

A STEM in the Park Take Home Activity

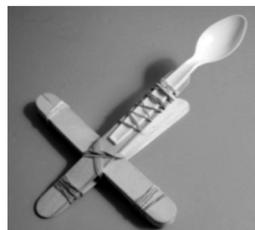
STEM in the PARK

Science, Technology, Engineering, and Mathematics

Simple Machine Science: Marshmallow Catapult

What You Need

- 9 craft sticks
- 4-6 rubber bands
- 1 plastic spoon



What To Do

1. Take 7 sticks and tie a rubber band tightly around one end.
2. Tie another rubber band tightly around the opposite end so all 7 sticks are bound together.
3. Take the remaining 2 sticks and tie a rubber band on one of the ends. Try to tie the band close to the edge of the sticks.
4. Insert the 7 sticks banded together through the 2 stick bundle.
5. Tie the rubber band in a cross fashion joining the 2 pieces. The closer the 7 stick bundle gets to the edge, the more leverage the catapult will have.
6. Use a few rubber bands and attach the plastic spoon on the end.

Continued on back

Learn...

There are six types of simple machines. Simple machines make our lives easier by allowing us to use less energy and force to do the work. A lever is one type of simple machine. A lever involves moving a load, your marshmallow, around a pivot or fulcrum, your Popsicle sticks. A force is needed to move the load. In this case it is your hand pulling back on the spoon. Levers were invented in the prehistoric times and they were first described in about 260 BCE by the ancient Greek mathematician Archimedes.

Investigate...

How far can your marshmallow fly? How high can it soar? Can you measure how far it went and keep track of your distances? Explore with your catapult. See if you can make the marshmallow fly farther by moving the spoon or adjusting the Popsicle sticks. Does the amount of force you apply effect the distance your marshmallow goes? Try throwing the marshmallow and compare its distance to that from the catapult. Which goes farther? At home, try catapulting cotton balls or a penny. See which one you can catapult the highest or farthest.

This activity is brought to you by West Side Montessori



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