



## Curiosity Guide #610

### Bowling Science

Accompanies Curious Crew, Season 6, Episode 10 (#610)

#### Bowling Ball Hook

Investigation #2

#### Description

Learn how to throw a bowling ball!

#### Materials

- Good bowling ball
- Bowling alley

#### Procedure

- 1) Hold the ball in front of you.
- 2) Swing the arm back on the four-step approach.
- 3) Release the thumb out of the ball before the fingers.
- 4) Think about the final push feeling like an underhanded spiral throw with a football.
- 5) Watch the ball go down the lane.
- 6) What do you notice happens to the ball during the last 20 feet?

#### My Results

## Explanation

Hooking a ball is a result of your release of the ball and the oils on the floor. Releasing your thumb before the two fingers from the ball will cause the ball to spin. If all three fingers are released at the same time, the ball will roll with less rotation. A proper hook release is often compared to throwing an underhanded spiral with a football so that the ball enters the pins between the 1 and 3 for a righty and 1 and 2 pin for a lefty.

Oil is the second reason for the hook. A thin layer of oil is laid over the lane surface. The oil starts off heavier at the foul line and tapers back for 40 of the 60 feet. This means that the last 20 feet are usually dry. The oil at the beginning makes the ball skid through the first 40 feet while the ball is rotating and trying to get grip on the lane. When the ball gets to the dry surface toward the end of the lane, the ball then abruptly grips the floor and hooks, according to the ball's rotation.

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