

**Simple Machines Unit**  
**Book, Video, Internet Resource**  
**Suggestions**



*The number following the author's name is how many copies are in the JMRL Library system. Have fun!  
Step-up readers followed by more in-depth reading:*

1. Levers by Anne Weisbacher (4)  
A very easy-to-read book with great pictures to describe levers and their use. Included is information on first-class, second-class, third-class, and compound levers. Highly recommended.
2. Pulleys by Anne Weisbacher (4)  
A very easy-to-read book with great pictures to describe pulleys and their use. Included is information on parts of a pulley, single fixed pulleys, moveable pulleys, double pulleys and much more. Highly recommended.
3. Inclined Planes by Anne Weisbacher (4)  
A very easy-to-read book with great pictures to describe inclined planes and their use. Included is information on parts of an inclined plane, the smallest inclined planes, wedges and much more. Highly recommended.
4. Screws by Anne Weisbacher (4)  
A very easy-to-read book with great pictures to describe screws and their use. Included is information on parts of a screw, using a screw to join, to grip, to lift and much more. Highly recommended.
5. Wedges by Anne Weisbacher (4)  
A very easy-to-read book with great pictures to describe wedges and their use. Information is included on parts of a wedge, using a wedge to cut, split, push apart, hold tight, push together, and much more. Highly recommended.
6. Wheels and Axles by Anne Weisbacher (4)  
A very easy-to-read book with great pictures to describe wheels and axles and their use. Information is included on parts of a wheel and axle, more speed & force with a wheel and axle, gears, sprockets, cranks and much more. Highly recommended.
7. Useful Machines, Pulleys by Chris Oxlade (6)  
What are pulleys? How do they work? Do boats have pulleys? How do pulleys make an elevator work? Read on to find out the answers and much more. Great pictures!
8. Useful Machines, Levers by Chris Oxlade (6)  
What are levers? How do levers work? Do bicycles have levers? See how scissors are actually two levers put together. Read on to find out the answers and much more! Great illustrations show each concept.
9. Simple Machines by Anne Horvatic (5)  
Look around. You'll see simple machines everywhere if you know what they are. A wheel, a seesaw, a wedge that holds open a door, did you know that these are all machines? An introduction to simple machines is explained and illustrated with simple black and white photos. Very helpful information as the author goes through each type of simple machine and how it works.

10. Machines We Use by Sally Hewitt (8)  
Very colorful illustrations and interesting text describe each simple machine and how it works and is used.
  11. Making Science Work, Forces and Machines by Terry Jennings (8)  
What is a machine? This easy to read book shows how the various simple machines are used in machines. Did you know that backhoes use levers? The platform that fire fighters stand on at their truck is a lever? An elevator uses a pulley? Read this great title to learn about these items and much more. Highly recommend.
  12. Machines at Work, On the Farm by Henry Pluckrose (8)  
I am including this title in the booklist although it does not contain information about simple machines as such. The very easy reading is set with awesome pictures to go along with it. Students can look at the pictures and think of which simple machine they may think is involved in making the more complex machines work. Very interesting! Very neat pictures.
  13. From Iron to Car by Shannon Zemlicka (3)  
This is an easy reading book. Very simple text describes the process of how a car is made from iron ore. There are neat pictures included that make this process come alive. Not a simple machine as such, but this is interesting reading on how machines work to create a final product!
- more in-depth reading:*
14. A true Book, Experiments with Simple Machines by Salvatore Tocci (4)  
What is a simple machine? What in your home is a simple machine? Many experiment ideas are presented as well as information on simple machines and great illustrations.
  15. The Science Book of Machines by Neil Ardley (6)  
Full of wonderful experiment ideas. This is for the student who wants to get deeper into machine study and build some to try out his (her) skills!
  16. Machines and How They Work by Harvey Weiss (1)  
Drilling holes, lifting weights, plowing fields—machines do these tough jobs easily and efficiently. Most machines are made up of simple parts. Simple black and white text explains each machine and how it works.
  18. Charlie Brown's Fifth Super Book of Questions and Answers (about all kinds of things and how they work!) published by Random House, New York. The Characters are based on the creation of Charles M. Schulz. (4)  
What is a machine? Do all machines have motors? How can a seesaw be a machine? What machine looks like an eggbeater? Very interesting book written in a question and answer format. Many Charlie Brown cartoons are scattered throughout the reading. Fun and informative! \*\*Parental note: Most of the cartoons are funny, however, there are a few instances where someone in the cartoon is called a 'blockhead' or 'stupid'. The reading is very interesting, so I am including this in the booklist with this one caution.
  19. Cyrus McCormick, Farmer Boy by Lavinia Dobler (1)  
This is a title from the childhood of famous Americans' series. Easy to read and interesting account of the life of Cyrus McCormick and what led up to his invention of the reaper. I am including this in the reading list since McCormick is on our list of scientists to be reported on. Also, a field trip is planned for the machine unit to McCormick farm.

