

Measurement Lab: Part 1

Purpose: To estimate various measurable quantities
To practice proper measuring skills

Predict it: Look at each task below (1-5) and predict/estimate what you think the result will be based on what you know right now. No research.

Measure it: (1) width of a single lab table
(2) time it takes for a tennis ball to fall from the ceiling to the floor
(3) mass of 50 paperclips
(4) thickness of one piece of construction paper
(5) your height in centimeters

Think about it: Ask your teacher for the “correct” results. For tasks 1-4 complete the following:
(a) Determine the percent error.
(b) Give reasons as to why your answer is different than the “correct” result.
(c) What percent error do you think should be acceptable for task ? Explain.

$$\text{percent error} = \frac{|\text{"correct" value} - \text{measured value}|}{\text{"correct" value}} \times 100$$

Measurement Lab Part 2

Purpose: To estimate various measurable quantities
To practice proper measuring skills
To do quick research for unknown information (offline and online)

Here’s the task...let’s convert this room into an aquarium. How many gallons of water would it hold if we took out all the furniture?

1. **Predict/estimate** how many gallons based on what you know right now. No research.
2. **Solve it:** Support your result with measured data and calculations. Be sure to acknowledge where you found any information you did not already know.

Make it Official:

- (a) Give your teacher your final answer/support
- (b) Results will be announced next class period

How are winners determined?

Grand Prize: The closest to the correct answer
Honorable Mention: All groups within 10% of correct answer