



Center for the Environment at Catawba College

Campaign for Clean Air

Clean Air in the Classroom

## Stage 1 Activity 3

## “To Point or Not To Point”

### Overview

This activity focuses on the science competency goal that addresses point and nonpoint source pollution. Since many of the lessons in the rest of the unit focus on certain sources of pollution, students should learn the difference between point and non-point source pollution early on.

A portion of this lesson is an excerpt of an activity created by the North Carolina Department of Waste and can be found at <http://www.wastenotnc.org/nonpointsource00.pdf>.

### North Carolina Standard Course of Study

This lesson meets seventh grade science competency goal 3.04.

### Learning Objectives

Students Will Be Able To identify the difference between point and non-point source pollution

SWBAT list examples of point source air pollution.

SWBAT list examples of non-point air pollution.

### Materials

- “Non-Point Source Pollution” PDF
  - **10 paper lunch bags**, *each containing one of the following:*
    - empty motor oil container
    - plastic baggie
    - toilet paper tube
    - six pack ring
    - toy car
    - small toy cow or pig
    - picture of manicured lawn
    - with flowers
    - small jar of dirt
    - empty container of garden
    - pesticide
    - crumpled piece of paper
- Air Pollution Concentration Game

## Procedures

1. Pre-assessment: Have the students fill in a small chart, similar to the one below, with their guesses to each of the answers on a notecard or sheet of paper.

Definition of point source pollution	Definition of non-point source pollution
Example of point source <b>air</b> pollution	Example of non-point source <b>air</b> pollution

2. Review the previous activity, and then play another game to clarify these ideas further. The “Non-Point Source Pollution” supplement connected with this activity on the website explains these pollution types in more detail, but you will need to conceal a few household items in brown paper bags before you allow the students reach in and try to identify the contents of the bag. In doing so, the students familiarize themselves with sources of non-point pollution.
3. To solidify what the students have learned and apply it to air pollution specifically, have them play the “Air Pollution Concentration Game.” In this game, cut out the cards available from the website, and set up a game board by taping the words and pictures down, in random order, but in an organized alignment on the white board. Then have the students (either one person against another at a time or split the class into two teams to take turns) and have the students play the classic concentration game. The only variation is that the match will not be a set of two identical pictures, but of a picture and the corresponding label of pollution, whether it is point source or non-point source pollution. They will remove one card and look at the other side, then make a choice of which one they think matches. If they successfully make a match, place those in that person or group’s pile or column on the scoreboard which should also be on the whiteboard. If they do not make a match the player must put the cards back in the same spot where they got them from. In either case, a match or not, it is the other player’s turn. In the end, the team with the most matches wins the game.

## Assessment

Have the students fill out another chart exactly like the one listed previously, but have them fill it in with the new information they have learned. When both old and new charts are taken up and graded, you will be able to see areas of progress and understanding derived from your teaching.