

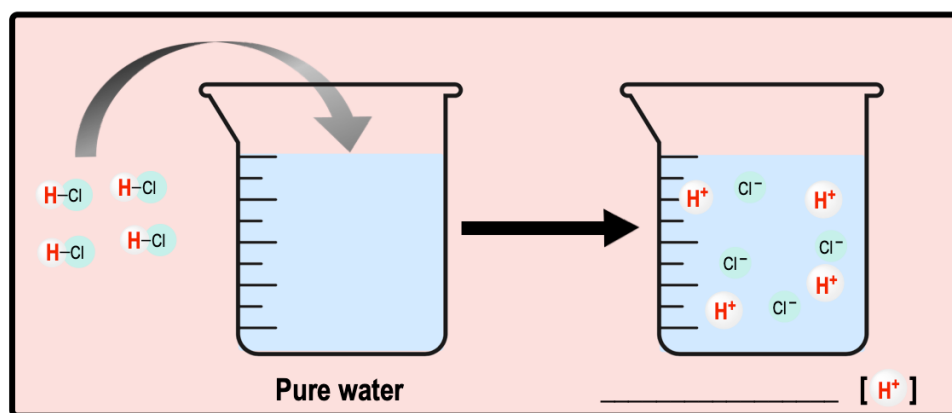
CONCEPT: ACIDS AND BASES

- Many biological processes are strongly affected by the _____ of dissolved H^+ in the aqueous solution.
 - Acids & bases directly affect the $[H^+]$.*

Acids

- _____ : any chemical that _____ a solution's concentration of H^+ ions.

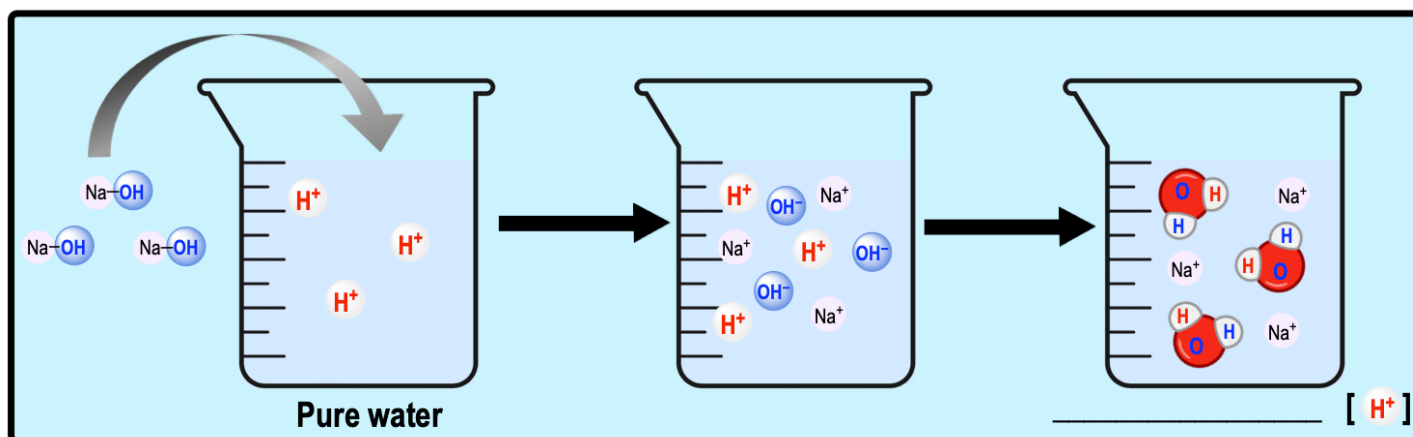
EXAMPLE: Addition of Hydrochloric Acid (HCl) to Water.



Bases

- _____ : any chemical that _____ a solution's concentration of H^+ ions.
 - Example of a Base is Sodium hydroxide (_____).

EXAMPLE: Addition of Sodium Hydroxide (NaOH) to water.



PRACTICE: Which of the following reactions is most consistent with that of a base?

- $NH_4^+ \rightarrow NH_3 + H^+$
- $H_2CO_3 \rightarrow HCO_3^- + H^+$
- $NaOH \rightarrow Na^+ + OH^-$
- $HCl \rightarrow H^+ + Cl^-$

CONCEPT: ACIDS AND BASES

PRACTICE: The addition of an acid like HCl to an aqueous solution (pure water) would result in:

- a) An increase in pH only.
- b) Both the release of H^+ and an increase in pH.
- c) Both the release of H^+ and a decrease in pH.
- d) The release of H^+ into the solution only.
- e) A decrease in pH only.

PRACTICE: In what way(s) do bases work to increase the pH of a solution?

- a) Increasing the concentration of hydroxide ions.
- b) Decreasing the concentration of hydrogen ions.
- c) Decreasing the concentration of hydroxide ions.
- d) Increasing the concentration of hydrogen ions.
- e) Both a & b.
- f) Both c & d.