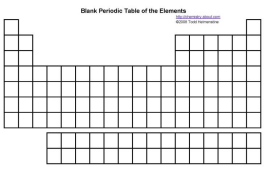
Ledermann Name:_____

1. **Distinguish between families (groups) and periods (series) on the periodic table.**
   Horizontal Rows are called _____ or _____
   Vertical Columns are called _____ or _____

2. **List the basic properties of the major families.**

Group	Group Name	# Valence Electrons	Charge of ion	# of electrons it will gain or lose	Metal, Non, or Both	Is it Reactive Y/N	Electron Configuration ends in
1A							
2A							
7A(17)							P^5
8A (18)							

3. **Locate and identify the transition elements.**
   Shade in every element that is a transition metal on the table



4. **Explain why it is unusual to find group I elements in their elemental state.**

5. **Explain how the periodic table is arranged.**
   Mendeleev arranged elements by their _____But now, we use _____

6. **Identify the father of the periodic table. _____**

7. **Determine how a new element would be placed on the periodic table.**
   What family would element 119 be in? _____What would you expect **4** of its properties to be?

8. **Explain why the inert (noble) gases are so stable.**

9. **Identify the number of energy levels, valence electrons, the valence energy level, and the most common ion an element will form for any element on the periodic table.**

Location	Element	# Energy Levels	# Valence Electrons	Most common Ion
Period 2 Group 2A				
	Potassium (K)			
Period 6 Group 8A				

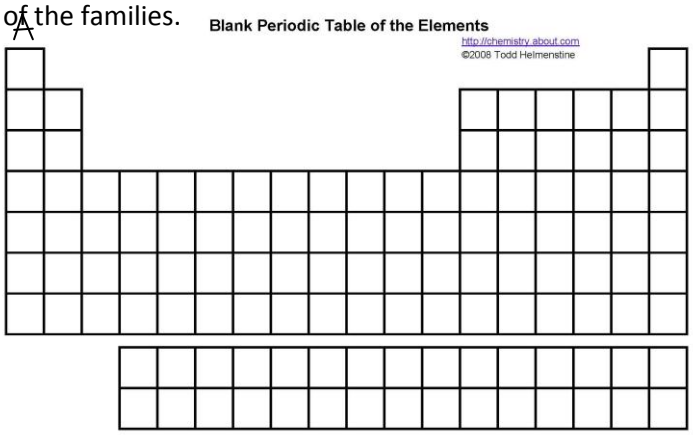
10. **Locate and describe the properties of the following families.** Label the blank table with A,B,C, and D for the families listed. Then, list the properties of the families.

A. alkalai metals-

B. alkaline earth metals-

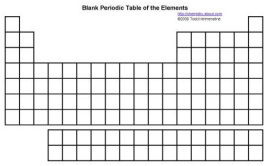
C. halogens-

D. noble gases-



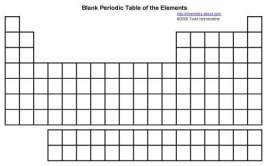
11. **Predict the relative properties of elements from the periodic table such as:**
Draw arrows that show how each property increases and explain why:

electronegativity



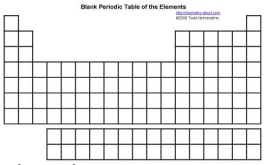
Why is this the pattern?

atomic radius



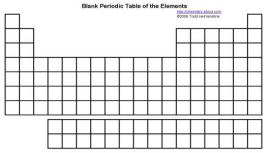
Why is this the pattern?

ionization energy

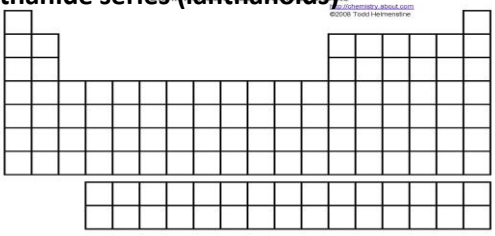


Why is this the pattern

chemical reactivity



12. **Locate the actinide series (actinoids) and lanthanide series (lanthanoids).**
Put an "A" in the Actinoids
Put an "L" in the Lanthanoides



13. **Define the following terms:**

a. **Inert**

b. **Atomic radius**

c. **Valence shell or valence energy level**

d. **Electronegativity**

e. **Ionization energy**

f. **Period**