



Curiosity Guide #405

Basketball Science

Accompanies Curious Crew, Season 4, Episode 5 (#405)

Angled Bounces

Investigation #3

Description

Learn a bit of science to improve your passing skills!

Materials

- Basketball
- A friend

Procedure

1. Stand facing your partner with about 10 feet between you.
2. Bounce-pass the ball to your friend.
3. Can you bounce the ball again so that it bounces up higher or lower to your friend?
4. How did you make the ball bounce at different heights?

My Results

Explanation

When a basketball collides with the floor, there is an elastic collision, which causes the ball to bounce back up. This relates to Newton's third law of motion, that says every action produces an equal and opposite reaction. The ball pushes on the floor, and the floor pushes back on the ball; the ball goes down, and then the ball goes up. At the same time, the ball is moving in an angle toward your friend. Whatever angle the ball hits the floor will be the same angle the ball bounces off the floor. This is called the law of reflection. If the angle is too steep, so is the bounce. If the angle is too shallow, the ball may bounce too low to easily catch. Try practicing your bounce pass to get the best angle for your friend to easily grab the basketball.

Parents and Educators: use **#CuriousCrew**
#CuriosityGuide to share what your Curious
Crew learned!



Curious Crew is a production of Michigan State University.

Learn more at WKAR.org.

© MSU Board of Trustees. All rights reserved.