

Science Exploration Schedule
Grades 3/4 Simple Machines Unit

Reading material:

1. **Simple Machine Handouts**
2. **Investigating God's World**

Pages are the same for the 1990 & 1999 editions of IGW

A reading list of recommended library books can be found on the ACTS Website assignment/download page for families who would like to require more reading for their child to do for this unit than what is written here.

- 2/16/12 Simple Machines Unit begins today!
First, Second, and Third Class Levers
Prior to class:
Read: Handout labeled 'What are the six simple machines'. Familiarize yourself with the six simple machines. Handout labeled 'First, Second, and Third Class Levers. Don't worry if you don't fully understand the differences. We will look at examples in class today.
Read: IGW p211-215 on energy and engines, force and motion
Complete: Homework sheet on levers
Complete: IGW Comp Check 6.1 p215 A & B
Website Resource:
http://atlantis.coe.uh.edu/archive/science/science_lessons/scienceles1/finalhome.htm
Great introduction to the 6 simple machines. Take the quiz at the end for fun!
Classtime: [A Robot with Levers](#)
- 2/23/12 Wheel and axle, gears
Prior to class:
Read: Handout labeled, wheel and axle, gears
Read: IGW page 235-236 on the steam engine & steam locomotive
Complete: Homework sheet on wheels, axles, and gears
Complete: IGW Comp check 6.6 page 236
Classtime: [\(wheels with teeth\)](#)
Website Resource:
<http://edheads.org/activities/simple-machines/index.htm>
Click on start for an excellent interactive video of how simple machines work. Try each activity to locate the simple machines and learn how they work. Try the tool shed to see how compound machines work. Highly recommended. **THIS IS REALLY GREAT!!!**
- 3/1/12 Pulleys (compound, simple, and movable)
Prior to class:
Read: Handout on the three types of pulleys
Read: IGW p224-227 on water wheels (no written work from IGW this week)
Complete: Homework sheet on pulleys
Classtime: [experiments with different kinds of pulleys](#)
Website Resource:
Just for fun, try designing a Rube Goldberg Machine! <http://www.fossweb.com/modules3-6/LeversandPulleys/index.html>
- 3/8/12 Inclined Plane (also called slope or ramp), screw, wedge
Prior to class:
Read: Handout labeled wedge, screw
Complete: Homework sheet on inclined planes, screws, wedges
Classtime: [inclined plane, screw, wedge experiments](#)
Website Resource:
http://www.edheads.org/activities/odd_machine/
Click on start and figure out what the best answers to the questions on compound machines are.

