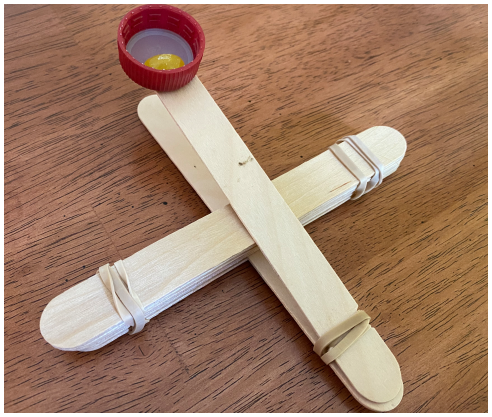
Popsicle Stick Catapult

Connected Standard: 3.2 PK.B.1 Explore and describe the motion of toys and objects.



What You Will Need:

- 10 Jumbo Popsicle Sticks
- 3 Rubber Bands
- Bottle Cap
- Super Glue or Hot Glue
- Fire Power! (Anything that will fit into the bottle cap i.e. marshmallow, jellybean, pom-pom, etc.)

Instructions:

1. Super or hot glue your bottle cap on to the end of one of your popsicle sticks.
2. Make 2 notches on each side of 2 popsicle sticks (they should be in the same place on both sticks). One of the 2 must be the stick with the bottle cap glued to it.
3. Stack the remaining 8 popsicle sticks evenly on top of one another. Secure them together using a rubber band on each side.
4. Take the notched stick without the bottle cap and slide it under the top popsicle stick in your stack until it's about halfway through.
5. Flip your catapult over.
6. Take the last stick (the notched stick with the bottle cap) and lay it on top of the other notched stick (the notches should line up). Secure them together by wrapping the rubber band around the notches.
7. Load your bottle cap with your fire power and catapult your items!

The Science Behind It:
This catapult is the perfect way to learn about physics! If you have multiple different things you can launch, predict and test out which flies the farthest and determine why! You might even want to measure how far you can launch different objects using a ruler or measuring tape. So why is a catapult able to launch things so far? When you pull back the popsicle stick, potential energy, or "resting" energy gets stored up. And when you release the stick, the potential energy turns into kinetic energy, "moving" energy! Then gravity eventually pulls the launched object back to the ground.

Books to Pair with this Experiment:

- *Iggy Peck Architect* written by Andrea Beaty and illustrated David Roberts
- *The Marshmallow Incident* written by Judi Barrett and illustrated Ron Barrett

Experiment Credit: https://littlebinsforlittlehands.com/popsicle-stick-catapult-kids-stem-activity/