



Simple and Compound Machines Poster

Congratulations on your purchase of the Really Good Stuff® **Simple and Compound Machines Poster**—a perfect reference for the types of machines we use every day.

This Really Good Stuff® product includes:

- **Simple and Compound Machines Poster**, 19" by 24"
- This Really Good Stuff® Activity Guide

Simple and Compound Machines Poster

This colorful poster and Activity Guide will help introduce your students to types of simple and compound machines. Students will explore how each type of machine helps us

to do work. Students will be introduced to specific vocabulary and content about forces, work and machines. Finally, students will be asked to consider and write about machines which they use in their daily lives.

Introducing the Simple and Compound Machines Poster

Display the poster and ask students to notice that the poster is divided into two sections—Simple Machines and Compound Machines. Ask which section students feel they should focus on first. Why? Responses might suggest that the top section will help them to better understand the bottom section.

Simple and Compound Machines Reproducible 1

Activity 1—Place the **Simple and Compound Machines Poster** in a place where it can easily be seen. Ask students to carefully observe the poster and answer the following questions.

1. The two main classifications of machines are _____ and _____.

2. Explain how simple machines are related to or connected to compound machines.

3. Name the six types of simple machines and describe in words the main properties or characteristics of each type of machine.

Six Types of Simple Machines	Properties or Descriptions of Each Machine
(1)	
(2)	
(3)	
(4)	
(5)	
(6)	

4. Look at the examples (on the poster) that use simple machines. Pick out one example of each of the types of machines and draw a diagram of that object. Highlight or use a colored pencil to show the specific part of your picture which contains the identifying property of that simple machine. Remember to use the answers in the chart above to learn the main properties of each type of machine.

Activity 2—Basic Understanding of Machines

Simple machines help us do work every day. You may be surprised to learn that machines cannot change the amount of work you need to do to accomplish a job. However, simple machines can make the job easier to do.

Below is a list showing two ways to do the same job. Circle the one that seems to make the job easier. Then look at the list of simple machines on the poster and see if you can name the simple machine which was used.

Work to be done	Way to do the work		Simple Machine used that made the work easier
1. Get a piano into a truck	Use a ramp to get it on the truck	or Lift the piano into the truck	
2. Raise a flag on a pole	Climb the pole and bring the flag with you	or Attach the flag to string on the pole and pull	
3. Clean crumbs from the kitchen floor	Use a rag	or Use a broom	
4. Move dirt	Use a box and then push the box	or Use a wheelbarrow	
5. Split wood for the fireplace	Use an axe	or Use a hammer	
6. Hit a ball as far as possible	Hit it with a bat	or Hit it with your hand	
7. Remove a heavy rock from the ground	Pick it up with your hands	or Put a board under it and push down on one end	
8. Crack open a walnut	Pull it apart with your hands	or Use a nutcracker	
9. Remove a nail from a board	Use pliers	or Pull the nail out with your hand	
10. Travel a mile in the shortest time	Run	or Ride your bicycle	

Activity 3—Machines

The word “work” has a very specific meaning in science. Work is the measure of force it takes to move an object a certain distance. A machine is a tool that makes work *easier*. Machines cannot do work for you. However, machines make the work *easier* to do by changing the direction, speed, and/or amount of the force we must apply to do the work.

The six simple machines are the lever, the pulley, the wheel and axle, the inclined plane, the wedge, and the screw. Read the information on the **Simple and Compound Machines Poster** and complete the chart below.

Read each statement and place a check in the column under each of the simple machines the statement describes. You may place a check in more than one column for a statement.

Statements	Lever	Wheel and Axle	Pulley	Inclined Plane	Wedge	Screw
1. A slanted surface with one end higher than the other						
2. Has an inclined plane winding around a cylinder						
3. A bar that moves on or around a fixed point						
4. A tool that helps people do work						
5. Contains a wheel						
6. Contains a fulcrum						
7. A screwdriver being used to open a paint can						
8. Used to raise a flag						
9. Can make work seem <i>easier</i>						
10. A doorknob						

Activity 4—Matching Machines

Most machines we use are compound machines. Compound machines are made up of two or more simple machines working together. A shovel is an example of a compound machine. The shovel is a wedge placed at the end of a lever. Carefully read the bottom of the poster to see more examples of compound machines.

Use the **Simple and Compound Machines Poster** to help you remember all you have learned about machines. Find the word that best matches the definitions and write the letter of the word in the blank column. Use each letter only one time.

	DEFINITION	WORDS
1. _____	A device that can change the amount and/or the direction of a force.	a. Fulcrum
2. _____	Made up of two or more simple machines	b. Drill
3. _____	A compound machine using pulleys, levers, and wheel and axles	c. Escalator
4. _____	A compound machine that uses pulleys and an inclined plane	d. Mini blinds
5. _____	A compound machine that uses a wedge and wheel and axle	e. Seesaw
6. _____	A part of a lever	f. Compound machine
7. _____	A pulley is used to open and close these	g. Pencil sharpener
8. _____	Uses an inclined plane wrapped around a pole	h. Wheel and axle
9. _____	An example of a lever	i. Simple machine
10. _____	Used in your bicycle	j. Crane