



## Curiosity Guide #405

### Basketball Science

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

#### Shooting Hoops

Investigation #7

#### Description

Can you become a hot shot?

#### Materials

- Basketball
- Hoop
- Tape
- Several friends
- Paper
- Pencil

#### Procedure

1. Choose a spot on the court to run the experiment. Mark the spot with a piece of tape.
2. Have players take turns shooting from that spot. Players will shoot the ball from their chests and shoot the same number of times.
3. Record how many baskets each player made.
4. Repeat the process, but have each player shoot the ball from the height of the chin.
5. Repeat the process one final time, having the players shoot the ball from over their heads.
6. In what shooting position did the players make the most shots?

## My Results

### Explanation

Players should shoot the ball by pushing with their dominant hand in a straight line toward the rim while keeping their eyes on the rim. The second hand is placed on the side of the ball to stabilize it, but is not involved in the flight of the ball. When the ball is released, the shooter's wrist is relaxed. The fingertips roll down the ball and give the ball a backspin. If released higher, the ball will travel in a symmetrical curved arc, or a parabola, and will have a greater possibility of making it in the basket. A men's regulation ball is 29.5 inches in circumference, and a women's ball is 28.5 inches. The circumference of the rim is 30 inches, so a higher arc will increase the overall rim area for the ball to hit.

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