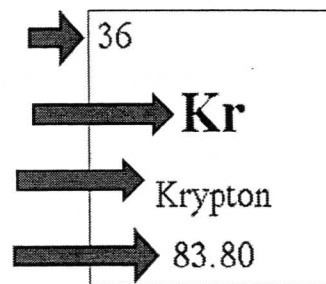


## Get Organized! A Periodic Table WebQuest

Website #1: [http://education.jlab.org/qa/pen\\_number.html](http://education.jlab.org/qa/pen_number.html)

1. What does the atomic number of an element represent? \_\_\_\_\_
2. If an atom is neutral, then the number of electrons is equal to the number of \_\_\_\_\_
3. What does the atomic weight (mass number) of an element represent? \_\_\_\_\_
4. How would you determine the number of neutrons in an atom? Show as a formula!



5. Complete the diagram to the right:

Website #2: <http://chem4kids.com/elements/table.html>

6. Why are the elements placed in specific places on the Periodic Table? \_\_\_\_\_

7. Periods are \_\_\_\_\_ that run from left to right.
8. Groups are \_\_\_\_\_ that run from top to bottom.
9. The elements of a group have the same number of \_\_\_\_\_ in their \_\_\_\_\_ shell.
10. Every element in group one has \_\_\_\_\_ electron in its outer shell. Every element in group two has \_\_\_\_\_ electrons in its outer shell.
11. Why do Hydrogen and Helium appear to be 'separated' from the rest of the table?

Hydrogen – \_\_\_\_

Helium – \_\_\_\_\_

Website #3: <http://www.ptable.com/>

12. Label and color code YOUR Periodic Table!! *(Blank one is on the last page)*

a. Label groups (columns) 1-18 and periods (rows) 1-7, 6 and 7 on your Periodic Table. Ask your teacher if you need help before you do this!

b. On your Periodic Table, color and label the 10 element groups shown on the web site. Be sure to create a 'key' so you know which color represents which group!! *HINT: if you place your mouse over a group name, the elements in that group will be highlighted for you!*

**Website #4:** <http://chemicalelements.com>

13. Click on **Alkali Metals** (left bar) and answer the following questions.

- What is the group number? \_\_\_\_\_. Are these metals reactive? \_\_\_\_\_
- Do these metals occur freely in nature? \_\_\_\_\_
- How many electrons are in their outer shell? \_\_\_\_\_
- What are the three characteristics of ALL metals? \_\_\_\_\_  
\_\_\_\_\_
- Are these metals soft or hard? \_\_\_\_\_
- Name the two most reactive elements in this group? \_\_\_\_\_ and \_\_\_\_\_
- What happens when they are exposed to water? \_\_\_\_\_

14. Go back and click on **Alkaline Earth Metals** (left bar) and answer these questions.

- What is the group number? \_\_\_\_\_. Are these metals reactive? \_\_\_\_\_
- Do these metals occur freely in nature? \_\_\_\_\_
- How many electrons are in their outer shell? (Hint: it's the same as their oxidation number or group number.) \_\_\_\_\_

15. Go back and click on **Transition Metals** (left bar) and answer these questions.

- How many elements are in this group? \_\_\_\_\_
- What are the group numbers? \_\_\_\_\_ through \_\_\_\_\_
- Name the three elements in this family that produce a magnetic field.  
\_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_.

16. Go back and click on **Other Metals** and answer these questions.

- How many elements are in this group? \_\_\_\_\_
- What are the group numbers? \_\_\_\_\_ through \_\_\_\_\_

17. Go back and click on **Metalloids** to answer these questions.

a. On your periodic table, draw the black stair-step line that distinguishes metals from nonmetals.

b. Metalloids have properties of both \_\_\_\_\_ and \_\_\_\_\_.

c. Define semiconductor: \_\_\_\_\_.

d. Name two metalloids that are semi-conductors. \_\_\_\_\_ and \_\_\_\_\_

e. This property makes metalloids useful in \_\_\_\_\_ and \_\_\_\_\_

18. Go back and click on **Nonmetals** to answer these questions.

a. What are the group numbers? \_\_\_\_\_ through \_\_\_\_\_

b. List four characteristics of ALL nonmetals. \_\_\_\_\_

\_\_\_\_\_.

c. What two states of matter do nonmetals exist in at room temperature? \_\_\_\_\_ and \_\_\_\_\_

d. The nonmetals have no \_\_\_\_\_ and do not \_\_\_\_\_.

19. Go back and click on **Halogens** to answer these questions.

a. What is the halogen group number? \_\_\_\_\_. Are halogens metals or nonmetals? \_\_\_\_\_

b. The term "halogen" means \_\_\_\_\_ and compounds containing halogens are called \_\_\_\_\_.

c. What states of matter do halogens exist in at room temperature? \_\_\_\_\_

20. Go back and click on **Noble Gases** and answer these questions.

a. What is the group number? \_\_\_\_\_

b. Why were these gases considered to be inert or stable? \_\_\_\_\_

\_\_\_\_\_.

21. Go back and click on **Rare Earth Elements** and answer these questions.

a. What are the names of the two groups of elements known as the Rare Earth Elements?

\_\_\_\_\_ and \_\_\_\_\_

b. How many Rare Earth elements are there? \_\_\_\_\_

c. Define trans-uranium. \_\_\_\_\_.

