**Introduction to Acids & Bases Webquest:**

Complete the following webquest independently to help with your understanding of concepts. All answers should be written in your own words to help with your understanding of concepts.

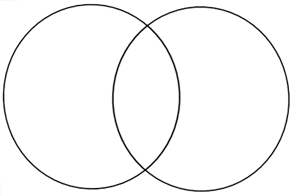
**Solutions**

1. Go to <http://www.chem4kids.com/files/matter_solution.html>
   1. What is the difference between a **homogenous** and a **heterogeneous** mixture?
   2. What is a **solution**?
   3. Give an example of a solution that does not involve a solid being dissolved in a liquid. Explain how this is a solution.
   4. Define the following terms:
      * **Solute-**
      * **Solvent-**
      * **Solubility-**
2. Give an example of each of the following types of solutions:

|  |  |  |
| --- | --- | --- |
| **Phase of Solvent** | **Phase of Solute** | **Example:** |
| Gas | Gas |  |
| Liquid | Gas |  |
| Liquid | Liquid |  |
| Liquid | Solid |  |
| Solid | Solid |  |

**Properties of Acids & Bases**

1. Go to <http://chemistry.about.com/od/acidsbases/a/acidsbasesterms.htm> Scroll down to
   1. **Properties of Acids.** Complete the following sentences for **Acids**
      * Taste \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
      * Changes litmus from blue to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
      * Solutions are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (conduct electricity)
      * React with bases to form \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
      * Create \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ gas when reacting with an active metal.
   2. **Properties of Bases**
      * Taste \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
      * Feels \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
      * Don’t change the color of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
      * Solutions are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (conduct electricity).
      * React with acids to form \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
   3. Give four examples of Common Acids
   4. Give four examples of Common Bases:
2. Complete the Venn diagram below by placing the properties/characteristics in the diagram. **ACIDS** **BASES**



**Sour Taste Corrosive Reactive with metals Conducts electricity**

**H3O+ ions OH- ions Not reactive with metals Cleaning products**

**Fruits and juices Bitter pH greater than 7 pH less than 7**

**Feels slippery Blue litmus paper turns red Red litmus paper turns blue**

**The pH Scale**

1. Go to <http://chemistry.about.com/od/acidsbases/a/phtable.htm> and <http://www.visionlearning.com/en/library/Chemistry/1/Acids-and-Bases/58>
   1. What is pH?
   2. What is the pH range of **acids** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   3. What is the pH of a **neutral** substance \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   4. What is the pH range of **bases** (alkalis)\_\_\_\_\_\_\_\_\_\_
   5. What is the formula for calculating pH?
   6. What does the symbol [ ] mean?
   7. Use information from the sites above and list the following substances from lowest pH to highest pH.

|  |  |  |
| --- | --- | --- |
| **Substance** | **pH** | **pH lowest to highest** |
| Pure Water | 0 | HCl |
| Wine and Beer | 1 |  |
| Milk of Magnesia | 2 |  |
| Ammonia | 3 |  |
| Lime (Ca(OH)2) | 4 |  |
| Milk | 5 |  |
| Tomatoes | 6 |  |
| Egg Whites | 7 |  |
| Baking Soda (NaHCO3) | 8 |  |
| Battery Acid | 9 |  |
| NaOH | 10 |  |
| Apples | 11 |  |
| HCl | 12 |  |
| Lemon Juice | 13 |  |
| Drano | 14 | NaOH |

**What Have YOU Learned?**

1. Go to <http://chemistry.about.com/library/weekly/blacidquiz.htm> and take the quiz.

Place your score here \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. (call me over to initial it before you close out the tab)

1. Look at the picture below.
   1. Identify the side that is acidic.
   2. Explain why this side is acidic
   3. Identify the side that is basic
   4. Explain why this side is basic

