# THE PERIODIC TABLE WEBQUEST!!

Answer the questions on the following pages using the information on the websites provided.

## ON THE SHOULDERS OF GIANTS

CLICK HERE

Complete the following table using information from the website above.

| Scientist | Contribution to the development of the periodic table |
|---|---|
| Greek thinkers | |
| Lavoisier | |
| John Dalton | |
| Doberiner | |
| Dechancourtois | |
| Cannizaro | |
| Newlands | |
| Meyer | |
| Mendeleyev | |
| Moseley | |
| Seaborg | |

## GETTING THE LAY OF THE LAND: PERIODICALLY ORGANIZED

Click here to learn more.

1. Why are the elements placed in specific places on the Periodic Table?

2. Periods are _____ that run from _____ to _____.
3. Elements in the same period have the same _____.
4. Every element in the first period has _____ shell for its _____. Every element in the second period has _____ for its _____. See the pattern?
5. Groups are _____ that run from _____ to _____.
6. The elements of a group have the same number of _____ in their _____ shell.
7. Every element in group one has _____ electron in its outer shell. Every element in group two has _____ electrons in its outer shell.
8. Hydrogen is special because it can act like two groups, _____ and _____.
9. Hydrogen sometimes is _____ an electron and sometimes it has an _____ electron.
10. Although helium has only _____ electrons in its outer shell, it is grouped with elements that have _____.
11. The green elements on this table are called _____ elements. They each have two electrons in their outer shell.

GETTIN" TOGETHER WITH THE FAMILIES!!!!
Use this site to fill in the blanks below:
http.//chemicalelements.com/

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

    a. What is the group number? _____

    b. Are these metals reactive? _____

    c. Do these metals occur freely in nature? _____

    d. How many electrons are in their outer shell? _____

    e. What are the three characteristics of ALL metals? _____

    _____

    f. Are these metals soft or hard? _____

    g. Name the two most reactive elements in this group? _____ and _____

    h. What happens when they are exposed to water? _____

13. **Click on Alkaline Earth Metals** (left bar) and answer these questions.

a. What is the group number? _____

b. Are these metals reactive? _____

c. Do these metals occur freely in nature? _____

d. How many electrons are in their outer shell? _____ (Hint: It's the same as their oxidation number or group number.)

14. **Click on Transition Metals** (left bar) and answer these questions.

a. How many elements are in this group? _____

b. What are the group numbers? _____ through _____

c. What are valence electrons? _____

d. Because the valence electrons are present in more than one _____ transition metals often exhibit several common _____.

e. Name the three elements in this family that produce a magnetic field. _____,

_____, and _____.

15. **Click on Other Metals** (left bar) and answer these questions.

a. How many elements are in this group? _____

b. What are the group numbers? _____ through _____

c. How are these other metals similar to the transition metals? _____

d. How are these metals different than the transition metals? _____
_____

e. List three physical properties of these other metals. _____

f. What are the oxidation numbers for this group? _____

16. **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 _____.

17. **Click in Nonmetals** to answer these questions**.**

a. What are the group numbers? _____ through _____

b. List four characteristics of ALL nonmetals. _____

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c. What two states of matter do nonmetals exist in at room temperature?
_____

d. The nonmetals have no _____and do not _____.

e. What are the oxidation numbers of the nonmetals? _____

18. **Click on the Halogens** (left bar) to answer these questions**.**

a. What is the halogen group number? _____

b. Are halogens metals or nonmetals? _____

c. The term "halogen" means _____ and compounds containing halogens are called _____.

d. How many electrons are in their outer shell? _____

e. What is their oxidation number? _____

f. What states of matter do halogens exist in at room temperature? _____

19. **Click on Noble Gases** (left bar) and answer these questions**.**

a. What is the group number? _____

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

c. What is their oxidation number? _____

20. **Click on Rare Earth Elements ( Inner Transition)** (left bar) and answer these questions.

a. On you periodic table, label the Lanthanide and Actinide series with your pencil.

b. How many Rare Earth elements are there? _____

c. Define trans-uranium. _____

d. The Rare Earth metals are found in group _____and periods _____and _____.