



Curriculum Units by Fellows of the Yale-New Haven Teachers Institute
1998 Volume III: Art and Artifacts: the Cultural Meaning of Objects

Technological Change in a Coastal New England Village, 1790-1990 - - The Duck Creek Harbor Site, Wellfleet, Massachusetts

Guide for Curriculum Unit 98.03.03
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This curriculum unit brings together information from the fields of material culture, historical archaeology, ecology, and environmental science in an interdisciplinary approach to learning. I identify strategies for the study of excavated archaeological artifacts using the language and methodologies of material culture. The evidence gained from these studies is used to examine changing technologies and associated present day environmental problems. An expected outcome of the study is an understanding of the changing beliefs and values of a coastal New England community during the past two hundred years. The curriculum unit has been developed for use in my high school course, "Environmental Science," a science elective for juniors and seniors. It is based on a long term historical archaeology project I have been conducting. The archaeological site, which is underwater at high tide and exposed at low tide, is in a tidal creek at the center of the Outer Cape Cod town of Wellfleet, Massachusetts.

Environmental Science is the study of how people interact positively and negatively with other living organisms and with the nonliving environment. It is a physical and social science that draws on knowledge from many disciplines. An important component of environmental science is the examination of technology, that applied science which employs process or invention or engineering to provide a social group with the material objects of its civilization. The technologies considered in this unit include energy use, food handling and preservation, disposal of waste, methods of transportation (carriage, sailing ship, steam ship, railroad, automobile), and those technologies more broadly encompassed in trade or commerce. The excavated objects my students examine to learn about these changing technologies are lighting devices (candlesticks, whale oil lamps, kerosene lamps), kitchen and other household items (pewter spoon, earthenware milk cooling pans and other storage containers, chamberpots), 19th century children's toys, early maps of Wellfleet Village, and such tools and devices as a brass telescope, a harpoon, a whale blubber cutting blade, and an eel spear.

The specific environmental problems which I anticipate will emerge from student work include the near-extinction of baleen whales, the decimation of the Atlantic fishery, the changing economic base of a small New England community, the collapse and subsequent recovery of Cape Cod's human population, human impacts on estuaries, salt marshes, and freshwater wetland ecosystems, and the growing shortage and contamination of groundwater.

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