

Name: _____

Date: _____

Period: _____

Independent Research Lab Report Calendar

As we progress through this unit, you will write in what must be completed by the end of each day. If you have completed the assignment, you will receive a stamp for that day. The stamps on this calendar and your actions in class will determine your classwork grade for this unit.

Monday	Tuesday	Wednesday	Thursday	Friday
5/11 2 nd Semester Final	5/12 2 nd Semester Final	5/13	5/14	5/15
5/18	5/19	5/20	5/21	5/22
5/25 NO SCHOOL MEMORIAL DAY	5/26	5/27	5/28	5/29
6/1	6/2	6/3	6/4	6/5
6/8 End of 2 nd Semester Grades Due				

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Directions: Some parts of the lab are to be written neatly on this sheet. You will use this document to write up your research project.

A. **Finding a Topic:** Use the “End of the Year Research Topic Selection” activity to pick the two topics that interest you the most. Then write a testable question for each, identifying both the independent and dependent variables.

I. Testable Question: _____

Independent Variable: _____ Dependent Variable: _____

II. Testable Question: _____

Independent Variable: _____ Dependent Variable: _____

Topic # chosen: _____

Teacher Approval:

B. **Developing Background Questions:** Using keywords and your independent/ dependent variables, develop some background questions related to your testable questions above.

Question Word	Possible Questions
Why	Why does _____ happen? Why does _____ ? Why _____ ?
How	How does _____ happen? How does _____ function/ work? How does one measure _____ ? How does _____ affect _____ ? How _____ ?
What	What causes _____ to increase/ decrease? What causes _____ ? What is _____ ? What are characteristics of _____ ? What affects _____ ? What _____ ?
When	When does _____ cause _____ ? When is _____ used/ needed? When _____ ?
Where	Where does _____ occur? Where _____ ?

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C. Researching the Answers to your Questions: *Identify your 3 best questions from Part B that are most relevant to your testable question and rewrite them below. Find and read the background research for the answers to your questions and record them below.*

Background Questions	Answers
1.	1.
2.	2.
3.	3.

Make sure you cite which article you used

D. Writing your Review of Literature: *Use the outline below to write a 5-paragraph essay on a separate sheet of paper.*

I. Introduction

- Attention getter: quote, statistic, fact, or question that gets the reader's attention
- Connector: why might the reader be interested/ or why is this topic important?
- Thesis statement: introduce the question or purpose of the experiment
- Summary of the main ideas of the body paragraphs (set up the essay)

II. Background Question #1

- Main Idea: Turn your background question #1 into a statement
- Evidence: Support your claim using facts, data, quotes, or anything else from your research
- Links: Explain your evidence and **how** it supports your main idea. 1 – 2 sentences per piece of evidence
- Con: Wrap up sentence that summarizes what you have written and gives your paragraph closure

III. Background Question #2 (see same format as above paragraph)

- Main Idea → Evidence → Links → Con

IV. Background Question #3

- Main Idea → Evidence → Links → Con

V. Conclusion

- Use a transition (not “in conclusion”)
- Summarize each of the three points from your body paragraphs
- Thesis: restate your thesis (testable question/ purpose) in a different way
- Attention Getter Loop: Tie back to your introduction
- Clincher: Explain the “so what?” about your thesis to get your reader interested

* Remember 3rd person only (no I, we, you, me, us, etc) and cite direct quotes or paraphrased info *

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E. Hypothesis: Refer back to Part A to write a hypothesis in the “If... then... because...” format.

Hypothesis: If _____

F. Materials: Write a list of materials that you will need to complete your experiment. Remember to include quantities (how many/ much of something), containers, and tools.

G. Procedure: Develop a detailed step-by-step procedure of your experiment. Make sure it is **numbered**, and include specific amounts, time, and/or trials.

Teacher Approval:

H. Results:

I. Data Table: Design a data table that you will use to collect your data. Be sure to include a title and appropriate units.

