Robyn Thiessen

Crazy Catapults 85 min

Objective:

Students will work in small groups to develop an understanding of the design of simple machines/catapults through STEM challenges

Big Idea:

Ideating, Design Thinking and testing protypes will provide an engaging and hands on way to learn about how simple machines/catapults function.

1. Warm Up / Anticipatory 5 min

Activated prior knowledge by showing the 6 simple machine tour video embedded within the Wonder of the Day.

Resources

- Catapults for Kids https://youtu.be/XchdUB-ZnKc
- DIY Catapults https://youtu.be/bjiw7qYvuAs
- Cows Can't Fly https://www.amazon.com/gp/product/0613284550/ref=oh_aui_detailpage_o00_s01?ie=UTF8&psc=1
- Plastic Cows https://www.amazon.com/gp/product/B004ZKZL2I/ref=oh_aui_detailpage_o09_s00?ie=UTF8&psc=1
- Go Science Girls! https://gosciencegirls.com/catapult-stem-project/

2. Investigation and New Learning 60 min

Read the Simple Machines wonder together as a class and share what students know, what the wonder and what they want to know.

With supplies provided by teacher(spoons, string, playdoh, tongue depressors, elastics, cups) Students ideate to create prototypes of catapults that they can use to move an object through the air. You may want to give students a budget and have them pay for supplies.

Students should create 2 plans(sketches) for testing

You could design a few challenges such as: The Accuracy Challenge, The Strength Challenge and/or the Longshot Challenge

3. Review & Check for Understanding 30 min

Students write a reflection of learning in a Science , Math or Reflection Journal-sharing their successes, struggles, and learning.

Note: This lesson can be extended and/or reduced depending on the age of students.