



Curiosity Guide #610

Bowling Science

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

Oily Bowling Ball

Investigation #6

Description

Don't let that ball slip out of your hands!

Materials

- High-end bowling ball, preferably not plastic
- Freshly-oiled bowling lane
- A friend

Procedure

- 1) Have a friend bowl on the freshly-oiled lane, using a high-end ball.
- 2) When the ball comes back from the return, quickly observe the ball closely.
- 3) What do you notice?
- 4) Now try to bowl to take advantage of the oily part of the lane.

My Results

Explanation

High-end bowling balls are more porous than plastic balls are. When you examine the ball after rolling on a freshly oiled lane, you should be able to see oil streaks on the ball. Oil streaks are much harder to see on a plastic ball. The oil will then begin to disappear into the pores of the porous bowling ball. Serious bowlers can study the consistency of the oil pattern on the ball to see if they are throwing the ball the same each time. The ball picks up the oil as the ball skids across the oil-covered first 40 feet of the lane before hitting the final dry 20 feet. At that point the friction quickly increases, and the ball reacts to the rotation.

Good to know: Have you ever seen a bowler wipe down a bowling ball before they use it? Good bowling balls are porous, which means they have tiny holes in them. Those holes in the ball give a good grip when the ball hits the part of lane with less oil on it. Because the ball already moved through that oil, the pores get dirty. Wiping down the ball will clean the pores and improve the grip again for a strong hook into the pins. Some bowlers will even gently sand or polish their ball to adjust the friction for when the ball hooks into the pins. Looks like your ball is ready for another strike!

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