

## OVERVIEW OF THE KIT

# Chemicals in the Environment

## Overview, Objectives, Pedagogy and Practice

### Overview

This kit provides teachers, college faculty and other educators with the materials needed to engage students in a dynamic and constructivist process of learning how chemicals in the environment have been perceived by the people in the United States and how the U.S. media has constructed that public perception. The subject areas covered include agriculture, biology, chemistry, earth and environmental sciences and history of science. The kit contains five lessons including a slide history and four case studies.

This is one of a series of three curriculum kits that collectively examine the way various media have represented human interactions with the natural world. *Chemicals in the Environment*, *Endangered Species* and *Resource Depletion* explore the media interpretation of the social basis of these concerns.

### Objectives:

- To teach core information and vocabulary about the history of chemicals in the environment.
- To teach students to understand historical and scientific perspective as communicated through various media.

- To train students in visual literacy and media literacy skills, especially the ability to identify persuasion in marketing ideas and consumption.
- To engage all students, but particularly those disengaged from traditional school work, in complex critical thinking and the development of reading, listening and visual decoding skills and attitudes that support life-long democratic citizenship.

### Learning Standards:

This kit addresses specific standards from the following:

### National Science Education Standards (NSES):

- *Science in Personal and Social Perspectives:* personal and community health, environmental quality, natural and human-induced hazards, science and technology in local national and global challenges.
- *History and Nature of Science:* science as human endeavor, nature of scientific knowledge, historical perspectives.
- *Science as Inquiry:* Understandings about scientific inquiry.
- *Physical Science:* Chemical reactions.
- *Life Science:* Matter, energy and organization in living systems.
- *Science and Technology:* Understandings about science and technology.

**National Council for the Social Studies (NCSS):**

- *Culture*: Knowing how belief systems, such as those related to human and environmental health, influence other parts of the culture.
- *Time, Continuity, and Change*: Knowing what things were like in the past and how things change and develop. Drawing on their knowledge of history to make informed choices and decisions in the present.
- *People, Places and Environments*: Knowing why things are located where they are. How places and environments change and what implications these changes have for people.
- *Individual Development and Identity*: Knowing how personal identity is shaped by one's culture, by groups, and by institutional influences.
- *Individuals, Groups, and Institutions*: Knowing how institutions are formed, what controls and influences them, how they control and influence individuals and culture, and how institutions can be maintained or changed.

**National Council of Teachers of English (NCTE):**

- applying a wide range of strategies to comprehend, interpret, evaluate, and appreciate print and non-print texts.
- applying knowledge of media techniques, figurative language, and genre to critique and discuss print and non-print texts.

This kit also addresses many of the core learning skills that have been identified as essential skills for the **21st Century Literacy**, specifically:

--Information and media literacy skills: analyzing, accessing, managing, integrating, and evaluating information in a variety of forms and media.

--Critical thinking and systems thinking: exercising sound reasoning in understanding and making complex choices, understanding the connections, conflict and change among systems.

Finally, the activities foster group discussion skills, and can be easily linked to related lessons in other disciplines such as art, economics or multicultural studies.

**Access Materials: Slides, Video and Print**

All print and media materials for this kit are available for free download at [www.projectlooksharp.org](http://www.projectlooksharp.org) This includes the Powerpoint slide show, video clips (Quicktime), and all print materials (PDF). Educators will need access to a computer and digital projector or large monitor so that the class can identify key details in each slide. Teachers will want to print and review the lesson and make copies of student histories and assessments prior to instruction. Educators may purchase at cost a print copy of the entire teacher guide (including lessons, readings and assessments) and a CD/DVD with the media materials from the Ithaca College Bookstore. Check the Project Look Sharp website for more information.