

## Properties of Acids and Bases

- Identify each of the following as either an acid or a base.
  - $KOH$
  - $HClO_3$
  - $Mg(OH)_2$
  - $HNO_3$
  - $NH_3$
  - $HCl$
  - $CH_3COOH$
  - $NaOH$
- Write the corresponding name for the substances in question 1.
- If you had a clear, colourless, odourless solution and knew that it could be an acid or a base, describe two tests that could be done to identify it properly.
- In your own words, explain the meaning of pH.
- What would you expect as an approximate pH value for each of the following?
  - A very concentrated base that dissociates completely.
  - A basic solution that only partially ionizes.
  - An acid that dissociates completely.
  - An acid solution that only partially dissociates
  - Tap water.
- How much more acidic is a solution with a pH of 4.5 than a solution with a pH of:
  - 5.5
  - 6.5
- How much more basic is a solution with a pH of 12.5 than a solution with a pH of:
  - 10.5
  - 8.5
- What happens to the pH of an acid when water is added to it?
- Toothpastes are often slightly basic. Why does this make sense?