Biology 138 Name _____
Periodic Table Review

Use this website to answer the next 10 questions.
Atomic Structure You can also check out this site! Click Here

1. Where is the majority of the mass of an atom located?

2. What subatomic particles make up the nucleus?

3. Describe a unique property of protons.

4. Describe a unique property of neutrons.

5. What is an isotope?

6. What can you learn from an atomic number?

7. How many protons are in an atom of carbon?

8. How do you calculate the atomic mass of an atom?

9. What is the atomic mass of an atom of nitrogen with 7 protons, 7 neutrons, and 7 electrons?

Use the website below to answer the next 2 questions.
Dynamic Periodic Table

10. What is the number called at the top of an element's box on the periodic table?

11. What number is located below the element's symbol and/or name

1) During the 19th century, several scientists had tried to organize the known elements into a workable table. The man credited with designing the periodic table we use today is Dmitri Mendeleev. Using http://www.chemistry.co.nz/mendeleev.htm, answer these questions about this famous chemist.

A) In what country was Mendeleev born?

B) He lived from when to when?

C) What is the title of his famous book and when was it published?

D) What group of elements did he omit? Why?

2) Before we can begin our little webquest, we need some definitions. This website--named How Many--will help us to define two important words we will need to complete this exercise. Using this website, please provide very brief definitions of these terms.

A) **Atomic mass unit (u or amu)**

B) **Atomic number**

3) Please note the names of any two elements. These elements are the ones you will use throughout your web exercise.

Element 1_____

Symbol_____

Element 2_____

Symbol_____

Before you can go any farther, please use this website called WebElements to find the symbol assigned to each of your two elements and write it in the appropriate blank.

4) This next site is color coded to help you find which group your element belongs to. Please use this site on the chemical elements to identity the appropriate group or family for each of your two elements. After you have found the groups for your elements, please click here and find and list the defining characteristics of those elements in that family.

Element 1 Family:
Characteristics of that family

Element 2 Family:
Characteristics of that family

5) Now the work begins in earnest. Using this wonderful site provided to us by the Los Alamos National Labs, please give the appropriate information for each of your two elements.

Element 1_____ Element 2_____

Atomic Number _____ Atomic Number_____

Atomic Weight_____ Atomic Weight_____

Uses_____ Uses_____

Discovered by_____ Discovered by_____

When_____ When_____

6) Boiling point and melting point are key attributes to each element. This online periodic table was designed by a high school class and contains information about these properties. Please list the boiling point and the melting point for each of your elements.

Element _____ Boiling pt._____ Melting pt._____

Element _____ Boiling pt._____ Melting pt._____

7) Go to http://en.wikipedia.org/wiki/Valence_electrons

1. What is a valence electron?

2. How many valence electrons would an atom of Silicon have?

3. Why are valence electrons so important?

4. What is an ionic bond?

5. Give an example of two elements that would form an ionic bond.

6. What is a covalent bond?

7. Give an example of two elements that would form a covalent bond.

8. What is a hydrogen bond?

For more bonding information you can try this site: Vision Learning or you can check out this site: Fundamentals of Chemistry