Introduction to Acids & Bases: A WebQuest

1. http://www.visionlearning.com/library/module_viewer.php?c3=&mid=58&l=

The word acid comes from the Latin word _____ meaning _____.
Boyle stated that acids taste _____, are corrosive to _____, change the color of litmus to _____,and become less acidic when mixed with _____.
He described bases as feeling _____, changing litmus to the color _____, and becoming less basic when mixed with an _____.

About 200 years later, Arrhenius proposed that water can dissolve many compounds by separating them into their individual _____. He suggested that acids contain _____ and can dissolve in water to release _____.
Bases dissolve in water to release _____ ions into the solution.

2. http://www.chem4kids.com/files/react_acidbase.html

Every liquid has _____ & _____ traits. One exception might be _____. It is just water. However, the _____ ions and _____ ions cancel each other out.

3. http://chemistry.about.com/od/acidsbases/a/acidbaseformula.htm

Give the formula for the following acids:
Hydrofluoric Acid-
Hydrochloric Acid-
Hydrosulfuric Acid-
Nitric Acid-
Sulfuric Acid-
Acetic Acid-
Boric Acid-

Give the formula for the following bases:
Sodium Hydroxide-
Potassium Hydroxide-
Calcium Hydroxide-
Iron (II) Hydroxide-

4. http://chemistry.about.com/od/acidsbases/a/acidsbasesterms.htm

Scroll down to Properties of Acids.
Complete the following sentences for **Acids**

- Tastes _____
- Changes litmus from blue to _____.

- Solutions are _____ (conduct electricity).
- React with bases to form _____ + _____.
  Neutralization
- Create _____ gas when reacting with an active metal.
- Five (5) Common acids (scroll down):

Properties of **Bases**

- Tastes _____.
- Feels _____.
- Don't change the color of _____.
- Solutions are _____ (conduct electricity).
- React with acids to form _____ + _____.
  Neutralization
- Four (4) Common Bases:
-

5. http://chemistry.about.com/od/acidsbases/a/phtable.htm and http://www.visionlearning.com/library/module_viewer.php?c3=&mid=58&l
Scroll down on the site above until you get to the pH scale

Using the sites above, answer the questions below:

A. pH range of acids _____
B. pH of a neutral substance _____
C. pH of a basic (alkaline) substance _____

Use information from the sites above and list the following substances according to pH. The lowest pH should be listed first and the highest base listed last. HCl and NaOH are given as examples.

Substances:	Correct Acid-Base pH list
Pure water	1 HCl
Apples	
Ammonia	
Lime (Calcium Hydroxide)	
Milk	
HCl	
Vinegar	
Baking Soda	
NaOH	
Human Blood	
Lemon juice	
Battery Acid	
Milk of Magnesia	
Rain water	
Egg whites	
Drano	14 NaOH

6. http://chemistry.about.com/library/weekly/blacidquiz.htm

Take the quiz.
Place score here _____

7. http://chemistry.about.com/library/weekly/bl060603a.htm

Take the quiz.
Place score here _____.

8. Go to http://www.wordiq.com/definition/Valence_electron
Using the information at this site, write a definition for valence electron.

9. Visit the following site to answer the questions below;
http://dl.clackamas.cc.or.us/ch104-06/valence_electrons.htm

(a) Do valence electrons show a repeating or periodic pattern? Explain.

(b) How many valence electrons does each of the following elements have? Carbon, oxygen, nitrogen, fluorine, neon, and sodium.

(c) What is a quick way to determine the valence electrons for an element?

Unit 4 Covalent Bonding Webquest
Activity #1- Introduction to Covalent Bonding

Open Chemical Bonding. Scroll down to the heading "Covalent Bonding."

1. As opposed to _____ bonding in which a complete transfer of electrons occurs, _____ bonding occurs when two or more elements _____ electrons. Covalent bonding occurs because the atoms in the compound have a similar tendency for electrons (generally to _____ electrons). This most commonly occurs when two _____ bond together. Because both of the nonmetals will want to _____ electrons, the elements involved will share electrons in an effort to _____ their valence shells.
2. How many valence electrons are in one atom of hydrogen?
3. How many valence electrons does hydrogen need to have a full first shell?
4. How does the hydrogen atom "pick up" another electron?
5. What compound does hydrogen form?
6. How do hydrogen atoms make a covalent bond?
7. Visit the simulation, Covalent bonding between hydrogen atoms. Describe or draw what you see.