

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. _____ can be both an acid and a base, depending on how you look at it. It can be considered an acid in some **reactions** and a base in others. Water can even react with itself to form acids and bases.

Most of the time, the positive and negative _____ in distilled water are in equal amounts and cancel each other out. Most water you drink from the _____ has other ions in it. Those special ions in solution make something acidic or basic. In your body there are small **compounds** called _____. The name tells you those are acids. In fruits there is something called _____.

A chemist named _____ came up with a way to define acids and bases in 1887. He saw that when you put molecules into water, sometimes they break down and release an _____. At other times, you find the release of an _____. When a hydrogen ion is released, the solution becomes _____. When a hydroxide ion is released, the solution becomes _____.

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/acidsbaseterms.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 _____.