

## Comparing Acids and Bases

Characteristic	Acids	Bases
<b>Conductivity</b>	Aqueous solutions are electrolytes (Conduct electricity) ★ The ability of acids to conduct electricity is proportional to their degree of ionization ★ strong acids are strong electrolytes ★ weak acids are weak electrolytes	Aqueous solutions are electrolytes ★ strong bases are strong electrolytes ★ weak bases are weak electrolytes
<b>pH</b>	Increase the hydronium ion concentration of water ★ Have a pH below 7	Increase the hydroxide ion concentration of water ★ Have a pH above 7
<b>Taste</b>	Taste sour	Taste bitter
<b>Indicators</b>	Cause color changes in indicators ( <i>indicator - something that reacts with an acid or base to show a definite color change</i> ) ★ litmus → red ★ phenolphthalein → clear ★ bromthymol blue → yellow ★ methyl orange → red	Cause color changes in indicators ★ litmus → blue ★ phenolphthalein → pink ★ bromthymol blue → blue ★ methyl orange → yellow
<b>Typical Reaction</b>	Corrosive – React with active metals (below hydrogen on Table J <i>Activity Series</i> ) to release hydrogen (except for oxidizing acids like $\text{HNO}_3$ )	Caustic – Feel slippery because bases dissolve skin
<b>Neutralization</b>	React with bases to form a salt and water	React with acids to form a salt and water