

Name \_\_\_\_\_

## The pH Scale: A Colorful Journey Through Acids and Bases

### Short Answer Key

1. The pH scale helps bakers because it allows them to understand how ingredients like baking powder, which is mildly basic, interact with acidic components in recipes. This interaction affects how baked goods rise and their final texture.
2. Pool owners need to regularly test the pH of their pool water to ensure it remains balanced. If the pH is too low (acidic) or too high (basic), it can cause skin and eye irritation for swimmers and affect the effectiveness of pool sanitizers.
3. In agriculture, understanding the pH of soil is important because different crops thrive in specific pH conditions. By adjusting the soil pH, farmers can create optimal growing conditions for their crops, leading to better yields.
4. The pH scale plays a vital role in blood chemistry and healthcare. Our bodies maintain a blood pH close to 7.4, which is slightly alkaline. Even a small change in blood pH can have serious health consequences, affecting enzyme activity and the function of various bodily systems.
5. Ocean acidification is the gradual decrease in ocean pH due to the absorption of excess carbon dioxide from the atmosphere. This phenomenon can harm marine life, especially organisms with shells or skeletons made of calcium carbonate, as the increased acidity makes it difficult for them to build and maintain these protective structures.

