



# WORK IS SIMPLE WITH SIMPLE MACHINES

OVERVIEW, OUTCOMES, and CLASSROOM ACTIVITIES

STANDARDS AND BENCHMARKS

USEFUL WEB SITES

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## OVERVIEW

Students participating in this project will investigate simple machines and their usefulness in everyday life.

## OUTCOMES:

- | Students will be able to identify each simple machine.
- | Students will calculate the formulas used with simple machines.
- | Students will understand the following terms: force, effort, and work. Students will access the internet and communicate through e-mail to search for and share information on machines.
- | Students will be able to demonstrate their knowledge of simple machines by drawing, demonstrating, and/or creating a simple or complex machine.

## CLASSROOM ACTIVITIES in context...

- | A machine is a device that does work. Machines do not increase the amount of work done, but they do make work easier.
- | Machines make work easier by changing force or distance, or by changing the direction of the force.
- | There are three simple machines: the lever, the pulley, and the inclined plane.  
The wheel and axle, the wedge, and the screw are modifications of the three simple machines.
- | A complex machine is a machine made up of two or more simple machines.

[Related Language Arts activities](#)  
[Standards and Benchmarks](#)



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## USEFUL WEB SITES

### [EISENHOWER NATIONAL CLEARINGHOUSE](#) (ENC)

This is a nationally recognized source for K-12 math and science teachers, providing a resource finder which describes all types of curriculum resources and providing classroom-ready lessons and activities.

### [THOSE CRAZY LEGO SCREWS](#)

This site provides basic information regarding the history and uses of the screw over the centuries, including images.

### [INSANELY GREAT SCIENCE WEB SITES](#)

Provides a list of the most useful science web sites including links to web sites of science museums worldwide.

### [THE BOSTON MUSEUM OF SCIENCE](#)

The Boston of Science Home page which includes a list of exhibits, teacher resources, on-line exhibits, and programs.

### [WEB66 INTERNATIONAL WWW SCHOOL REGISTRY](#)

Lists home pages of science schools throughout the U.S., as well as a list of 3,500 schools worldwide.

### [SIMPLE MACHINES](#)

This site actually provides units on simple machines including criteria, outcomes, and sample lessons.



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## RESOURCES USED TO CREATE THIS PROJECT

- | Croasdale, William, PhD., Department of Education. The University of Rhode Island. Personal interview. August 7, 1996.
- | Maton, Anthea, et al. Prentice Hall. *Science: Motion, Forces, and Energy*. Englewood Cliffs, New Jersey : Prentice-Hall, Inc., 1993
- | Sund, Robert B., et al. *Accent on Science, Activity Book 3*. Columbus, Ohio : Charles E. Merrill Publishing Co., 1983.
- | VanCleave, Janice Pratt. *Janice VanCleave's Physics for Every Kid: 101 Easy Experiments in Motion, Heat, Light, Machines, and Sound*. New York : John Wiley & Sons, Inc., 1991.



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## ADDITIONAL RESOURCES

## BOOKS

- | Bender, Lionel. *Invention. Eyewitness Books Series*. New York : Alfred Knopf, 1991.
- | Bernstein, Leonard, et al. *Concepts and Challenges in Physical Science*. 2nd ed. New York : Globe Book Company, Inc., 1986.
- | Burton, Virginia Lee. *Mike Mulligan and His Steam Shovel*. Boston : Houghton Mifflin Co., 1939.
- | *How Things Work. Books for World Explorers Series*. Washington, D.C. : National Geographic Society, 1987.
- | Kardos, Thomas. *Physical Science Labs Kit: Ready-to-Use Activities and Worksheets for Grades 5-9*. West Nyack, New York : The Center for Applied Research in Education, 1993
- | Macaulay, David. *The Way Things Work*. Boston : Houghton Mifflin Co., 1988.

## NON BOOK RESOURCES

- | *Simple Machines for Primaries*. Sound filmstrip. Eye Gate Media Inc., n.d.
- | *Inclined Plane, Wedge, Screw: Discovering Simple Machines*. Videocassette. United Learning, n.d.
- | Macaulay, David. *The Way Things Work*. CD-ROM. New York: Dorling Kindersley Multimedia, 1994.



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