



STEM
sports[®]

science • technology
engineering • math • sports

SOC CER

Module 3.1

Effective Ball Travel

GRADES 6th – 8th



MODULE
3.1

GRADES
6-8

What Do You Need?

Supplies Provided

[Worksheets](#), Soccer Balls, Tape Measures and Digital Timers

Materials Needed

Pencils and Calculators



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

Why does kicking a soccer ball cause it to travel much further than heading or throwing the ball?



Explore

With a partner, complete a trial of kicks and an overhead throw. Use the [worksheet](#).



Explain

Learn the importance of flight patterns and Newton's 2nd Law to calculate force.

$$F = MA$$

Elaborate

Whose ball traveled the farthest?
Use Newton's 2nd Law to find out.

Evaluate

Based on Newton's 2nd Law, how does force affect each ball handling technique?



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!

Create a *force diagram* to see which unbalanced force generates the most motion.



What is your Dream Job?

STEM Jobs in Sports

- Sports Physicist
- Equipment Manager
- Safety Engineer
- Assistant Athletic Trainer
- Materials Engineer



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

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