Plant Growth Experiment Final Report

The purpose of this report is to:

* **Describe** and **Explain** your experimental setup with background information about French Marigolds, and a single experimental variable of your choice.
* **Analyze** the data collected to describe the effects of the variable you chose on the growth of French Marigold plants.
* **Explain** with evidence from your data to draw a conclusion that addresses your experimental question and either supports or refutes your original hypothesis.

For the past month you have designed and experiment and collected data to see what the effects of an experimental variable would be on the growth of French Marigolds. First, you need to organize the data collected.

**Directions:**

Cconvert your data into a format that can be entered into a spreadsheet and graphed for analysis. Use your collected data and the calander below to complete the following table.

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| Germination Date → | | | | |  | | | |  | |  | | | |  | |
| Plant → | | | | | Control 1 | | | | Control 2 | | Experimental 1 | | | | Experimental 2 | |
| Days from Germination | | | | | Height  (cm) | | Number of Leaves | | Height  (cm) | Number of Leaves | Height  (cm) | | Number of Leaves | | Height  (cm) | Number of Leaves |
| C1 | C2 | E1 | E2 | |
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**Plant Experiment Research Paper Rubric**

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| **Content** | **Criteria** | **Score** |
| **Title Page** | **Descriptive Title with Dependent and Independent variables**  **Name, period number**  **Date**  **Class** | *\_\_ / 5* |
| **Background Research Paragraph 1** | 1. *Introduce species* 2. *Important details that are specific to French Marigold Growth* | *\_\_ / 10* |
| **Background Research**  **Paragraph2** | 1. *Introduce your experimental variable* 2. *Describe how this variable helps plants grow. Be specific and identify what nutrients and or properties of this variable are helpful for plant growth.* | *\_\_ / 10* |
| **Purpose** | *In a single sentence describe the purpose of your experiment. What are you testing and why? (This is your experimental question)* | *\_\_ / 5* |
| **Hypothesis** | *Write a clear and descriptive hypothesis in the (If \_\_\_ then \_\_\_ becasues \_\_\_) format including both independent and dependent variables.* | *\_\_ / 5* |
| **Materials** | *Include a list of all materials you used to run your experiment.* | *\_\_ / 5* |
| **Methods and Procedures** | *Describe the methods and procedures you used to carry out your experiment.* | *\_\_ / 10* |
| **Data** | *Create a data table and graph that accurately reflects the data collected for each plant in the experiment. Include a descriptive title and axis labels for the graph.* | *\_\_ / 10* |
| **Analysis** | *In a four to five sentence paragraph explain what your results reveal about the growth of French Marigolds. Cite specific evidence from your experimental data and graph.* | *\_\_ / 10* |
| **Conclusion** | *In a five to six sentence paragraph include the following:*  *Answer the experimental question (purpose)*  *Explain whether the data supports or refutes your hypothesis.*  *Cite specific data to explain the reasoning for your conclusion.*  *Explain any factors that might have altered the results of your experiment.* | *\_\_ / 10* |
| **Data Sheet** | *Attach your completed data collection sheet to the back of your report* | *\_\_ / 20* |
| **Total Score** | | *\_\_ / 100* |