



Simple Machines

Target Audience: Youth ages 5-10

Description: Simple Machines is a curriculum designed to introduce youth to the basics of several types of simple machines. Each session includes an explanation of the simple machine being discussed, as well as an experimental activity to illustrate how these simple machines operate.

Format:

Session 1: Introduction to Simple Machines

Learn the basics of the term “work” through use of a DVD, “All About Simple Machines” and various facts. The second half of the lesson asks youth to create their own simple machine, a paper fan.

Session 2: Inclined Planes and Friction

Youth will learn more about both friction and inclined planes, by creating their own inclined plane and doing a friction demonstration.

Session 3: Screws and Wedges

Youth will begin this lesson by observing and then drawing the components of a screw. This lesson continues with youth practicing their skills with a screw and screwdriver. The second part of the lesson involves experimenting with wedges through a number of demonstrations.

Session 4: Wheels and Axles

Learn more about the concept of wheels and axles by comparing wheel sizes and building a rubber band car.

Session 5: Levers

Youth will learn the basics of levers and their fulcrums through a Leave it to Levers! Experiment, as well as the creation of a first and second class lever.

Session 6: Pulleys

Learn more about pulleys by creating both a simple pulley system and a multiple pulley system.

Cost: Simple Machines can be borrowed for one month at no cost to the borrower.