

TINKERING WITH A CATAPULT

GRADES K-12



MATERIALS

- Plastic spoons
- Base: Can, box, popsicle sticks
- Elasticity/Torsion Source: tape, string, rubber bands
- Launch Material: wadded up paper, cotton ball (wet/dry), marshmallows coated in powdered sugar, ball, etc.



OBSERVE

Explain the goal and allow children to explore the material you give them to design and build a catapult.



CREATE

Using the material you choose, build a catapult.



PLAY

After building the catapult have children use the catapult to launch the object. Use the questions below to guide the play experience and foster learning.

KEY CONCEPTS

- **Cause and Effect**
Try different ideas and experience what happens.
- **Plan and Carry Out Investigations**
Explore structure and functions as you build and adjust your catapults.
- **Measurement**
Use non-standard (steps, blocks, etc.) or standard (measuring stick, measuring tape, etc.) tools to measure the distance/height.

QUESTIONS TO ASK

- What was my goal? (distance, height, speed, or accuracy)
- What worked well? What didn't work well? Why?
- How can you measure the distance the object traveled?
- How might I change my design to reach my goal? (launching arm/ force/ style)
- What other materials do I want to try? What might be the same and/or different with the new catapult?

THINGS TO NOTICE

- Children's attention to different things that can change in the design.
- Children's curiosity related to the catapult.
- How the child adjusts the catapult.
- How the child measures their achievement of the goal. (distance, height, speed, or accuracy)

RESOURCES

- [AIMS HANDS ONline Fun with a Catapult Webinar](#)
- [Science Max - Catapult Part I](#)
- [2 Catapults Out of Popsicle Sticks](#)