

Catapult Project

Due date: 4/13/2020

What is a catapult? A catapult is a “slingshot” style device with a fixed lever arm designed to launch a small object a long distance.

Why do we make catapults? We experiment with projectile motion, gravity, friction, and building methods, friction, and building methods as needed for the Ca science standards... they are fun!

Rules:

1. The catapult may not have a mass greater than 2kg (about 2.5 lbs)
2. The catapult should be able to fit inside of a standard –sized shoebox
3. The catapult will launch a “hacky sack”. (DIY: zip lock bag/sock with beans)
4. You must have a fixed lever arm.
5. Energy source must fit safety and school, state laws/rules.
6. Catapult designs to travel over a wall that is 1m away wall is 1m x 1m
7. Grading (worth 30 points.)
 1. Building it to fit rules 10 points
 2. HS travels .5m +5pt.
 3. HS hits wall +5pt.
 4. HS over wall +10pt.

Project timeline...

First, you need to **make the catapult** (research how to make one with the supplies you have at home or outside your home). *It CAN be done!

Second, **try it out!** Engineers are problem solvers. Fix problems the best you can and try to make the catapult better each time you test it out.

Third, **make a wall** in an area of your house. The wall should be 1 meter away from your catapult... it should be 1 meter wide and 1 meter tall.

Fourth, **test your catapult!** (be ready to **report your results** to the class at our Zoom meeting that is scheduled for: 4/15 @ 2:30PM)

Take pictures of every step of the way (even if it's a MASSIVE failure)