

STEM
sports[®]

science • technology
engineering • math • sports

BASKETBALL

Module 5.1

Engineering Design Process

GRADES 6th – 8th

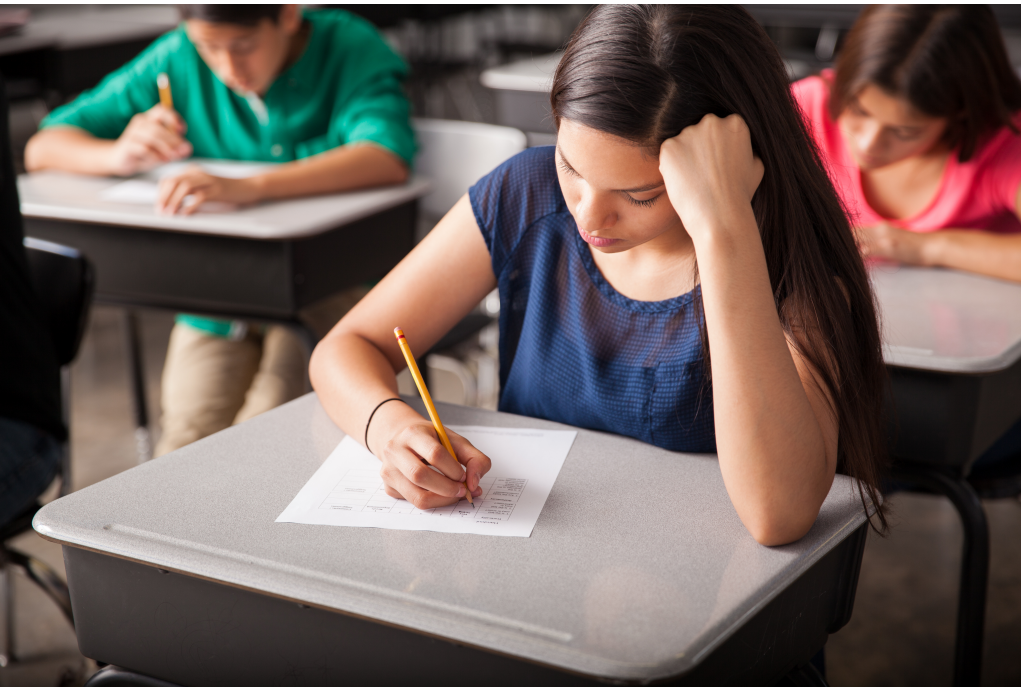
What Do You Need?

Supplies Provided

[Worksheets](#), Craft Sticks,
Plastic Spoons, Protective
Eyewear and Rubber Bands

Materials Needed

Marshmallows, Cotton
Balls and Pencils



Test Your Knowledge

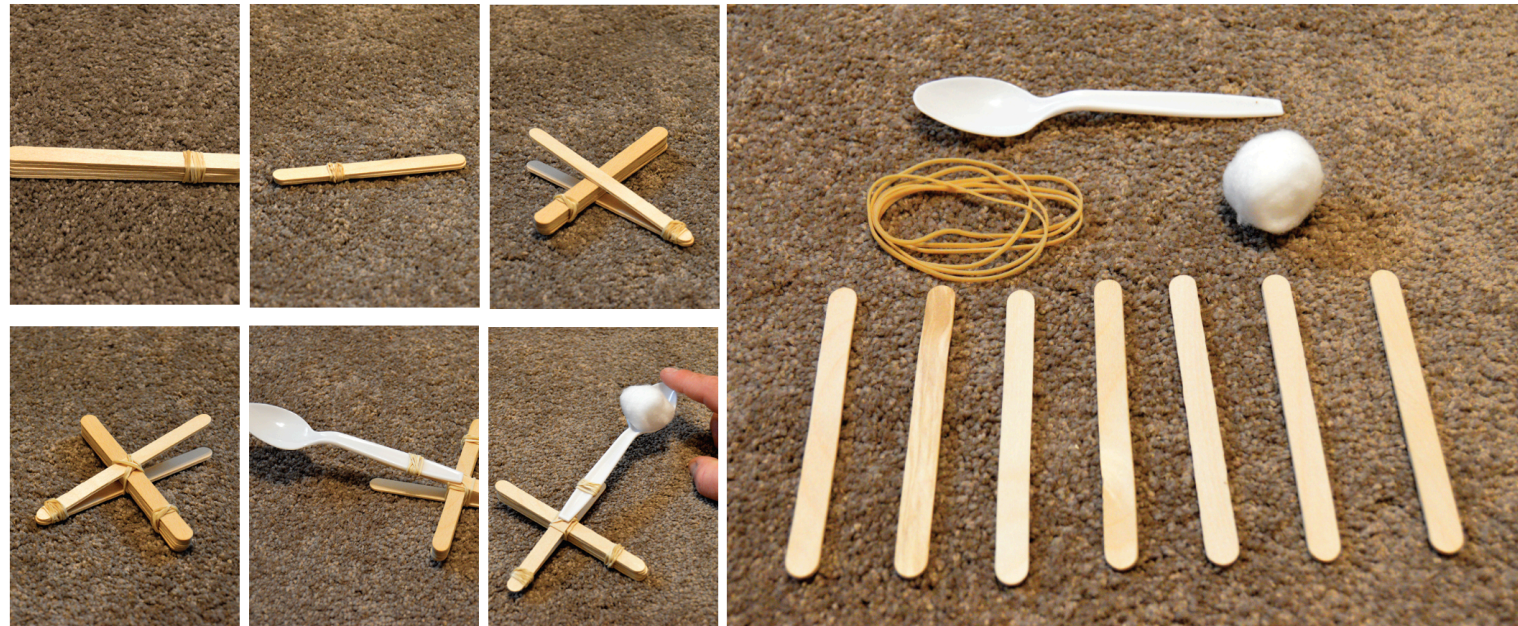
Have your students take this lesson's assessment prior to engaging by visiting: <https://stemsports.com/assessments/>. If you have limited digital capability, please email Info@STEMSports.com to access the Assessment & Key.

Engage

Do you have a “sweet spot” you like to shoot from on the court?

Explore

Design and construct a mechanical shooting device.



Explain

Learn about the *Engineering Design Process* and the importance of the test and redesign stages.



Elaborate

Test your device: Shoot an object and measure location and distance. Use the [worksheet](#).

Evaluate

Based on your measurements, can you create more force and distance? Use the [worksheet](#).



What Did You Learn?

Have your students retake this lesson's assessment to effectively evaluate their comprehension by visiting:

<https://stemsports.com/assessments/>. If you have limited digital capability, please email Info@STEMSports.com to access the Assessment & Key.



Extend

Challenge Yourself!

Using the Engineering Design Process,
design and build a unique shooting
device with various materials.



What is your Dream Job?

STEM Jobs in Sports

- Systems Engineer
- Arena/Stadium Operations Coordinator
- Equipment Manager
- Director of Facilities
- Arena/Stadium Architect

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