

Metric Measurement Lab

Objectives:

1. Learn how to take accurate measurements with a meter stick, metric ruler, stopwatch, and lab balance.
2. Become familiar with units of measurement in the metric system.

Materials:

Meter stick, Metric ruler, Triple beam balance, Piece(s) of paper, Stopwatch
Marble, Ramp

Part 1: Measuring Length and Distance

Procedure:

1. Use a meter stick to measure the height of one of the wooden doors in meters. Record the height in a data table. Convert the height to centimeters and millimeters.
2. Use a ruler to measure the length, width, and thickness of a piece of paper in centimeters. Convert the measurements to millimeters and meters.

Part 2: Measuring Mass

Procedure:

1. Use the triple beam balance to measure the mass of two objects. Record the masses of each object in a data table. Convert your masses to kilograms.

Part 3: Measuring Time

Procedure:

1. Set up a ramp using some books or notebooks.
2. Let the marble roll down the ramp and across the table.
3. Using a stopwatch, time the marble rolling across the table (NOT down the ramp) five times. Record the times in a data table.

Discussion Questions:

1. Compare your measurements with those of another group. Were they similar or different? Why might there be differences between the measurements?
2. Specifically, which digit in your measurements is most likely to be different from other groups? Why?