

Air Pollution Investigation Kit Worksheet

Data Tables

Part I. Particulates in the Air

Location of slide	
Observations after 1 week	
Count 1 (1 cm ²)	
Count 2 (1 cm ²)	
Average value of Count 1 and 2	

Part II. Smoke and Acidic Gases in Air

Experiment A. Smoke from Match

Original contents, color and pH of solution	
Observations after match was placed in plastic jar	

Experiment B. Outside Air

Original contents, color and pH of solution	
Observations after outside air is blown through solution	

Part III. Acid Rain

Experiment A. Simulated Acid Rain

Marble chip with “unpolluted water”	
Marble chip with “simulated acid rain solution”	

Experiment B. Rainwater

Color of acid rain test strip after sampling	
pH of rainwater	

Questions (Answer the following questions on a separate sheet of paper.)

Part I. Particulates in the Air

1. Did your test area have low or high particle pollution? Give examples of possible sources of particle pollution in your test area. Compare your results with your classmates.
2. Which location had the highest number of particulates?
3. Which location had the largest particulates? the smallest?
4. Which location had the most variable types of particulates?

Part II. Smoke and Acidic Gases in Air

5. What effect does the pH of smoke have on water in the atmosphere?
6. What are some possible sources of acidic gases in air?
7. Explain possible outcomes of high levels of acidic gases in the atmosphere.

Part III. Acid Rain

8. What effect did the simulated acid rain have on the marble chip?
9. What does this experiment show about the decay of buildings and statues in metropolitan areas?
10. According to Experiment B, are the limestone and marble buildings in your area in danger of deterioration?
11. What effects does acid rain have on plant life and other organisms?