

Looking at the Environment (LATE)

Publisher and Developer: The WorldWatcher Project at Northwestern University

Grade levels: 9–12

Scientific domains: Environmental and earth science, geography, and technology

Web site:
<http://www.worldwatcher.nwu.edu/curriculum.htm>

Year profiled: 2002

Looking at the Environment (LATE), still in development, is a high school course with a geographic perspective on environmental science. The *LATE* curriculum employs geographic visualization and data analysis tools to support its inquiry-based pedagogy. Lessons and software are provided through the Internet. Its design intends to integrate technology with hands-on activities, group work, and discussions to help students understand scientific and social issues associated with changes in the environment.

SCOPE/CONTENT

LATE is designed as a research-based environmental science curriculum with a focus on technology and scientific visualization. The curriculum consists of four units centered on three issues: the relationship between population growth and resource availability, electricity generation and meeting the demand for energy, and water resources management for agricultural use and human consumption. The first three units focus on each of these subject areas, respectively. The fourth unit includes activities that are interwoven with the other three units over the year and allows students to apply their learning to study and investigate local, regional, and global environmental issues. These applications include understanding local ecosystems, collecting and analyzing data on basic physical properties, analyzing the environmental impacts of human activities, identifying the potential threats to the environment, and making recommendations based on an evaluation of alternatives.

The activities were designed to engage students in investigations of realistic environmental problems and to introduce them to a variety of research techniques and computer tools for the visualization and analysis of geographic data.

FORMAT

LATE is fully downloadable off of the World Wide Web. Its four units are available as PDF documents. The WorldWatcher Project's Web site includes descriptive sites for each component of the program, including the curriculum units; software description and directions for downloading; curriculum scope and sequence; and the program's correlation with the *National Science Education Standards* (NRC), *Benchmarks for Science Literacy* (AAAS), *National Educational Technology Standards* (International Society for Technology in Education), and *National Geography Standards* (National Council for Geographic Education).

Along with the units, *LATE* includes a set of computer tools: WorldWatcher, a visualization and analysis tool; My World, a geographic information system (GIS) tool; and ArcView, a commercial GIS.

ASSESSMENT INSTRUMENTS

The curriculum includes unit-embedded assessments. Teachers are able to track student progress on curriculum objectives, which, according to the developers, are aligned to the *National Science Education Standards*.

PROFESSIONAL DEVELOPMENT SUPPORT

The WorldWatcher Project is in the process of field-testing the *LATE* curriculum. Teachers implementing *LATE* receive materials, technology, and professional development. Field-test teachers receive a set of classroom materials and have the opportunity to collaborate with peers around the country, work closely with the development team at Northwestern University, and earn graduate credit (CPdUs).

STAND-ALONE VS. SUPPLEMENTAL

LATE is designed as a year-long stand-alone environmental science course.