# Biology Investigation and Experimentation Graphic Organizer Name: Block: Date:

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| EXPERIMENTAL DESIGN AND DATA COLLECTION | RESEARCH QUESTION: What are you testing? | | | | | | | | |
| PROCEDURE: What are you going to do? (Summarize the procedure) | | | | | **What do you think will happen?** | | | |
| HYPOTHESIS If \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, then \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  *I do this… …I think this will happen.* | | | | | | | | |
| DESIGN | | | | | | | | |
| **Independent Variable**  Determines  *(the thing you changed/manipulated)* | **Dependent Variable**  *(the thing you measured/responding)* | | | **Constants** *(all the things that are the same between each run)* | | **Control Run** *(the baseline that you compare everything to)* | | |
| **Experimental Run(s)** *(the runs or trials that you changed things)* | | |
| DATA y | | | | | | | | |
| Table   |  |  |  |  | | --- | --- | --- | --- | |  | x | y1 | y2 | | *Label:* |  |  |  | | *Units:* |  |  |  | | *Data:* |  |  |  | |  |  |  | |  |  |  | |  |  |  | |  |  |  | |  |  |  | |  |  |  | |  |  |  | | | Observations | Sketch Your Graph  x  :::::::Desktop:Screen shot 2011-12-08 at 11.01.11 AM.png | | | | *Does the graph have…?*   * *Descriptive title* * *DV on y axis* * *IV on x axis* * *Units on axes* * *A legend* |
| ANALYSIS: What does your GRAPHED DATA tell you about the PROBLEM in this experiment? *(Provide one sentence that connects the results in your graph to what you were trying to find out.)* | | | | | | | | |

*Modified from the Claremont Unified School District by Cheryl Fiello, Linda Moule, Marizka Rivette, Sarah Woods, and Eric Tucker. Funding provided by the UCLA TIIP Grant (2011-2013).*

# Biology Scientific Writing and Common Core Graphic Organizer Name: Block: Date:

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **ANALYSIS AND CONCLUSION** | **INTRODUCTION** | | | | | | | |
|  | What were you trying to find out? | | | | | | |
| What did you do to find it? | | | | | | |
| What did you think would happen? | | | | | | |
| **THESIS STATEMENT** | | | | | | |
| What is your ONE most important piece of data you collected? | | | Why did you do this lab? | | How good are your results? | |
| **BODY** | | | | | | | |
|  |  | | *Paragraph 1* | | *Paragraph 2* | | *Paragraph 3* |
| *Concrete Statements* | *1* | Restate your research question and hypothesis. | | List three variables that you didn’t control. | | What are the sources of error in this experiment? |
| *2* | State the results of your experiment (use data from your lab). | | BONUS: List any additional uncontrolled variables. | | How could you fix those errors? |
| *3* | Was your hypothesis right? Why did you think that would happen (evidence)? | | Describe any other problems that happened when collecting data. | | If we did this lab again, what other  independent variables could we test? |
| **CONCLUSION** | | | | | | | |
|  | Restate your thesis in different words. | | | | | | |
| What is so important about this lab to our learning? | | | | | | |
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