

A decorative graphic on the left side of the slide consisting of two overlapping parallelograms. The front one is blue and the back one is a lighter greenish-blue. They are both tilted at an angle.

ACIDS, BASES AND SALTS

Neutralization in Everyday Life

Ant's Sting

- The sting of an ant contains an acid called formic acid. So, when an ant stings (or bites) a person, it injects an acidic liquid into the skin of the person which causes burning pain.
- If an ant stings a person, then rubbing a mild base like baking soda solution (or calamine solution) on the stung area of the skin gives relief.

- **This is because, being a base, baking soda solution (or calamine solution) neutralizes the acidic liquid injected by the ant and cancels its effect.**
- **Calamine solution contains a base called zinc carbonate.**

Soil Treatment

- **The plants do not grow well if the soil at a place is too acidic or too basic. The excessive use of chemical fertilizers in the fields also makes the soil too acidic.**

- **1) When the soil is too acidic, it is treated with bases such as quicklime (calcium oxide) or slaked lime (calcium hydroxide). The bases neutralize the excess acid present in the soil and reduce its acidic nature. Thus, a farmer should add quicklime (or slaked lime) in the fields if the soil is too acidic.**

Soil Treatment

- **Sometimes, however, the soil is too basic. If the soil is too basic, then decaying organic matter (called manure or compost) is added to it.**
- **The decaying organic matter releases acids which neutralize the excess bases present in the soil and reduce its basic nature.**

- **Thus, a farmer should add decaying organic matter (manure or compost) in his fields if the soil is too basic.**

Factory Wastes

- **The waste substances discharged by many factories contain acids.**
- **The acidic factory wastes should be treated with basic substances to neutralize them before discharging them into water bodies**

- **If these untreated factory wastes are discharged into water bodies (like lakes, ponds, and rivers, etc), then the acids present in them will kill the fish and other aquatic organisms which live in the water bodies.**

PLENARY

**Q. Which acid is present in ant
sting?**

ASSESSMENT

Q. While playing in a park a child was stung by a wasp. Some elders suggested applying the paste of baking soda and other lemon juice. Which remedy is more suitable and why?