

Catapults and Potential Energy

Activity Provided by
Maria Mitchell Association

Materials:

10 tongue depressors, 4-8 rubber bands, plastic spoon, item to fling (try out different things like marshmallows, pompoms, balls of paper, pebbles, etc)

Instructions:



1. Make a stack of 8 popsicle sticks and rubber band them together on each end.
2. Take two additional popsicle sticks and stack them together. Rubber band them together on just one end.
3. Pull the two popsicle sticks slightly apart and place the larger stack of popsicle sticks in between them.
4. Rubber band the stack of popsicle sticks to just the upper popsicle stick.
5. Rubber band a spoon to the upper popsicle stick. Place a pool noodle piece onto the spoon.
6. Hold the catapult with one hand, and use the other hand to pull the spoon down.

How does it work?

Catapults work because of **potential energy**. **Potential energy** is the energy stored in an object because of its position or state. A bicycle on top of a hill, a book on the edge of a shelf, and the **stretched rubber band in your catapult** all have **potential energy**. When potential energy is released, it becomes motion and is then called **kinetic energy**.

A real life scientist in energy research



Dr. Akanksha Menon is a thermal scientist in the Energy Technologies Area at Lawrence Berkeley National Laboratory. Akanksha works on exciting problems ranging from wastewater treatment and thermal energy harvesting, to storing energy as heat. She was inspired to work in STEM because there were very few women role models. Rather than allowing this to deter her, she saw this as an opportunity to one day become that role model for someone else.

Participate and Win Prizes

Scan this QR code and fill out a quick questionnaire to be entered to win a prize for participating in the Nantucket Science Festival 2021!



Video and Photography Contest

Take part in this science festival **technology** challenge. Make a video or shoot photographs of you or others engaged in STEAM (Science, Technology, Engineering, Art, Math) activities, post it on FaceBook or Instagram with #ACKSciFest and tag @The Maria Mitchell Association and @Nantucket Community School and be automatically entered to win one of our great prizes. You can choose activities below or come up with your own experiment or challenge.

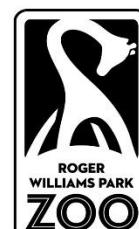
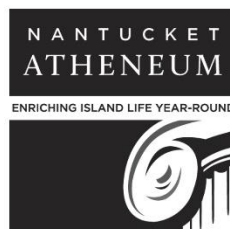
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