Activity: What Are Acids & Bases? Video Questions

FOR THE TEACHER

Summary
In this lesson, students will watch a video and answer questions about acids and bases. They will learn about characteristics of acids and bases, the pH scale, and the role of acids in biochemistry.

Grade Level
Middle School, High School

Objectives
By the end of this lesson, students should be able to:
- Determine what makes some acids safe to eat and others dangerous.
- Define acids, bases, pH, and neutralization reactions.
- Learn about the role of acids in biochemistry.

Chemistry Topics
This lesson supports students’ understanding of:
- pH
- Acid/base theories
- History of Chemistry
- Strong vs. weak acids/bases
- Acid base reactions

Time
Teacher Preparation: minimal
Lesson: 10 minutes

Materials
- What Are Acids & Bases? Video
- Student handout
- Computer and projector with sound and internet access

Safety
- No specific safety precautions need to be observed for this activity.

Teacher Notes
- The “What Are Acids and Bases?” video is part of the ACS video series Chemistry Basics. The entire series can be found here.
- The running time of this video is about three minutes. It goes through information pretty quickly, so you may want to pause the video at certain points or play the video through twice.
- This video is intended for students to watch, and for teachers to integrate into their curriculum.
- The student questions/answers are presented in sequential order in the video.
- An answer key has also been provided for teacher reference.
FOR THE STUDENT
Lesson

What Are Acids & Bases? Video Questions

Instructions
While watching the ACS Chemistry Basics video about acids and bases, answer the following questions:

1. What do all acids do when dissolved in water?
2. When was the pH scale developed?
3. What numbers on the pH scale indicate an acid?
4. What numbers on the pH scale indicate a base?
5. What is the chemical difference between acids and bases?
6. What is the reaction between acids and bases called?
7. What do we call a substance that can act as both an acid and a base?