



## Curiosity Guide #201

### Vision

Accompanies Curious Crew, Season 2, Episode 1 (#201)

#### Hole in 1?

Investigation #3

#### Description

See what happens when you use only one eye to do a simple task.

#### Materials

- Pencil
- Washer with opening just larger than the pencil
- Lump of clay

#### Procedure

- 1) Place a small lump of clay on a table.
- 2) Gently insert the bottom edge of the washer into the clay so that the hole is fully exposed. In other words, make the washer "stand up" on its edge like a target.
- 3) Turn the clay so that the edge of the washer is toward you.
- 4) Close one eye, remain an arm's length away from the clay, and try to thread the pencil through the hole of the washer.
- 5) Try it again with an eye closed. However, this time move your head from side to side.

#### My Results

## Explanation

The human eye is separated by about six centimeters. People use both eyes to establish two perspectives of the same object. This is called binocular vision. When the object is closer than 100 feet, people use the dual image to determine depth, distance, and position within the object's surroundings. By closing one eye and performing a task with one eye, it is much harder to see how far away things are from each other, and to line them up. As a result, you had difficulty threading the pencil through the washer.

By moving your head from side to side, your eye tries to determine two vantage points of the washer. Determining two points allows your eye to locate the hole more accurately. A person who lost an eye would compensate in this way to help identify the position of two objects.

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