

Why Neutralize? The Impact on Health and the Environment

Teachers' Guide:

Learning Outcomes:

At the end of the lesson, a student should be able to:

1. Explain the meaning of neutralisation
2. Write equation for some neutralisation reactions
3. Explain the application of neutralisation in daily life

Prerequisites :

Before watching this video, a student should have prior knowledge of:

1. Basic concept of neutralisation
2. Writing chemical equation
3. pH concept

Suggested activities:

1. Problem solving - Brainstorming session
2. Carry out a simple experiment on the concept of neutralization
3. Mind mapping

The materials and apparatus in Activity 2 are not only limited to hydrochloric acid. You may use any dilute acid or any common materials such as vinegar.

Red cabbage can be used as an indicator to replace universal indicator.

How to prepare the red cabbage juice:

1. Cut red cabbage into small pieces.
2. Put the cabbage into a blender and pour 500 ml of water. You can also grind the cabbage using a pestle and mortar and then put them into a jug of water and leave them for a few minutes. The water will turn to a bright purplish colour.
3. Filter out the leaves using a strainer and pour the mixture into a container.
4. Please take note that if the solution is acidic, the red cabbage indicator will turn to red; while if the solution is basic, it will turn to greenish-yellow.

Note :

If the activities require longer time, this video can be divided into two lessons.

Suggestions:

1. Lesson 1 is from Segment 1 to Activity 4. Let the students discuss and find the answer.
2. In Lesson 2, you can continue with Segment 5 until Segment 6.