

# RECORDING AN EXPERIMENT IN YOUR LAB JOURNAL.

The rubric to the left is used to grade the work recorded in the lab journal. Please use this as a guide to writing your report.

Please refer to this if you question what you should include in your Lab Journal. Use the Roman Numerals as shown.

START a new report on a new page so the date and title are on the top of the page.

1. Date – Before anything be sure to write the date, An easy 2 points.

I. Title – Write a descriptive title, centered in the page. Come up with your own please.

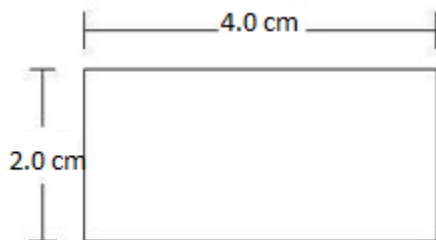
DATE: 9/30/2013

## I. Thickness of Aluminum Foil Lab

**II. Purpose:** The purpose of this experiment is to gain experience in making an indirect measurement. The goal is to indirectly measure the thickness of a piece of aluminum foil.

**III. Materials:** Scissors, Aluminum Foil, Metric Ruler, Balance, Calculator

**IV. Diagram:**



Continued on next page

## LAB JOURNAL RUBRIC

Please gluestick this in on the right side after your lab work. (No staples or tape please) (-5 if incorrect)

NAME		
Lab Report Rubric Notebook Form	Points Possible	Points Earned
<b>Date:</b> Date is recorded	2	
<b>I. Title:</b> Correct Form (Centered, underlined, Caps, spaced)	3	
<b>II. Purpose:</b> Clear, Concise	5	
<b>III. Materials List:</b> Complete & neat	5	
<b>IV. Diagram (s):</b> Simple illustration of set up or materials in action.	5	
<b>V. Procedure:</b> Completely described in full sentences.	10	
<b>VI. Data &amp; Observations:</b> Tables, graphs (If necessary) titled, units, neatly constructed.	25	
<b>VII. Calc.</b>	10	
<b>VIII. Analysis q's:</b> Complete, full sentences. All questions answered.	15	
<b>IX. Conclusion/Summary</b> – What was <u>learned</u> . Mention results and discuss.	20	
<b>Neatness</b> ( <i>Extra Credit –discretional</i> )	5	
<b>Total</b>	100	

LATE PENALTY: 10% of grade lost for every school day.

**II. Purpose** – DO NOT COPY THE PURPOSE GIVEN, PUT THIS IN YOUR OWN WORDS AND EXPAND UPON IT. Your purpose should state answer the questions below:

What are you measuring or trying to find out about something?

What do you expect to learn?

**Do not use first person: I, we, me etc.**

**This is 5 more challenging points**

**PLEASE NOTE LAB WRITING DO'S AND DON'T'S**

**III Materials** – Include a complete list of the materials that are used in the experiment.

**This is 5 easy points.**

**IV Diagram** – Include a diagram of the set up or object you are measuring. Label things.

**This is 5 easy points.**

**V. Procedure** –Write out a list of steps on how to perform this lab. If someone were to want to recreate what you have done they should be able to follow your directions.

Sometimes directions will be provided, sometimes they will be given verbally, and sometimes you may be asked to create your own.

**This is an easy 10 points.**

**VI. Data & Observations** –Tables of **data, graphs**, and any values you will need in your calculations must be presented in a neat fashion. This includes tables and graphs.

INCLUDE A DIAGRAM OF YOUR SET UP.

If you attach please make the papers smaller than the journal page so they do not need to be folded.

*Numbers do not need units if they are in tables with units in a column heading.*

**DO NOT STAPLE** – As the year goes on and your journal fills up staples cause the book to wear quickly.

**This is an easy 25 points.**

**VII. Calculations:**

*Show your calculations. You must include the algebraic equation you use BEFORE you use it. Then show the values plugged in with units.*

*State your final solution in a box with units.*

**VIII. Calculations & Analysis Questions**–This is the majority of your work.

**Calculations** – In this section you will analyze the data you collected and make calculations. Show all your work.

**Questions** – **Your must include the questions with your work. COPY OR CUT AND PASTE THE QUESTIONS INTO YOUR BOOK.** Answer all questions with complete sentences or show the calculation with the appropriate units.

**This is a challenging 15 points.**

**V. PROCEDURE:** If given the procedure you may cut and paste this in the old fashion way. If not you should write it out.

**VI. DATA & Observations:**

Foil Width	Foil Length	Foil Mass
(cm)	(cm)	(grams)
3.0	3.0	0.05

**Density of Aluminum:**  $2.7 \text{ g/cm}^3$

From <http://periodictable.com>

**GRAPHS:**

No graph for this one but please see Guidelines for Graphs.

**VII. CALCULATIONS**

**Calculate the thickness of the aluminum foil:**

**VIII. ANALYSIS QUESTIONS:**

**Questions from Directions:**

**How many sheets of aluminum foil would you need to stack to create a thickness of 1 cm?**

*It would take \_\_\_\_\_ pieces of aluminum foil to create a thickness of 1 cm.*

## IX. CONCLUSION

*The density equation along with the volume of a rectangular shape allows for the indirect measurement of the thickness of aluminum foil. Aluminum foil was found to have a thickness of \_\_\_\_\_.*

**IX. Conclusion** – Make a statement of what you learned and your results. You should state numerical results.

**COMMON ERROR:**

*Do not refer to yourself, do not use first person : "I, we, me".*

**This is a challenging 20 points.**

## LAB WRITING DO'S AND DON'T'S

Writing scientific works is different than other areas of writing.

DO

Use complete sentences always.

Be neat and leave spaces between things so it is easier to find the different sections.

DON'T'S

Do not refer to yourself. The topic is the science that we are studying not ourselves. If you have the

LIKE THIS:

The thickness of aluminum foil is calculated to be \_\_\_\_\_cm.

INSTEAD OF THIS:

**I found the** thickness of aluminum foil is calculated to be \_\_\_\_\_cm.

## Guidelines for Graphs

Be neat.

Include a title, x and y axis scale, title and units for the title.

Point Markers must not be dots, they become confused for smudge marks. USE + or X or O or T.

If a line of best fit is included state the equation of that line on the graph.

If multiple sets of data are represented, use different point markers or line types and differentiate them in legend.



Journal Rubric goes on the Right side after your journal entry

### LAB JOURNAL RUBRIC

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NAME: \_\_\_\_\_

Lab report rubric is notebook form	Points Possible	Points Earned
<b>Date:</b> Data is recorded	2	
<b>I. Title:</b> Correct Title (Do not include materials, reagents, species)	3	
<b>II. Purpose:</b> Clear & Concise	4	
<b>III. Materials List:</b> Complete & List	3	
<b>IV. Diagrams:</b> Simple illustration of setup or a reaction.	5	
<b>V. Procedure:</b> Complete & includes all sentences	10	
<b>VI. Data &amp; Observations:</b> Tables, graphs, tables, neatly constructed.	20	
<b>VII. Calc. &amp; Analysis q's:</b> Complete, full sentences. All questions covered.	20	
<b>VIII. Conclusion-Summary:</b> What was learned. Mention results and discuss.	20	
<b>SCALES</b>		
Total	100	

APR 2016 BY 1056122 (2) for every student class.