

Do Now: Label Next page in notes  
Acids and Bases

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## Acids & Bases

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*They are everywhere..*

*In your food*

*In your house*

***EVEN IN YOU!!!!!!***

# What is an acid?

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- An acid is a solution that has an excess of  $H^+$  ions.
- from the Latin word acidus that means "sharp" or "sour".
- The more  $H^+$  ions, the more acidic the solution.



# Properties of an Acid

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Picture from BBC Revision Bites

[http://www.bbc.co.uk/schools/ks3bitesize/science/chemistry/acids\\_bases\\_1.shtml](http://www.bbc.co.uk/schools/ks3bitesize/science/chemistry/acids_bases_1.shtml)

- Taste Sour
- Conduct Electricity
- Corrosive
- Some acids react strongly with metals
- Turns blue litmus paper red. Red litmus paper stays red.

# Uses of Acids

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Acids

- Food products that are sour or “sharp”
- Sulfuric acid is used in the production of fertilizers, steel, paints, and plastics.
- Car batteries

# What is a base?

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- A base is a solution that has an excess of  $\text{OH}^-$  ions.
- Another word for base is alkali.
- **Bases** are substances that can accept hydrogen ions

# Properties of a Base

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**Bases**

- Feel Slippery
- Taste Bitter
- Corrosive
- Can conduct electricity. (Think alkaline batteries.)
- Do not react with metals.
- Turns red litmus paper blue. Blue litmus paper stays Blue

# Uses of Bases

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- Bases give soaps, ammonia, and many other cleaning products some of their useful properties.
- Your blood is a basic solution.

# pH Scale

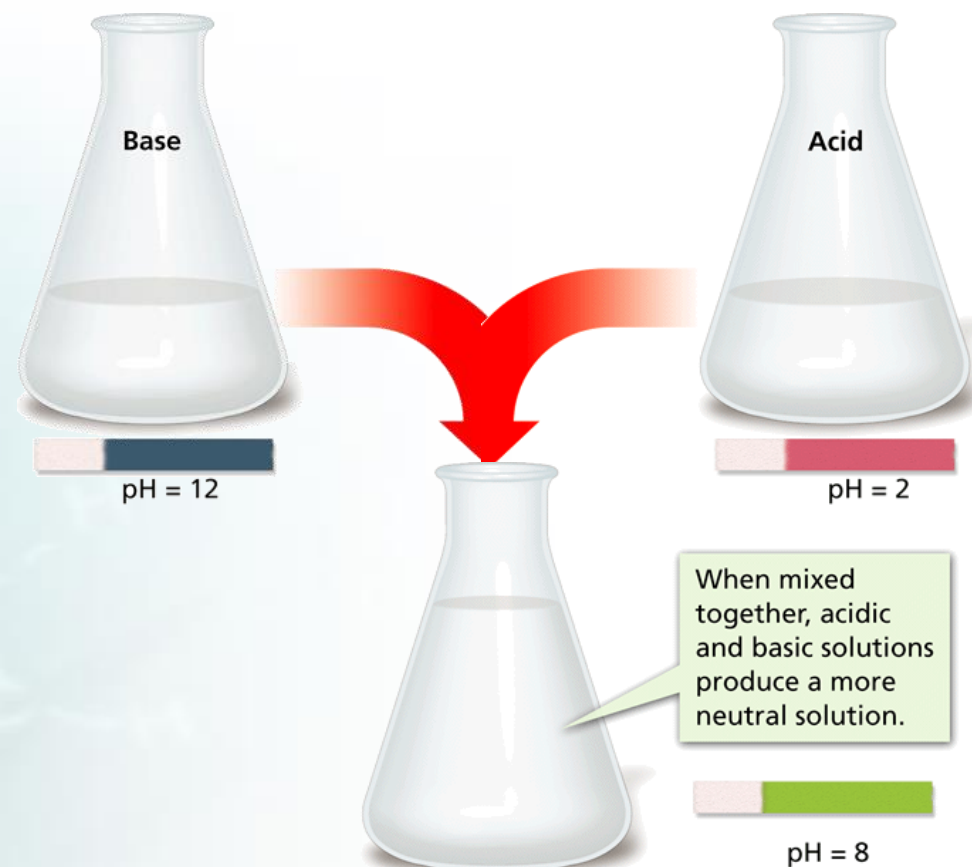
- **pH** is a measure of how acidic or basic a solution is.
- The pH scale ranges from 0 to 14.
- Acidic solutions have pH values below 7
- A solution with a pH of 0 is very acidic.
- A solution with a pH of 7 is neutral.
- Pure water has a pH of 7.
- Basic solutions have pH values above 7.





# Acid – Base Reactions

- A reaction between an acid and a base is called ***neutralization***.
- An acid-base mixture is not as acidic or basic as the individual starting solutions.



## Red Cabbage pH Scale

