

STEM
sports[®]

science • technology
engineering • math • sports

FOOTBALL

Module 1.1

Arm Strength: Youth vs Foam Football

GRADES 6th – 8th



MODULE
1.1

GRADES
6-8

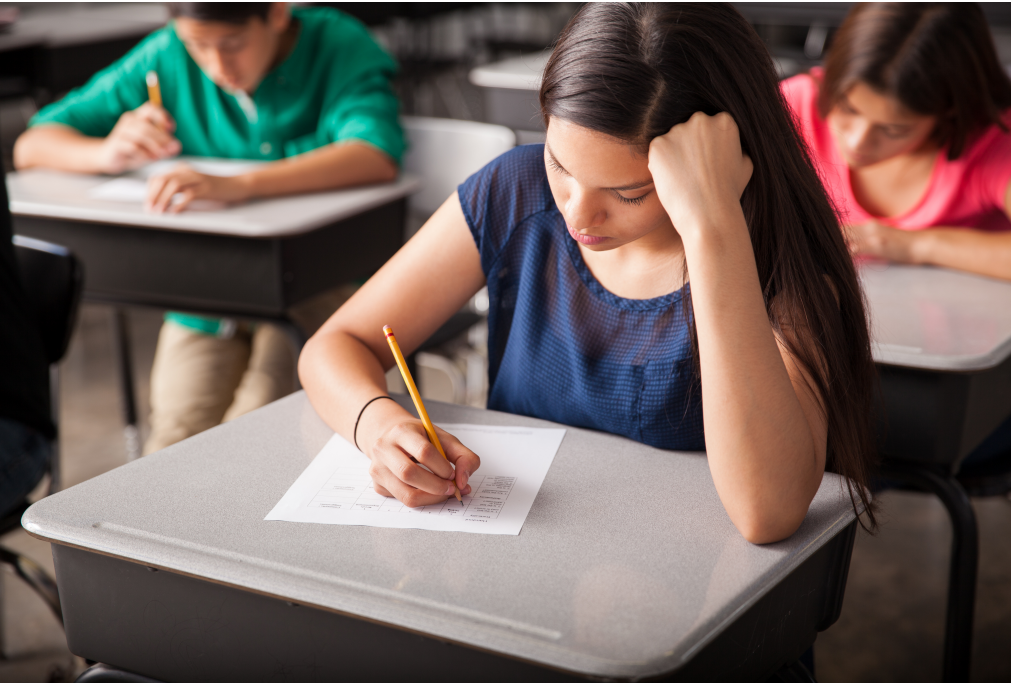
What Do You Need?

Supplies Provided

[Worksheets](#), Youth Footballs or Foam Footballs, Scales, Tape Measures and Digital Timers

Materials Needed

Calculators 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

Which will travel farther: a football full of air or foam football?



Explore

Time to play catch, measure, and compare. Use the [worksheet](#).

Explain

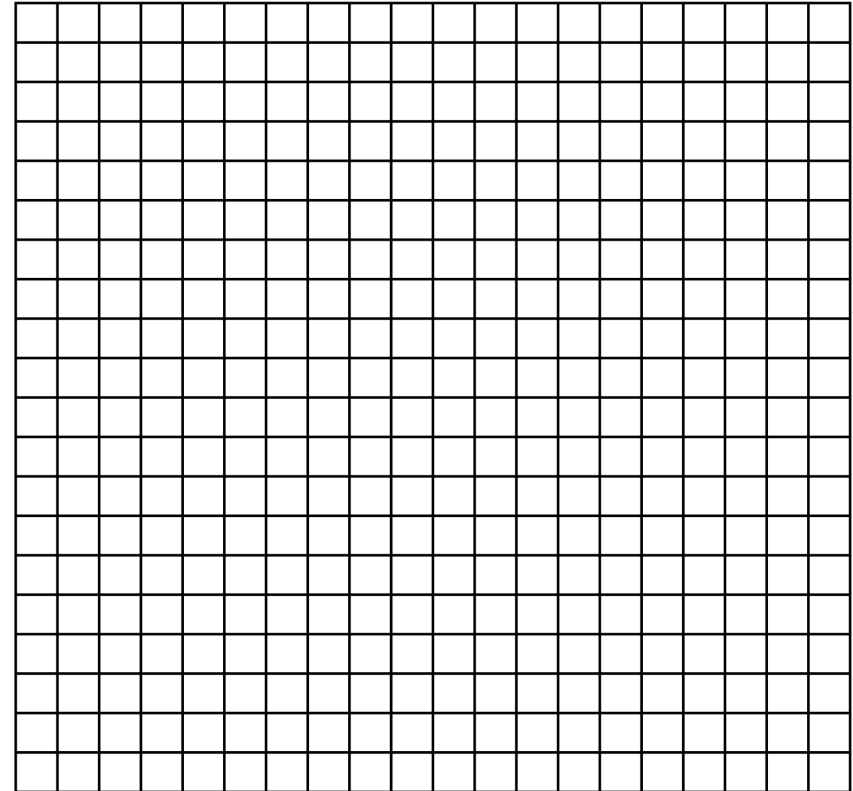
Learn about the relationship between *kinetic energy* and *mass graph*, and its importance in terms of motion.

Elaborate

Conduct another experiment of throws to find the velocity of each trial and the average.

Evaluate

Calculate kinetic energy
and graph using 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!

Learn about potential energy. Based on this information, use a *force diagram* to demonstrate which ball travels further.



What is your Dream Job?

STEM Jobs in Sports

- Strength and Conditioning Coach
- Material Scientist
- Equipment Manager
- Youth Sports Director
- Ball Manufacturer



To access Worksheet Keys, please visit www.STEMSports.com/digitaltools

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