



Yale-New Haven
Teachers Institute®

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

Problem Solving Using Mathematics Spatially to Interpret Environmental Issues

Guide for Curriculum Unit 99.06.04

by Creola Smith

The environmental issue to be addressed is Air. From this topic the student will be exposed to the idea of environment and how mankind interacts with land, air and water. All these items combine to form the environment. The environment is inter- and intra-dependent on the four elements listed above. The issues that this unit addresses are air its components, air quality, legislation, deregulation and pollution.

This is achieved through integration of the content areas math, science and language arts. Critical thinking skills are emphasized, while tuning or developing prior knowledge and new knowledge, which are the foundation of problem solving. The student will develop self confidence in this area.

Environmental conditions have a direct correlation on public health issues and the economy. Student will begin to dialogue the affect of clean air verses contaminated air. Clean Air Act is an example of government's response to public health issues in the environment. Air is studied from the molecule to the compounds it forms in the atmosphere and its reaction to other gases found in the environment. The Clean Air Act, deregulation of power plants, integrated lesson, and alternative assessments as a guide for student understanding are the essence of this unit.

(Recommended for Mathematics and Science, grades 6-12.)

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