

Curriculum Units by Fellows of the Yale-New Haven Teachers Institute 2011 Volume II: What History Teaches

Solving Environmental Problems

Guide for Curriculum Unit 11.02.07 by Charlene Woodland

The purpose of this unit is to teach students how to solve environmental problems, drawing upon skills of research and analysis used by historians and scientists, among others. The objectives with corresponding lessons are designed to facilitate critical thinking skills. Although hands-on experiments are essential to scientific study, not all questions can be answered in the lab. Often there are other influences at work in causing and solving environmental problems – namely humans. Due to this often unpredictable variable, students, especially in environmental science or environmental studies, need a more thorough look into how humans perceive their world, also called their worldview.

Solving environmental problems requires identification of the factors that affect decision-making. The unit begins with methods on teaching research skills. This includes primary and secondary resources, credibility of resources, and proper use of citations. These skills of analysis carry over to a lesson on graphical analysis. Once students have obtained some background knowledge on worldviews, they will analyze case studies. The case studies are original and written in everyday language. The issues are regional to ensure relevancy for students, but they are easily adapted to other localities.

The unit is designed for the teacher of advanced environmental science looking for ideas on how to teach environmental ethics, economics, and the policy portions of the environmental science curriculum. More broadly, the unit may be of interest to teachers seeking to enhance students' critical thinking skills.

(Recommended for Environmental Science, grades 11 and 12)

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