

DIY Air Force Activities: Catapult Chaos



Materials:

- 8 popsicle sticks
- 6 rubber bands
- plastic spoon
- cotton balls
- marker
- paper



A catapult is a mechanism used to forcefully propel projectiles. In ancient times they were used as military weapons as they could launch things like stones and spears without the aid of explosive devices. There are different types of catapults, like the ballista, which shoots arrows like a crossbow, and the trebuchet, which is powered by gravity. Every year engineers come together with their catapults to compete in “Punkin Chuckin” to see how far they can manage to hurl the gourds. Follow the directions below to build a catapult of your own and compete at hurling balls of cotton and paper!

Directions: *** see images on back

1. Stack 6 popsicle sticks. Wrap a rubber band around each end of the stack to secure them together.
2. Stack the last two sticks and wrap a rubber band around one end.
3. Insert the 6 stick bundle between the two sticks in your second bundle.
4. Tie a rubber band in a crisscross fashion to secure the two bundles together.
5. Use two more rubber bands to secure the handle of the plastic spoon to the top stick of the now open two stick stack. You have now created a catapult!
6. Use the paper and marker to make a target.
7. Use your cotton balls as ammunition and try to hit the target!



You can experiment with the amount of sticks in your first stack! How does this change the distance you can hurl your cotton balls? Wetting the balls alters the mass and makes them stick!

Air Force Associations:

The runway on an aircraft carrier is only 300 feet long, which is not enough room for an airplane to take off by conventional means. A steam powered catapult is employed to launch the planes into the air! The catapult cylinders fill with steam generated by the ships reactors and when the compressed air is released it slings the plane forward to generate the lift needed for takeoff.