*reference:*

19. Make it Work, Machines by Andrew Haslam (10)  
Full of hands-on projects to investigate the world of machines more fully.
20. Janice VanCleave's Machines by Janice VanCleave (6)  
How is your forearm like a lever? What makes it easy to pull a flag up a flagpole? How can a windmill help to do work? VanCleave presents information and numerous experiments to investigate the world of machines. Very excellent. Some class activities will be taken from this title.

*videos:*

1. The Way Things Work, Inclined Planes by Schlessinger Media (1)  
This is part of a set of videos based on the book by David Macaulay titled The Way Things Work. The series is a delightful way of combining theory and silliness to teach how each simple machine works. A 13-minute animated video where the inhabitants of Mammoth Island have decided to smash boulders into bits by dropping them off a wooden tower to make gravel for their new roads. A young islander suggests that they roll the boulders up a ramp to make it easier than hoisting up the side of the wooden tower. Inclined planes make the work much easier!
2. The Way Things Work, Screws by Schlessinger Media (1)  
The inhabitants of Mammoth Island are in the process of building a new observation tower out of stone blocks when one of the islanders gets trapped on top. Learn how an inclined plane can be turned to create a screw. The islander is rescued by using a large screw to decrease the height of the tower. Another 13-minute animated video.
3. The Way Things Work, Wheels and Axles by Schlessinger Media (1)  
The inhabitants of Mammoth Island decide to use the concept of a wheel and axle to create a feather machine to help them dry their mammoths. Another 13-minute animated video that combines theory and silliness to learn about simple machines.
4. The Way Things Work, Pulleys by Schlessinger Media (1)  
By using pulley systems, the islanders find the best method to lift their mammoths. Another 13-minute animated video in this series. Pulleys reduce the work immensely!
5. Modern Marvels, Clocks by A&E Television Network, the history channel (1)  
A 50-minute documentary on the history of clocks and how they work. It is fascinating to see how many kinds and methods of invention were used to keep time.  
This is a more in-depth production, fascinating, interesting, but will need a mature student to stay attentive to the documentary style.

*Website activities:*

1. [http://www.coe.uh.edu/archive/science/science\\_lessons/scienceles1/finalhome.htm](http://www.coe.uh.edu/archive/science/science_lessons/scienceles1/finalhome.htm)  
Click on the picture of each simple machine to find out more about it. Take the simple machine quiz at the end. Very fun!
2. <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. [http://www.edheads.org/activities/odd\\_machine/index.htm](http://www.edheads.org/activities/odd_machine/index.htm)  
Click on start to play the fairly odd machine game. This is an excellent interactive question and answer game to learn about the parts of a made-up odd machine. Very highly recommended!
4. <http://www.mikids.com/Smachines.htm>  
Click on each simple machine in the activity section to see examples of each one. Very good.

