



Exploration Summary

Students will identify images of U.S. cities and drag them to the correct location on a map to discover how each of these locations is working to reduce pollution.

Student Learning Objectives

- Name several major contributors to ground-level air pollution.
- Describe several ways in which communities are working to improve air quality.

Student Worksheet

The student worksheet includes questions to check understanding, instructions for how to use the Exploration, and a section for recording Exploration data. Why do the questions come first? In following best practices for teaching science, students are asked to review questions before participating in an activity. When the questions come first, students are more focused on the intended content of the activity. Then they can respond to the questions during the activity or after completion of the activity.

Exploration Procedure

Explain that the purpose of this Exploration is to learn how various communities in the United States are working to reduce ozone and other kinds of pollution. Follow the appropriate procedure below.

Student Performs Exploration

1. Tell students how much time they will have to complete the Exploration and the student worksheet.
2. Explain how students should proceed:
 - Read the questions before starting the Exploration.
 - Follow the instructions on the worksheet to perform the Exploration.
 - Take notes or record data as necessary.
 - Respond to the questions in writing.
3. Explain that you will be available to help any students who raise their hands.
4. Tell students to begin the Exploration.
5. When time is up, ask students to share their answers.
6. Talk about the Discussion Question below.



Teacher Performs Exploration

1. Display the questions from the student worksheet and ask students to tell you what they think they will learn from the Exploration based on its questions. Highlight key words.
2. Read the Introduction and click the Continue button.
3. Roll the mouse over each photo to reveal the hint. Ask students to identify the correct location for a particular photo and drag it to that spot on the map.
4. Read the outcome explanations as they appear and discuss.
5. Read the congratulations text. Note that the question posed is the discussion question.
6. Pose each of the questions below and ask for answers from the class. Replay parts of the Exploration as necessary to illustrate the answers.
7. Talk about the Discussion Question below.

Optional: Use this Exploration as a small-group activity at a computer station. Assign it to students who need specific reinforcement of the concept.

Questions

1. Name three major contributors to ground-level air pollution.
Answer: heavy traffic, loss of trees, and industries that burn fossil fuels
2. What is Atlanta doing to reduce pollution?
Answer: Creating communities with homes, shops, and public transportation all close together so more public transportation can be used.
3. What source of pollution was mentioned by every community?
Answer: Too many polluting vehicles (traffic)

Discussion Questions

Does our community have ozone alert days or other air pollution problems? (If not, ask if the nearest big city does.) What solutions might help? Challenge the students to come up with some solutions not listed in the Exploration.

Accept all reasonable responses and discuss.