



Yale-New Haven  
Teachers Institute®

Curriculum Units by Fellows of the Yale-New Haven Teachers Institute  
2004 Volume IV: Energy, Engines, and the Environment

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## Las Maquinas y Nosotros: Machines and Us

Guide for Curriculum Unit 04.04.02  
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This unit introduces the concepts of energy, machines and engines. Although the principles surrounding thermodynamics are complex it is imperative that students at this early age become familiar with this topic. The concepts of heat, work, and energy - viewed as everyday phenomena present in engines and machines - make an abstract topic more relevant and easier to understand and relevant. Using hands-on activities, simple demonstrations and learning centers this unit explores the sources of energy, both renewable and non-renewable. The use of journal writing establishes a medium through which the students can expand their English language expression. My students are English- and Spanish-dominant students participating in a two-way immersion program that promotes science inquiry. This unit was developed with the intention of enhancing the science curriculum in second grade. As a curriculum and staff developer I will implement this curriculum as part of my modeling and coaching for teachers in the classroom. For two weeks for approximately an hour period I will meet with my students at their assigned classrooms. A final project will include a written collection of scientific and historical observations.

(Recommended for Science, Social Studies and Language Arts, grades 2-5.)

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