



## Simple Machines Design Project Lessons

### Websites

#### [Simple Machines](http://edheads.org/activities/simple-machines/frame_loader.htm)

This kid-friendly, interactive web-site is a wonderful learning tool about simple and compound machines. Students navigate through the different rooms in a typical house to identify 10 simple machines and the parts that make up each machine. Students can also navigate to the "Tool Shed" to identify and learn more about compound machines.

( [http://edheads.org/activities/simple-machines/frame\\_loader.htm](http://edheads.org/activities/simple-machines/frame_loader.htm) )

#### [Marvelous Machines](http://www.galaxy.net/~k12/machines/index.shtml)

This site, designed for teachers, lists a series of experiments about simple machines: levers, wheels and inclined planes.

( <http://www.galaxy.net/~k12/machines/index.shtml> )

#### [Simple Machines](http://www.mikids.com/Smachines.htm)

This website gives a clear, concise description of the six simple machines. Click on each tool listed in the far right column for everyday examples of each machine.

( <http://www.mikids.com/Smachines.htm> )



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### Books

#### **Forces and Motion**

By Alvin Silverstein, Virginia Silverstein, and Laura Silverstein Nunn (2009, 21st Century Books)

This book focuses on concepts of force and motion. The beginning of the book provides a great introduction to the concepts of force and work as well as how they are related. There is also a very informative section describing how the six types of simple machines make it easier to do work.

#### **How Do You Lift a Lion?**

By Robert E. Wells (2009, 21st Century Books)

This entertaining book is used as a read-aloud in the first session of the project. The author describes unusual, yet informative ways that levers, wheels and axles, and pulleys could be used to move large animals as well as groups of large animals.

#### **Inclined Planes**

By Michael Dahl (1997, Bridgestone Books)

This age-appropriate book discusses simple inclined planes and describes how they can make work easier. The book also provides examples of common inclined planes such as ramps, stairways, and slides.

#### **Inclined Planes and Wedges**

By Sally M. Walker and Roseann Feldmann; Photographs by Andy King (2002, Lerner Publications Company)

The author describes a variety of inclined planes as well as the ways they can make work easier. The book includes several hands-on activities that help students learn how inclined planes and wedges can make work easier.



### **Pulleys**

By Sally M. Walker and Roseann Feldmann; Photographs by Andy King (2002, Lerner Publications Company)

The author focuses on work, forces, and pulleys. She describes the ways that a variety of pulleys make it easier to do work.

### **Screws to the Rescue; and Wedges to the Rescue**

By Sharon Thales (2007, Capstone Press)

These age-appropriate books provide a good introduction to the screw and to the wedge. The author describes ways that screws and wedges have been used in the past to make work easier, as well as ways they are currently used. Each book provides a brief description of the other five simple machines and discusses complex machines.

### **Wheels and Axles**

By Sally M. Walker and Roseann Feldmann; Photographs by Andy King (2002, Lerner Publications Company)

This book focuses on work, forces, and wheels and axles. The book provides several simple hands-on activities that enable students to learn important science concepts by playing with pulleys and other types of wheels and axles.