**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Pd:\_\_\_\_\_\_\_\_\_**

**Measurement Lab**

**Purpose:** To estimate various measurable quantities

To practice proper measuring skills

To do quick research for unknown information

**Instructions**

* Read through each task (1-5) and use the data table to collect your data. Fill in “Prediction” column BEFORE you take measurements.
* Complete the lab and record your measured data.
* Show your work for any calculations you do. Include any conversion factors with your work and units with all your numbers.

**First:**

* Fill in the **“Prediction”** section of the table with your best guess of the table, tennis ball and weight of an object **before** **measuring.**

**Measure it:**

1. Measure the surface area of your lab table (do not include the legs…just the top!)
2. Measure the time it takes for a tennis ball to fall from any given height to the floor (i.e., from the ceiling, etc)
3. Determine the mass (think weight) of 50 paperclips
	1. How did you determine the mass? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Solve it:**

1. Ms. DeLeon wants to paint the top surface of all student lab tables in the room. Determine how much paint you will need to accomplish this. (**Hint:** Paint cans are 1 gallon each)

\*Think about calculating the surface area of one wall & research how much paint 1gallon covers.

1. Let’s convert this room into an aquarium. How many gallons of water would it hold if we took out all the furniture and cabinets? Support your result with measured data and show your calculations.

**Don’t forget your units for each measurement!**

**Commonly used units**

Lbs (pounds)

m (meters)

cm (centimeters)

s (seconds)

**Don’t forget your units when filling in the table!**

|  |  |  |  |
| --- | --- | --- | --- |
| **Task** | **Prediction of measurement****(your best guess)** | **Measured quantity** | **Calculations & Notes** |
| Table surface area(In cm) |  |  |  |
| Tennis ball fall**(Time in seconds)** |  |  |  |
| Mass of50 paperclips |  |  |  |
| Paint to cover all tables in room |  |  |  |
| Gallons of water to fill this room |  |  |  |

**Use this space for additional work if needed.**