

**STEM**  
*sports*®

science • technology  
engineering • math • sports

## **BASKETBALL**

Module 5.1

Engineering Design Process

GRADES 3<sup>rd</sup> – 5<sup>th</sup>

## 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](mailto:Info@STEMSports.com) to access the Assessment & Key.



**Engage**

Can you create a device  
to improve accuracy?

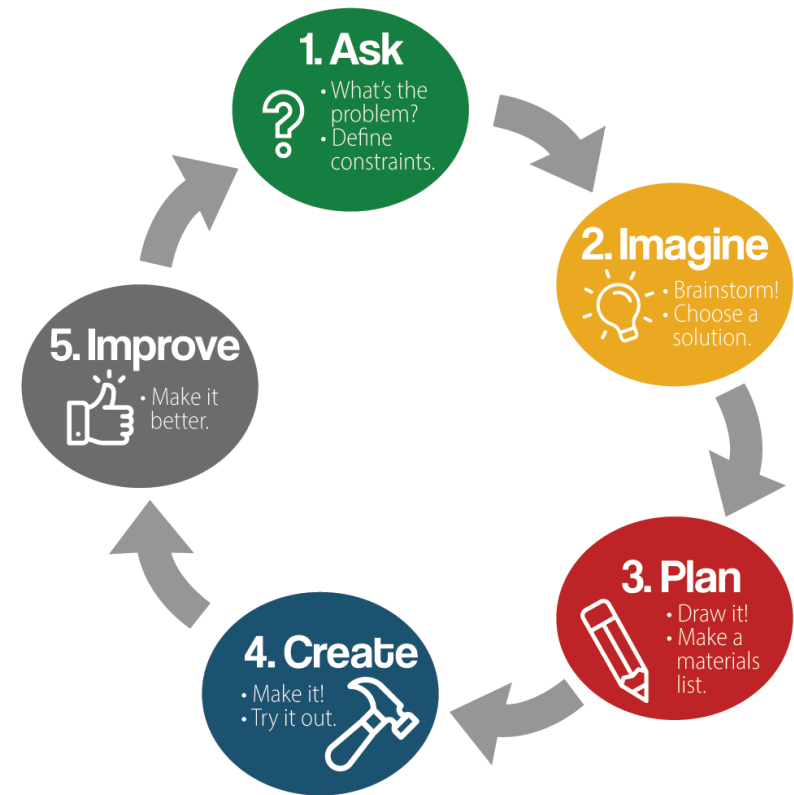
# Explore

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 accuracy and  
distance? Use the [worksheet](#).



## What Did You Learn?

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

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**Extend**

## **Challenge Yourself!**

Using the *Engineering Design Process*, design and build your own device on a budget.



# What is your Dream Job?

## STEM Jobs in Sports

- Arena/Stadium Operations Coordinator
- Basketball Engineer
- Equipment Manager
- Facilities Supervisor
- Director of Operations

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