



Yale-New Haven
Teachers Institute®

Curriculum Units by Fellows of the Yale-New Haven Teachers Institute
2005 Volume V: Ecology and Biodiversity Conservation

Historical Harbor Habitats

Guide for Curriculum Unit 05.05.04
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This is a complete 10th grade biology or environmental science unit. It begins with food webs of a natural coastal marine environment. An initial trip to Outer Island (located in the Thimble Islands) introduces students to typical organisms in their community. Teachers will use this information to introduce the characteristics of living things, heterotrophs and autotrophs, photosynthesis, cellular respiration and microscopes. It then looks at how the Industrial Revolution has impacted the water quality of New Haven harbor. Students will determine how the bioaccumulation of pollutants may affect a food web. The scientific method will be taught by conducting an ecological experiment. By accessing local research on the harbor the students will determine sediment toxicity throughout the area. With this information students will generate a hypothesis about the environmental quality throughout the harbor. The unit will be concluded by determining an ecological profile of New Haven harbor by sampling the biological, chemical, and geological environments of four parks located along the coastline of the harbor. Students will generate conclusions on the overall health of New Haven harbor after the study.

(Recommended for Biology, grade 10; Environmental Science, grades 9-12.)

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