

Setting the Stage

Ask students to use their knowledge of pH, acids, and bases to speculate about what acid rain is. Describe most precipitation — rain, snow, hail, or sleet — as slightly acidic. Describe acid rain as precipitation with a pH of 5.0 or lower resulting from human activity — things people do.

Have students draw a pH scale. Ask them to label the pH values of 0, 7, and 14 and the parts of the scale that are acidic, neutral, and basic.

Have students label pH 5.0 or lower as the values scientists usually use to describe the pH of acid rain. Ask them to add *acid rain* to their personal word lists and to define it as precipitation (rain, sleet, snow, or hail) with a pH of 5.0 or lower that results from human activity.

The Activity

Part I: Taking a Closer Look at Acid Rain

Explain that students will start to take a closer look at what acid rain is. Divide the class into pairs or small groups.



Distribute Student Science Journal page 4. Have students use the procedure to investigate “What Is Acid Rain?” (Part I).

Procedure for Taking a Closer Look at Acid Rain

Discuss questions 1-5 with your partner or group.



1. What is the pH scale?



2. What are acids? neutral substances? bases?



3. Name a strong acid and identify its pH. Name a weak acid and identify its pH.



4. Name a strong base and identify its pH. Name a weak base and identify its pH.



5. What is the pH of acid rain?



► *Students can use the online resources for Session 2 and their data from measuring pH to answer question 1-5.*