**Get Organized, Baby!**

**Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**WebSite 1 :** [**http://www.chem4kids.com/files/elem\_pertable.html**](http://www.chem4kids.com/files/elem_pertable.html)

**WebSite 2 :** [**http://chemicalelements.com**](http://chemicalelements.com/)

**Click on the first website listed.**

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

    \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2.  Periods are \_\_\_\_\_\_ that run from left to right.

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 \_\_\_\_\_ shells for its \_\_\_\_\_\_\_\_\_\_.  See the pattern?

5.  Groups are \_\_\_\_\_\_\_ that run from top to bottom.

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 gray elements on this table are called \_\_\_\_\_\_\_\_\_\_ elements.  They each have two electrons in their outer shell.

**Go back to first page and click on the second web site.**

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.  Go back and 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.  Go back and 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 that one \_\_\_\_\_\_\_\_\_\_

        transition metals often exhibit several common \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

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

        \_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_, and \_\_\_\_\_\_\_\_\_\_\_.

15.  Go back and click on Other Metals 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 other metals different to the transition metals?\_\_\_\_\_\_\_\_\_\_\_\_\_

        \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

    e.  List three physical properties of these other metals. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

    f.  What are the oxidation numbers for this group? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

16.  Go back and click on Metalloids to answer these questions.

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

    b.  Define semiconductor. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

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

17.  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 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

    e.  What are the oxidation numbers of the nonmetals? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

18.  Go back and click on Halogens 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.  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? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

    c.  What is their oxidation number? \_\_\_\_\_

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

    a.  On your 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 \_\_\_\_\_.