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

**Periodic Table**

**Internet Investigation**

**Instructions: In each of the websites listed, find the information asked for.**

**“Family Fun”**

**Go to** [**http.//chemicalelements.com/**](http://www.chemicalelements.com)

1. Click on Alkali Metals (left bar) and answer the following questions.
2. What is the group number?
3. Are these metals reactive?
4. Do these metals occur freely in nature?
5. How many electrons are in their outer shell?
6. What are the three characteristics of ALL metals?
7. Are these metals soft or hard?
8. Name the two most reactive elements in this group?
9. What happens when they are exposed to water?
10. Click on Alkaline Earth Metals (left bar) and answer these questions.
11. What is the group number?
12. Are these metals reactive?
13. Do these metals occur freely in nature?
14. How many electrons are in their outer shell?
15. Click on Transition Metals (left bar) and answer these questions.
16. How many elements are in this group?
17. What are the group numbers?
18. What are valence electrons?
19. Because the valence electrons are present in more than one \_\_\_\_\_\_\_\_\_\_\_\_\_ transition metals often exhibit several common \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
20. Name the three elements in this family that produce a magnetic field.
21. Click on Other Metals (left bar) and answer these questions.
22. How many elements are in this group?
23. What are the group numbers?
24. How are these other metals similar to the transition metals?
25. How are these metals different than the transition metals?
26. List three physical properties of these other metals.
27. What are the oxidation numbers for this group?
28. Click on Metalloids to answer these questions.
29. Metalloids have properties of both \_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_.
30. Define semiconductor
31. Name two metalloids that are semi-conductors.
32. This property makes metalloids useful in \_\_\_\_\_\_\_\_\_\_\_\_and \_\_\_\_\_\_\_\_\_\_\_\_\_.
33. Click in Nonmetalsto answer these questions**.**
	1. What are the group numbers?
	2. List four characteristics of ALL nonmetals.
	3. What two states of matter do nonmetals exist in at room temperature?
	4. The nonmetals have no \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_and do not \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
	5. What are the oxidation numbers of the nonmetals?
34. Click on the Halogens(left bar) to answer these questions**.**
	1. What is the halogen group number?
	2. Are halogens metals or nonmetals?
	3. The term “halogen” means \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and compounds containing halogens are called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
	4. How many electrons are in their outer shell?
	5. What is their oxidation number?
	6. What states of matter do halogens exist in at room temperature?
35. Click on Noble Gases(left bar) and answer these questions**.**
	1. What is the group number?
	2. Why were these gases considered to be inert or stable?
	3. What is their oxidation number?
36. Click on Rare Earth Elements (Inner Transition)(left bar) and answer thesequestions.
	1. How many Rare Earth elements are there?
	2. Define trans-uranium.
	3. The Rare Earth metals are found in group \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_and periods \_\_\_\_\_\_\_\_\_\_\_\_\_\_and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Metals, Non-metals, Metalloids**

**Go to** <http://www.mikeblaber.org/oldwine/chm1045/notes/Periodic/Metals/Period06.htm>

**Properties of Metals:**

1. Malleable (define)
2. Ductile (define)
3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ionization energy
4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ electrons to form \_\_\_\_\_\_\_\_\_\_\_\_
5. Forms \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ compounds with non-metals
6. All metals are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ at room temperature except for \_\_\_\_\_\_\_\_\_\_ which is a liquid.
7. Good conductors of \_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Properties of Non-Metals:**

1. Non-lustrous
2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ conductors of heat and electricity
3. Define diatomic molecule. Name the 7 diatomic molecules.
4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ electrons forming \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. When bonded with metals forms a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ compound
6. When bonded with other non-metals forms a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ compound

**Properties of Metalloids:**

1. Has similar properties to both \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Silicon: describe the properties & use of silicon.

**Trends in Metallic Character:**

1. Describe the trend in metallic character on the periodic table.
2. What element has the most metallic character?
3. What element has the least metallic character?