



Curriculum Units by Fellows of the Yale-New Haven Teachers Institute  
2012 Volume IV: Engineering in the K-12 Classroom: Math and Science Education for the 21st-Century Workforce

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## Simply Amazing

Guide for Curriculum Unit 12.04.02  
by Carol P. Boynton

Work smarter not harder! This expression articulates the benefit of the basic engineering principles behind the simple machines that make our lives easier. All around us, day in and day out, we use simple machines to help us work smarter and more efficiently. But first we must ask, "What is considered work?" It does seem that there are a variety of possible answers, depending on your personal perspective. From the scientist's perspective, work is defined as using force to move an object (when the force and object are moving in the same direction).

The idea of working smarter is the foundation of this six-week curriculum unit designed for students in sixth grade as they use inquiry and experimentation to discover the work advantage gained through the use of simple machines. We will focus on the lever, wheel and axle, pulley, inclined plane, wedge, and screw.

(Recommended for Science, grade 6)

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