

I ACIDS AND BASES:

A. What is an acid?       $\text{HCl}$        $\text{H}_2\text{SO}_4$        $\text{H}_2\text{NO}_3$



1. An acid is any \_\_\_\_\_ that \_\_\_\_\_  
the number of \_\_\_\_\_ ions when dissolved in water.
2. Hydronium ions form when a \_\_\_\_\_ ion ( $\text{H}^+$ )  
separates from the \_\_\_\_\_ & bonds  $\text{H}_2\text{O}$  to form  $\text{H}_3\text{O}^+$  (hydronium ion)

B. Properties of acids:

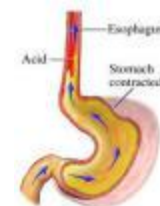
1. They have a \_\_\_\_\_ taste.  
Example: citric acid found in \_\_\_\_\_ like \_\_\_\_\_.
2. They react with \_\_\_\_\_ to produce hydrogen gas.
3. They are \_\_\_\_\_, they destroy body tissue.  
( they \_\_\_\_\_ water from skin.)
4. Acid solutions can \_\_\_\_\_ electricity.
5. Most acids are also \_\_\_\_\_.
6. They make \_\_\_\_\_ change color.
  - a) Bromthymol blue turns \_\_\_\_\_ in the presence of an acid.
  - b) Blue litmus paper turns \_\_\_\_\_.

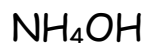


C. Uses of acids:



1. Industries use \_\_\_\_\_ acid to make many products:  
\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_
2. \_\_\_\_\_ acid is used to make fertilizers.
3. \_\_\_\_\_ acid extracts metals from their ores.
4. Hydrochloric acid is also found in your \_\_\_\_\_.
5. Vitamin C is \_\_\_\_\_ acid, found in \_\_\_\_\_ juice.



D. What is a base?

1. A base is any \_\_\_\_\_ that increases the number of \_\_\_\_\_ ions, (OH<sup>-</sup>), when dissolved in \_\_\_\_\_.

E. Properties of bases:

1. Bases have a \_\_\_\_\_ taste.
2. Bases have a \_\_\_\_\_ feel. (dissolves \_\_\_\_\_ in your skin)
3. Solutions of bases \_\_\_\_\_ electricity due to the \_\_\_\_\_ ions.
4. Bases make \_\_\_\_\_ change color.
  - a) Bromthymol blue turns \_\_\_\_\_ blue in the presence of a base.
  - b) Red litmus paper turns \_\_\_\_\_.

F. Uses of bases:

1. Sodium hydroxide is used to make \_\_\_\_\_ and \_\_\_\_\_.
2. \_\_\_\_\_ hydroxide is used to make \_\_\_\_\_.
3. Ammonia (\_\_\_\_\_) is in many cleaners.
4. \_\_\_\_\_ hydroxide (\_\_\_\_\_) is in antacid
5. Lye (\_\_\_\_\_) dissolves \_\_\_\_\_ and is used in Drano.

