

STEM
sports[®]

science • technology
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BASKETBALL

Module 3.1

Understanding Basketball

GRADES 6th – 8th

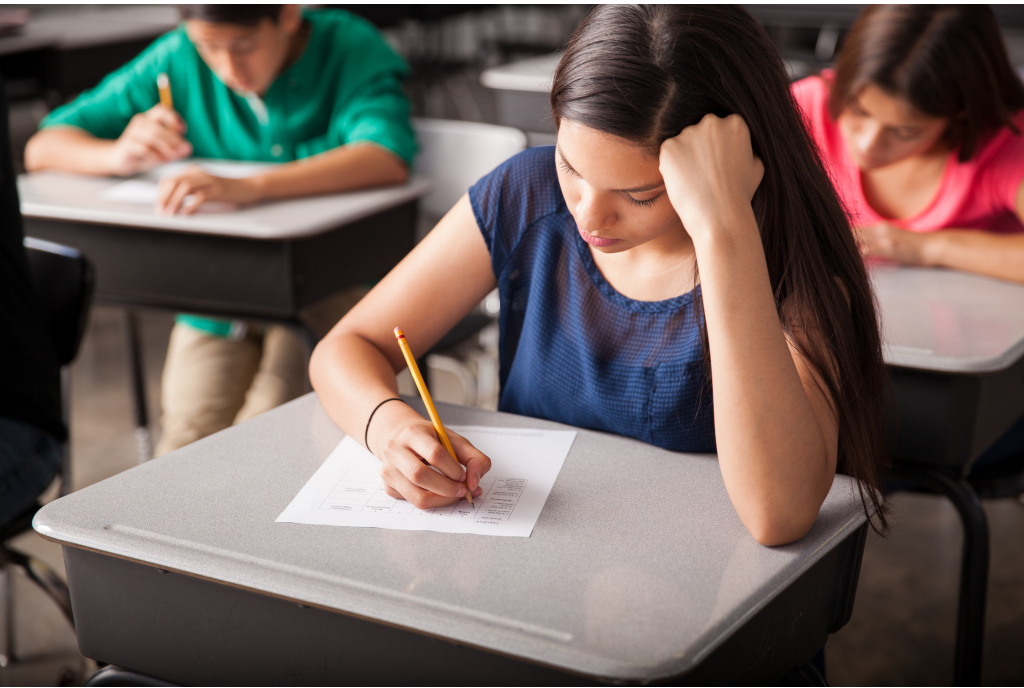
What Do You Need?

Supplies Provided

[Worksheets](#), Indoor and Outdoor Basketballs, Cut Samples of Indoor and Outdoor Balls, Calipers and Hair Dryer

Materials Needed

Large Bucket, Ice 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

Does the game change each time you play? Is there a difference between playing indoor vs. outdoor?

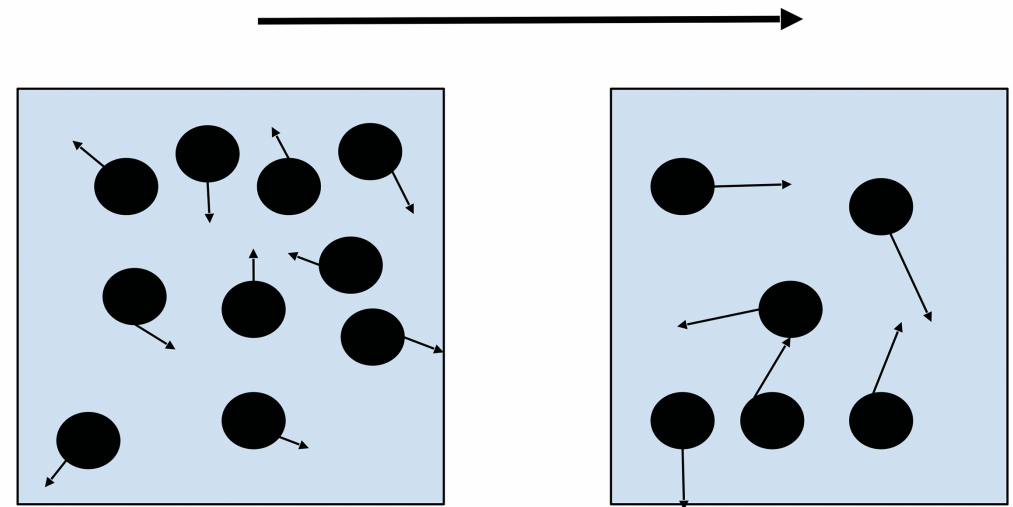


Explore

Focus on how temperature affects the way a ball behaves. Is there a difference between the indoor and outdoor ball? Use the [worksheet](#).

Explain

Learn about *molecular motion* and the air inside the ball, and how the air in the ball and the ball's material react to temperature change.



Elaborate

Make observations and test the functionality of a ball using heat and ice. Use the [worksheet](#).

Evaluate

How would a ball react if played outside in the winter?
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!

How would the balls density change when it is warm? *Make a prediction and measurement.*



What is your Dream Job?

STEM Jobs in Sports

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

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