Teacher Approval:

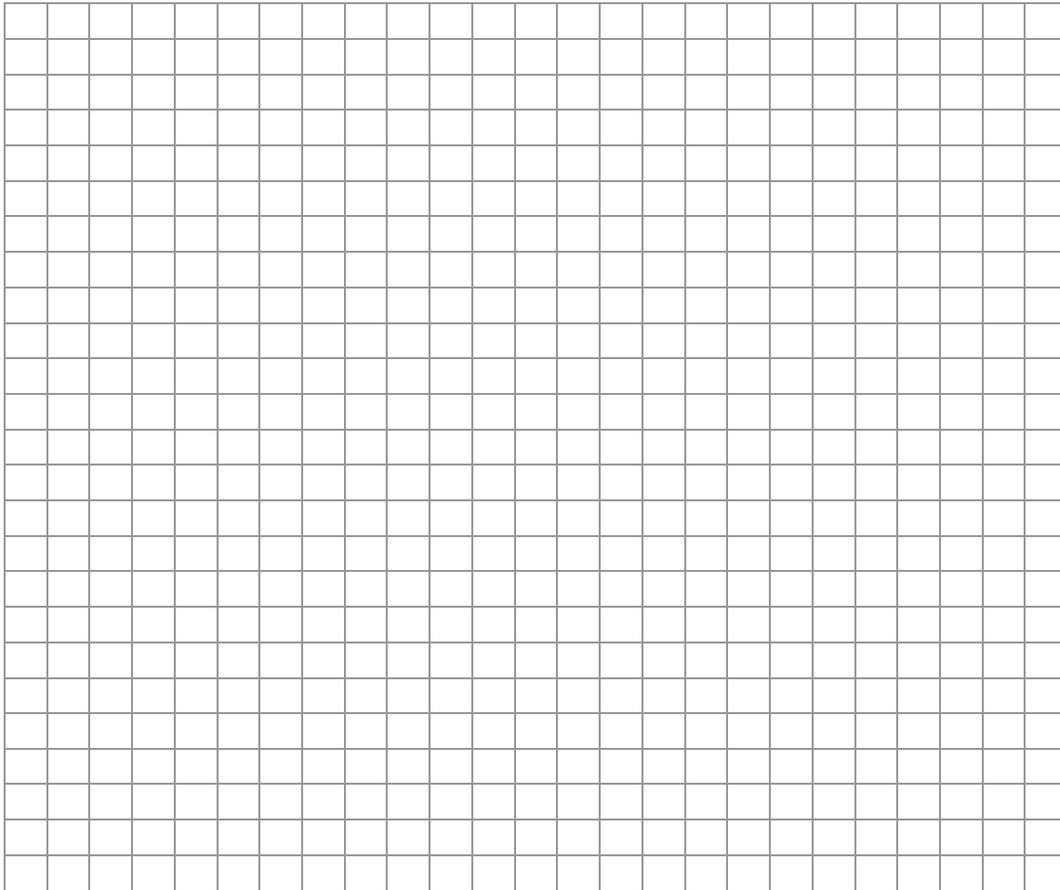
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II. Graph: *Create a graph displaying your data. Make sure your graph TALKS!*



III. Data Analysis: *Answer the following questions in complete sentences.*

- i. What is the title of your graph? _____
- ii. What is the independent variable? _____
- iii. What is the dependent variable? _____
- iv. What is shown in the key? _____
- v. What is the range of values (minimum and maximum) with units for the y-axis?

- vi. What is the range of values (minimum and maximum) with units for the x-axis?

- vii. Describe the trend or pattern in the graph. _____

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I. **Conclusion:** Write your conclusion on a separate sheet of paper, using the following outline.

I. Paragraph 1

- Main idea: Restate your hypothesis and say if it was supported or not supported
- Evidence: Use at least 2 pieces of specific evidence (numbers) from the data table, graph, or data analysis
- Links: Explain why the data supports or does not support the hypothesis

II. Paragraph 2

- Main idea: highlight how the results did or did not deviate from expected. Suggest possible reasons for error.
- Evidence: Cite evidence from the review of literature that relate to the results
- Explain how your research accounts for the results (use what you learned in your research to explain why the data turned out the way it did)

III. Paragraph 3 – Conclusion

- Explain why this project is important.
- Suggest ways/ methods to improve this investigation.
- What impact does this have on others or for science in general?

Organizing Your Final Paper: Your Final paper must be neatly written or typed using the following outline!

Title: This should be in the **center** at the top of your paper

Purpose (Part A): This is where you are to identify your testable question

Hypothesis (Part E): Make sure it is in proper format “**If... then... because**”

Review of Literature (Part D): Be sure that your essay follows the format given, is **4 paragraphs!**

Materials (Part F): Make sure this is in **list format** and measurements of all material are given!

Procedure (Part G): This should be **numbered** and specific

Data Table (Part H): All tables should have a title and units used should be identified

Graph (Part H): Must be on **Graph paper** or formatted on the computer. Make sure that your graph TALKS

Data Analysis (Part H): This should be written in **paragraph form**, which means it must be in complete sentences.

Conclusion (Part I): Be sure that your essay follows the format given.