The Ozone Lab

Objective:

To determine the amount of ozone present in different areas.

Time:

This lab will take approximately 1 hour to make the Schoenbein paper strips. The strips will be left out for 8 hours to detect the ozone.

Materials:

- ¼ teaspoon potassium iodide
- Distilled water
- Spray bottle
- Filter paper
- Hot plate
- Glass plate
- Corn starch
- Small paint brush

Procedure:

1. Put 100 ml of distilled water into a 250-ml beaker.
2. Add 1¼ teaspoon of corn starch.
3. Heat and stir until the mixture turns into a gel and is translucent.
4. Remove from the heat, add ¼ teaspoon of potassium iodide, and stir.
5. Let the solution cool.
6. Lay a piece of filter paper out and carefully brush the paste onto the filter paper.
7. Turn the filter paper over and coat the other side with the paste.
8. Set the paper out of direct sunlight and allow it to dry.

9. Cut the filter paper into 1-inch strips.
10. Take the strips and hang them in places where you want to collect your data (not in direct sunlight). Allow to hang for 8 hours.
11. After 8 hours, spray the paper with distilled water and observe the color.

Data:

Compare your strips with those of other students in your class. They will range from no change in color to dark purple. The darker the color the more ozone was detected. Fill out the data table.

Place where you put the strip	Color

Analysis:

1. In what locations did you and your fellow students find the worst ozone problem?

   The least?

2. Explain the epigram "ozone is good up high, but bad nearby."

3. Why do you think the place that had the highest ozone concentrations had such a high amount of ozone?