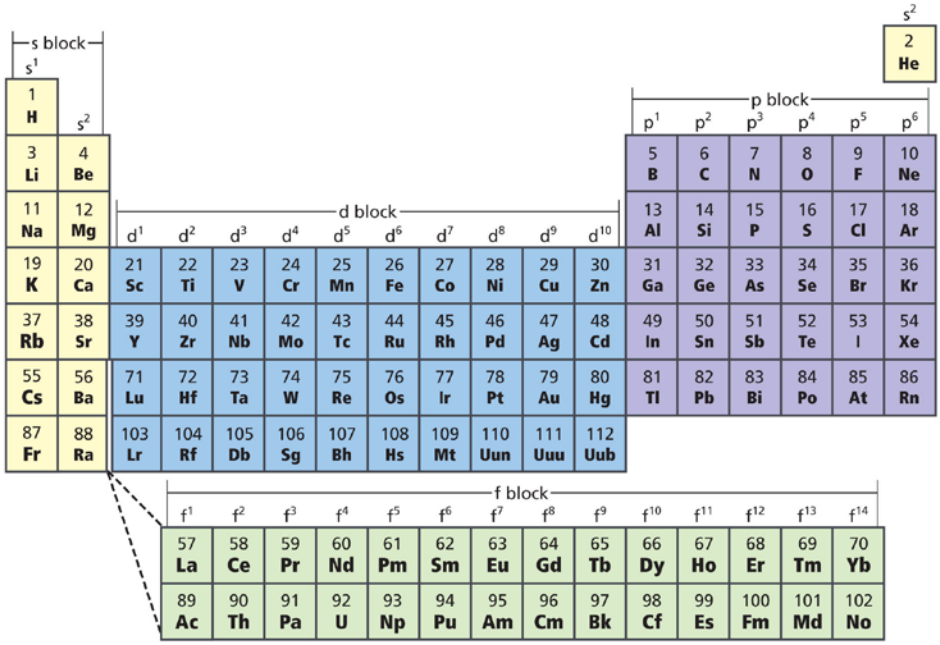
Periodic Table WS #2 **KEY**



1. How many elements are listed in the periodic table? (the one Dr. Hart gave you…) 118
2. What is the atomic number of selenium? ___34_____
3. What is the symbol for palladium? ___Pd_____
4. What is the atomic mass of strontium? __87.62 amu or g_____
5. How are elements that are gases at room temperature designated in this periodic table? ___their boxes contain a red balloon_____
6. How many columns of elements does the periodic table contain? ___18___
7. What is another name for a column of elements? __group or family_____
8. What two group numbers can be used to designate elements in the second column of the periodic table? ___group 2A or group 2_____
9. How many rows of elements does the periodic table contain? __7_____
10. What is another name for a row of elements? ___period_____
11. Which period contains the least number of elements? ___period 1_____
12. What element is found in period 4, group 7B? __manganese_____
13. How are metals designated in this periodic table? __boxes are tinted blue_____
14. How are metalloids designated in this periodic table? __boxes are tinted green_____
15. How are nonmetals designated in this periodic table? __boxes are tinted yellow____
16. What can be said about the electron configurations of all the elements in a group? _their valence electron configurations are identical_____

The s-, p-, d-, and f-Block Elements



1. What are the four sections, or blocks, of the periodic table? __s-, p-, d-, f- blocks
2. What does each block represent? the energy sublevel being filled by valence electrons
3. What do elements in the s-block have in common? valence electrons only in the s orbitals
4. What is the valence electron configuration of each element in group 1A? __s^1____
5. What is the valence electron configuration of each element in group 2A? __s^2____
6. Why does the s-block span two groups of elements? the single s orbital can hold a maximum of two valence electrons
7. Why does the p-block span six groups of elements? The three p orbitals can each hold a maximum of two electrons, resulting in a maximum of six valence electrons, which corresponds to the six columns spanned by the p-block.
8. Why are there no p-block elements in period 1? The p sublevel does not exist for the first principal energy level.
9. What is the ending of the electron configuration of each element in group 4A? p^2
10. What is the electron configuration of neon? $[He]2s^22p^6$
11. In what period does the first d-energy sublevel appear? Period 4
12. Why does the d-block span ten groups of elements? The five d orbitals can each hold a maximum of two electrons, resulting in a total of ten possible valence electrons.
13. What is the ending of the electron configuration of each element in group 3B? _d^1____
14. What is the noble gas configuration of titanium? __$[Ar]4s^23d^2$_____
15. In what period does the first f-energy sublevel appear? __period 6_____
16. Determine the group, period, and block for the element having the electron configuration $[Xe]4f^{14}5d^{10}6s^26p^3$. a. group_5A or 15__ b. period _6___ c. block _p__