



Curriculum Units by Fellows of the Yale-New Haven Teachers Institute  
1999 Volume VI: Human-Environment Relations: International Perspectives from History, Science, Politics, and Ethics

---

## **Abiotic Factors and Plants: A Local Pollution Study With Global Implications**

Guide for Curriculum Unit 99.06.06  
by Maureen E. Taylor-French

Plant study is among the easiest and most cost effective units which may be employed by Integrated/Life/Earth Science educators. From a simple study of plants and interactions with their environment, students can examine how plants respond to pollutants which also affect us. Given information presented in this unit, Science, Math and Social Studies students can observe impacts of pollution on different plant types, describe how they contribute to local pollution, debate local land use issues, and describe how local actions affect and are affected by global changes.

This four-week unit is written for Grade 7/8/9 integrated science curriculum. It is inquiry-based. Lessons and activities accommodate the City of New Haven's performance standards, many of which are National Science Association standards. The lab experiments are presented in CAPT format, requiring critical thinking, data analysis and reporting, and assessment.

In this unit, students will:

- Complete Controlled Lab Experiments employing the Scientific Method
- Classify living organisms
- Describe plant functioning
- Investigate the sun as an energy source
- Describe and illustrate Cycles in Nature
- Describe pollutants and examine their impacts in lab activities
- Assume personal responsibility for the environment
- Plot and illustrate how global winds carry pollutants
- Debate impact of societal demands and technology on the environment

(Recommended for Integrated Life Science, grade 7 and Integrated Earth Science, grade 8.)

---

<https://teachersinstitute.yale.edu>

©2019 by the Yale-New Haven Teachers Institute, Yale University

For terms of use visit <https://teachersinstitute.yale.edu/terms>