



SfS Away from the Classroom!

E05: Simple Machines (Recommended for Grades 3-8)

Please use the following resources to learn about simple machines.

Watch these videos:

<https://www.youtube.com/watch?v=zSymWaexstY> and https://www.youtube.com/watch?v=_NTCToqZ_3Q

Answer these questions:

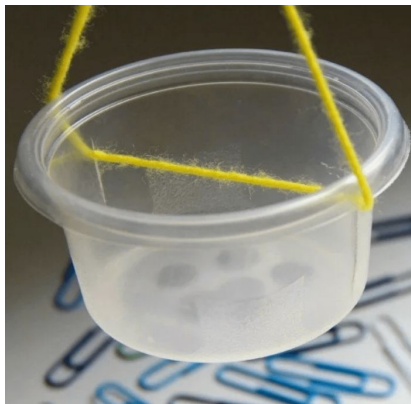
- How many simple machines are there?
- Name 3 simple machines you use everyday. How do they help you make work easier?

Activities: Follow these directions to make and test two simple machines!

Simple machine 1) Make a **pulley** and see how many paperclips you can lift. You will need these materials.

<ul style="list-style-type: none">• Small plastic container/cup• Scissors	<ul style="list-style-type: none">• String or yarn• Magnets	<ul style="list-style-type: none">• Paper clips• Yard stick• Tape
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1. Cut small holes in the sides of the container.
2. Thread string through the holes and tie together the ends to make a handle.
3. Tape magnets to the bottom of the container/cup.
4. Cut 1 yard of string, tie it to a door handle and thread it through the “handle” of the container.
5. Thread the long string through the handle you made on the container.
6. As you move the long string, the container should slide along it.
7. What is the largest number of paperclips you were able to pick up?



Simple machine 2) Use these directions to make an **inclined plane** into a race course:

<https://preschooltoolkit.com/blog/marble-run-with-an-inclined-plane/>

You will need these materials.

• 2 pieces of cardboard	• colored tape	• marbles or small toy cars	• small plastic cups
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How can you make the marbles (or cars) get to the bottom faster, without pushing?

Make observations & use Claims, Evidence, and Reasoning!

1. **Claim:** Simple machines make work easier.

• **Evidence:**

• **Reasoning:**

2. **Claim:** People use simple machines every day.

• **Evidence:**

• **Reasoning:**