



A POT OF POLLUTION

ALLOTTED TIME: Variable

SUGGESTED GRADE LEVEL: 3 - 5

NUMBER OF STUDENTS NEEDED: Any

OBJECTIVES:

Students will grow plants to study the effects of various pollutants. This project takes time, as plants should be close to maturity when used. The students choose a type and plant their seeds.

MATERIALS:

1. Seeds – lettuce, radishes, marigolds
2. Water
3. White vinegar
4. Vegetable oil (simulates oil spill)
5. Coarse salt (simulates road salt)
6. Soil; long planting containers or small window boxes
7. Camera (optional)

PROCEDURE:

1. Plant 4 rows of seeds in individual containers, each row containing the three types of seeds. Label each seed type. Students can grid the arrangement for data collection. Rows should stay separated, but plant types should be able to be identified. Use Xeroxed seed packet pictures on straws to identify rows.
2. When seedlings have grown close to maturity, have students hypothesize and record what effect each of the following mixtures will have on the plants:
 - a. Plain water in Row 1
 - b. $\frac{1}{2}$ water and $\frac{1}{2}$ vinegar in Row 2 (simulates acid rain)
 - c. Oil spill in Row 3
 - d. $\frac{1}{2}$ water and $\frac{1}{2}$ salt in Row 4
3. Water each row regularly using the designated mixture. Students should record daily any effects observed. Be sure to check leaves, stems, and roots. Check results of the tests with previous hypotheses. Photographs taken at distinctive stages can be used for later study.
4. Dispose of pollutants properly. Investigate the disposal procedure in your community, or call the local environmental agency.



SOURCES:

1. Adapted from Lynn Leighton in CONNECT, Teacher's Laboratory, October 1989.
2. Museum Institute for Teaching Science (MITS)