

Name _____

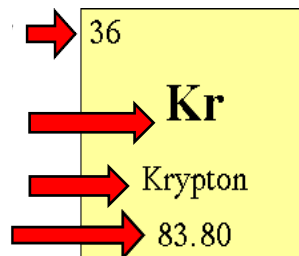
Date _____

Science _____

Get Organized! A Periodic Table Web Quest

Website #1: 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 mass (mass number) of an element represent? _____.
4. How would you determine the number of neutrons in an atom?



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!!

- a. Label groups (columns) 1-18 and periods (rows) 1-7 on your Periodic Table.
- 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 the curser 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:
 - a. What is the group number? _____. Are these metals reactive? _____
 - b. Do these metals occur freely in nature? _____
 - c. How many electrons are in their outer shell? _____
 - d. What are the three characteristics of ALL metals? _____
_____.
 - e. Are these metals soft or hard? _____
 - f. Name the two most reactive elements in this group? _____ and _____

g. 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 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 _____
- List 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:

- On your periodic table, **draw** the **black stair-step line** that distinguishes metals from nonmetals.
- Metalloids have properties of both _____ and _____.
- Define semiconductor: _____.
- Name two metalloids that are semi-conductors. _____ and _____
- This property makes metalloids useful in _____ and _____.

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

- What are the group numbers? _____ through _____
- List four characteristics of ALL nonmetals. _____
_____.
- What two states of matter do nonmetals exist in at room temperature? _____ and _____
- The nonmetals have no _____ and do not _____.

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

- What is the halogen group number? _____. Are halogens metals or nonmetals? _____
- The term "halogen" means _____ and compounds containing halogens are called _____.
- What states of matter do halogens exist in at room temperature? _____

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

- What is the group number? _____
- Why were these gases considered to be inert or stable? _____

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

- What are the names of the two groups of elements known as the Rare Earth Elements?
_____ and _____
- How many Rare Earth elements are there? _____

Periodic Table of the Elements

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