

Amaze Your Brain *at Home!*

EXPERIMENTS

**BEST FOR
Grades
K-5**

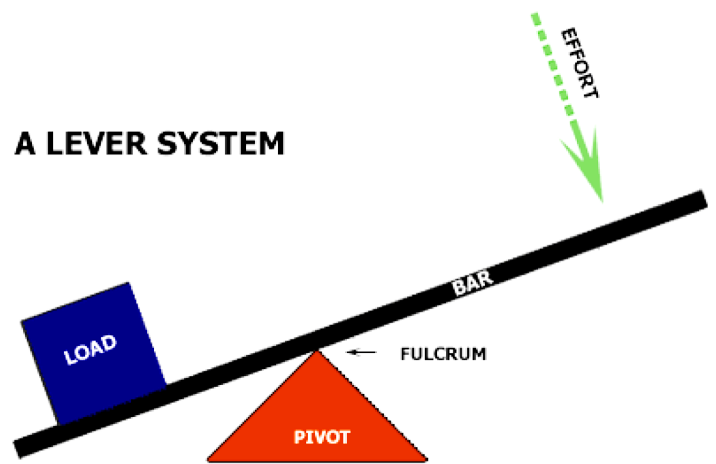
Build a **Catapult**

ABOUT

Learn about levers, force, and work all while building your own catapult! Use popsicle sticks, pipe cleaners, tape, and a spoon in order to build a lever that will also function as your launching machine.



A LEVER SYSTEM



WHAT'S HAPPENING?

A lever is a plank or rigid beam that is free to rotate on a pivot. You use force applied to one end of the lever in order to do work. It is perfect for lifting or moving heavy things. Examples of levers include the seesaw, crowbar, fishing-line, oars, wheelbarrows, and the garden shovel.

WHAT IS A FORCE?

Strength or energy as an attribute of physical action or movement (a push or pull).

WHAT IS WORK?

Measure of energy transfer that occurs when an object is moved over a distance by an external force.

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Build a **Catapult** (CONT.)

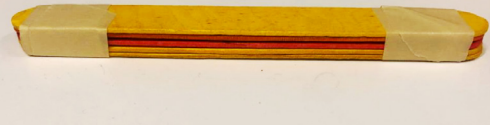
MATERIALS

- 6 craft sticks
- Tape
- 1 plastic spoon
- 2 pipe cleaners (more if needed)

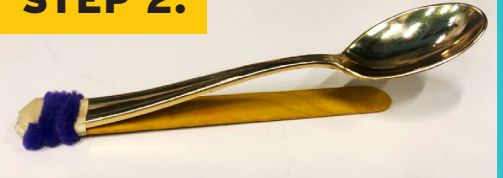
INSTRUCTIONS

1. Stack four popsicle sticks on top of each other and tape them together – this will be your pivot.
2. Tape the end of another popsicle stick to the handle of your spoon, sandwiching them together. Secure the end with a pipe cleaner as needed.
3. Take your pivot (popsicle stick stack) and slide it in between your taped spoon and popsicle stick through the end with no tape.
4. Decide the placement of the pivot and secure with tape and pipe cleaners.
5. Use the bowl of the spoon as your basket, pull back and release to launch.

STEP 1.



STEP 2.



STEP 3.



STEP 4.



STEP 5.



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