



## Curiosity Guide #405

### Basketball Science

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

#### Curvy Passes

Investigation #2

#### Description

Try this investigation to learn a good passing trick!

#### Materials

- Basketball
- A friend
- Cone

#### Procedure

1. Place the cone three feet in front of you. The cone represents someone on the other team.
2. Have a friend stand several feet behind the cone, facing you.
3. Ask your friend to take two side steps to the right.
4. Can you bounce-pass the basketball to your friend, but make the ball go around the cone?

#### My Results

## Explanation

Sometimes you need to pass the ball to a teammate, but there is a defender in the way. You can bounce-pass the ball around someone by adding spin to the ball. Throw the ball to the right of the cone so that the ball will bounce off the floor. When you release the ball, slide your right hand up the right side of the ball and slide your left hand down the left side of the ball. The ball will now have a top spin that rotates the ball hard to the left. When the ball hits the floor, the floor pushes sideways and upwards on the ball. Because the ball is spinning when the ball hits the floor, the angle of the bounce changes, and the ball will hook to the left.

**Did you know?** Basketball is a wonderful sport that has changed a lot since the game was invented by Dr. James Naismith in 1891. Until 1929, players used smooth brown soccer balls, which were hard to dribble and grip. Instead of a netted basket, players would try to throw the ball into a full peach basket nailed up in a gym. Every time a basket was made, someone would have to climb a ladder to get the ball out! Today, the basketball is much bigger, has bumps on it to improve grip, and is kept at a perfect pressure to improve bounce. The pace of the game is much faster, and players have learned to take advantage of many science ideas to perfect their game. Basketball science—you gotta love it!

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