



## Curiosity Guide #610

### Bowling Science

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

#### Oily Lanes

Investigation #5

#### Description

This may be a slippery investigation!

#### Materials

- 500 ml of water
- Oil lane applicator
- A friend

#### Procedure

- 1) Show your friend the water 500 ml of water.
- 2) Have the friend guess how much oil would go on a single lane.
- 3) Observe the oil applicator machine.
- 4) Let the friend revise his or her predictions.

#### My Results

## Explanation

Lane oil machines run over the lane to apply a very thin layer of oil, much thinner than motor oil, to reduce friction. The oil reduces the friction between the ball and the floor because it acts as a lubricant. The oil is laid over the lane surface, starting off heavier at the foul line and tapering back for 40 of the 60 feet. This means that the last 20 feet are usually dry. The oiled surface makes the ball skid through the first 40 feet while the ball is rotating and trying to get grip on the lane. The longer the lane is bowled on, the drier the lane gets because the oil continues to absorb into the porous wood lanes and also sticks to the rolling ball. The machine applies about 30 ml of oil to each lane.

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