

Get Organized! A Periodic Table WebQuest

Website <http://chemicalelements.com>

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

- What is the group number? 1. Are these metals reactive? yes
- Do these metals occur freely in nature? no
- How many electrons are in their outer shell? 1
- What are the three characteristics of ALL metals? malleable, ductile, good conductors (of heat and electricity)
- Are these metals soft or hard? soft
- Name the two most reactive elements in this group? Cesium and Francium
- What happens when they are exposed to water? they react strongly (explode)

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

- What is the group number? 2. Are these metals reactive? yes
- Do these metals occur freely in nature? no
- How many electrons are in their outer shell? (Hint: it's the same as their oxidation number or group number.) 2

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

- How many elements are in this group? 38
- What are the group numbers? 3 through 12
- Name the three elements in this family that produce a magnetic field.
iron, cobalt, and nickel

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

- How many elements are in this group? 7
- What are the group numbers? 13 through 15

5. 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 metals and nonmetals.
- Define semiconductor: have ability to conduct under special conditions.
- Name two metalloids that are semi-conductors. silicon and germanium.
- This property makes metalloids useful in computers and calculators.

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

- What are the group numbers? 14 through 16.
- List four characteristics of ALL nonmetals. poor conductors, brittle, dull, can't be rolled or pounded into sheets.
- What two states of matter do nonmetals exist in at room temperature? gas and solid.
- The nonmetals have no luster and do not reflect light.

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

- What is the halogen group number? 7A (17). Are halogens metals or nonmetals? non.
- The term "halogen" means salt formers and compounds containing halogens are called salts.
- What states of matter do halogens exist in at room temperature? all three.

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

- What is the group number? 8A (18).
- Why were these gases considered to be inert or stable? valence shell is full.

9. 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? lanthanides and actinides.
- How many Rare Earth elements are there? 30.
- Define trans-uranium. synthetic or man-made.