

STEM
sports[®]


science • technology
engineering • math • sports

SOCCER

Module 5.2

Pressure and Molecular Motion

GRADES 6th – 8th



MODULE
5.2

GRADES
6-8

What Do You Need?

Supplies Provided

[Worksheets](#), Futsal and Soccer Balls, Ball Pump, Inflation Needles and Pressure Gauge

Materials Needed

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

Why does a flat ball not move as easily as a ball full of air?

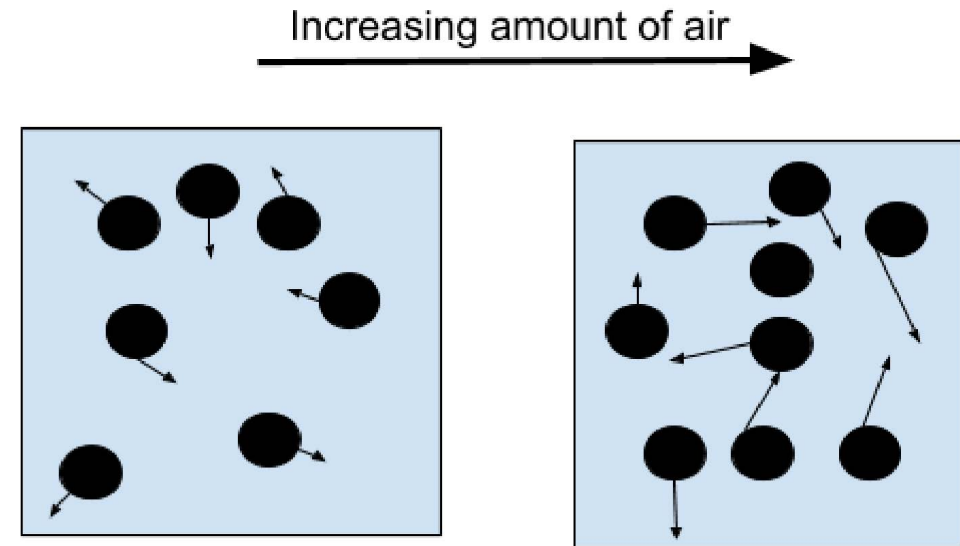
Explore

Learn the importance of playing with a properly inflated ball. Use the [worksheet](#) to record qualitative and quantitative observations.



Explain

Learn about the function, make up, and relationship of *molecules* inside of a soccer or futsal ball.



Elaborate

Use the [worksheet](#) to conduct a trial of how the ball behaves at various pressures.

Evaluate

What is happening on the inside of a flat ball vs. a fully inflated ball?
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!

Apply temperature to your experiment and explain why a soccer ball has less pressure on cold days.



What is your Dream Job?

STEM Jobs in Sports

- Materials Chemist
- Ball Engineer
- Market Researcher
- Product Development Scientist
- Equipment Manager



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

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