

STEM Event Module: Catapult Challenge #1



UAA College of Engineering
UNIVERSITY of ALASKA ANCHORAGE



Challenge #1:

THE POWER TEST

Challenge Details:

Design a catapult to launch a projectile the greatest distance.

Running the Activity:

Provide each student with a bag of materials

- *The goal is to build a catapult that will launch a projectile the greatest distance.*
- *Work with your team to design, build, test, and improve a catapult.*
- *You only have access to materials in bag. However, you do not have to use all the materials.*
- *This activity needs lots of space for the engineers to build, test and evaluate. Ex. A hallway*

WHOSE CATAPULT CAN PROJECT THE FARTHEST?

Preparation & Setup:

- **Assemble Kits:** Combine materials for students into brown paper bags to make kit distribution easier.
- **Work Station:** Allow plenty floor space to build and test catapults before testing occurs.
- **Testing Zone:** A launching range to test power, allow for a 2 meters of space measured with a tape measure or meter sticks. Tape the ground to make a starting line where catapults cannot cross (ex. A hallway).

Judging & Awards:

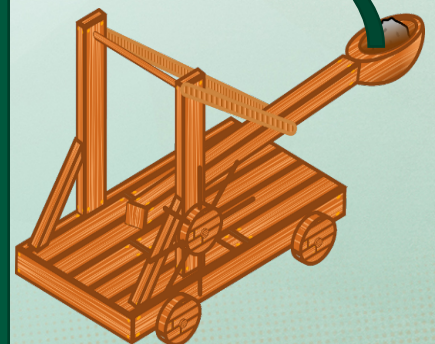
Engineers who successfully build a catapult that launches the farthest projectile wins THE POWER TEST challenge. Each team gets two attempts for this challenge.

Follow-up Questions:

- Which catapults were most successful? Why were they successful?
- What was the strongest part of your design? The weakest?
- If you could design another catapult, what would you design differently?



Do Not Cross



TEST #	Distance from spoon to ground	Length away from catapult	Observations	Adjustments
1				
2				
3				
4				
5				
6				
7				
8				