



Curriculum Units by Fellows of the Yale-New Haven Teachers Institute
1997 Volume VII: Environmental Quality in the 21st Century

Where Are Environmental Hazards

Guide for Curriculum Unit 97.07.01
by Holly S. Anthony

This unit leads students to develop an understanding of the following: toxicity, exposure, and precautions of certain chemicals, including pesticides such as DDT, heavy metals, lead poisoning, radon, sulfur dioxide, nitrogen dioxide, carbon monoxide, water pollution, drinking water quality, and air pollution. Overall, students can learn about specific environmental pollutants, causes, effects, and possible solutions.

Some emphases in this curriculum will be on conducting hands-on activities, such as testing water quality from tap water, classroom testing of radon and carbon monoxide in the air, debates and analyses of various environmental issues, field trips, and mock environmental investigations of homes / buildings in order to identify agents that do or do not meet standards for pollutants. These mock investigations will require students to understand scientific measurement units such as ppb (parts per billion), ppm (parts per million), mcg (microgram), pCi (picoCurie), dL (deciliter), and L (liter), and to determine if the given numerical values of concentration and time pose an environmental threat.

The curriculum is designed to integrate the readings of texts and current scientific journals, writings based on students' opinions of environmental issues, and cooperative activities for groups of students. The approach for this curriculum is interdisciplinary, combining science, mathematics, and language arts. Some questions that can be addressed in this curriculum are: What threats do pesticides in your food pose? What are ways to get pesticides out of your food? What are some possible contaminants in our drinking water? How can you find out if your water is safe? What are some possible contaminants in our air? How do we pollute indoor air? What can you do about your indoor air quality? How should toxic waste disposal be handled?

(Recommended for Earth Science and Chemistry, grades 7-12)

<https://teachersinstitute.yale.edu>

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

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