



YALE NATIONAL INITIATIVE

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Curriculum Units by Fellows of the National Initiative
2009 Volume VII: Energy, Climate, Environment

Unconventional Transportation

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Students will be introduced to the effects of human choices on the local environment through an analysis of data. We will look at methods of transportation, and their pollution outputs (air, liquid, and solid). They will use current data to analyze and predict future pollution.

With these predictions in mind we will begin exploring the atmosphere past, present, and future. Students will perform experiments regarding current energy resources. They will measure pollution outputs, and test effectiveness. Students will examine the most utilized nonrenewable resources and generate reports of benefits and costs of each.

After which they will research renewable energy sources. Students will examine these sources and debate potential challenges to each source. They will measure the pollution outputs of each. Finally in small groups students will use their knowledge of energy resources to create a low to non polluting transportation prototype to revolutionize the way in which we transport people, goods, and information. They will design, organize, and create a model of their prototype. They will calculate the pollution output of their vehicles, and predict the impact their machinery will have on air, water, and congestion pollution. Each group will also be responsible for creating a marketing campaign to sell their product.

The final results will be presented in an energy which will highlight our data findings, prototypes, and outputs.

(Developed for Math and Science, grade 6; recommended for Math and Science, grades 6-8)

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