Popsicle Stick Catapult

These popsicle stick catapults are SO easy to make and SO FUN to experiment with! A great learning activity to teach kids about physics.

Active Time	Total Time
5 minutes	5 minutes

Yield: 1 popsicle Catapult Adapted from: Debbie Chapman

Materials

- 8 popsicle sticks
- 3 rubber bands (thicker is better)
- 1 plastic spoon
- Projectile/firing power (tin foil ball, paper ball, pom poms)

Instructions

1) Take seven of the popsicle sticks and line them up on top of each other.

2) Take a rubber band and wrap it tightly around one end of the popsicle sticks.

Catapults such as this one rely on **elastic potential energy**. This kind of energy results in the stretching or compression of things such as rubber bands or metal springs. That potential energy is rapidly transformed into **kinetic energy** once the compression or stretch is released. In this case, that kinetic energy is transferred to you projectile.

Thoughts

What difference might the material used for the base make?

What if you used string or glue instead of rubber bands to secure the pieces?

3) Place the last (eighth) popsicle stick between the first and second popsicle sticks, sliding it into the middle.

4) Take a second rubber band and wrap it tightly around the other end of the popsicle stick stack.

5) Line up the handle of the plastic spoon with one end of the single popsicle stick. Attach the handle tightly with an rubber band.

6) You can now test out the catapult using all kinds of different projectiles. Pull down on the spoon, place a projectile on it, and let it fly.

Thoughts

Would it make a difference if your spoon was longer?

Does the material your projectile is made of affect its trajectory or distance?

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