

Situation

SLAM dunk a basketball into an engineered hoop designed by YOU!



STEM Ahoy! Basketball Hoop Engineering Design Challenge

Criteria:

Can you create a basketball hoop AND ball launcher made from household items?!

Constraints:

Hands **CANNOT** dunk the ball!
Determine which materials to use.
Work as a family engineering team!
* Create your own criteria!

Problem & Career Focus

Amidst the Coronavirus pandemic, your basketball team has been unable to play in front of fans. Your team of players, data analysts, ITs, and athletic trainers decide it's time to take the game to the house- fans houses! The problem is not everyone has a basketball hoop at their house. Your team decides to create a hoop that everyone can enjoy! To make sure everyone can play the game- your ball must be launched without using your hands! Engineer a hoop AND a ball launcher!

Things to Consider

1. What materials will you use to create the perfect hoop?
2. How will you slam dunk a ball without using your hands?

Materials:

Suggested Items:

- * Empty Boxes
- * Cardboard
- * Paper
- * Straws
- * Tape
- * String
- * Index Cards
- * A Ping Pong Ball
- * Popsicle Sticks
- * Plastic Spoon
- * Any household item!
- * Your Imagination!

Investigating Questions:

What is the typical structure of a basketball hoop?

How does a catapult work?

What steps of the engineering design process did you use?

Educational Standards Correlations

Language Arts, Engineering, Science, Social Studies, History, Physical Education