

## Ball Bounce Lab

### Description

This lab has students collect data on the bounce of a ball. The lab continues to explore multiple bounces as well so you explore linear, quadratic and exponential models. This requires technology in the form of motion detectors, calculator based laboratories, graphing calculators, meter sticks, and masking tape.

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### Prep Work

Get the following technology: motion detectors, calculator based laboratories, graphing calculators, meter sticks, masking tape, and a collection of balls that bounce.

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### Instructions

#### ○ Pre Activity

For Parts B and C: Set up calculator based laboratories (CBL) and motion detectors.

#### ○ Activity

Part A: Students need a meter stick, masking tape, and a ball.

Have small groups of about 3 students get their equipment.

Have each group go through Part A of the lab. Make sure they are doing the lab in order and thinking about the situation before they begin.

Parts B and C: Students need all the technology.

On separate days have students work through each part of the lab.

#### ○ Post Activity

You can discuss the differences in the models they collected as well as compare between groups and types of balls to determine the bounciest etc.

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### Time Required

150 minutes Do this lab over three days.

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