

<<Project Title precisely describes the work. All numbers, chemical elements and compounds should be spelled out.>>

Student Researcher(s): <enter here>

Chapter: OH0436

State: OH

Category: Choose an item from the STEM Fair group page update by Mrs. Henry.

Division: <Division 1- if you are working individually Division 2- if you are working with a partner>

## Importance

- Answers why this topic is important to the world and what problem this topic solves.
- If your topic is related to agriculture:
  - Why is the topic important to the agriculture industry?
    - Provide one clear, detailed paragraph answer here.
  - What problem does the investigation solve for agriculture?
    - Provide one clear, detailed paragraph answer here.

## Other's Work/Literary Review

Clearly details what information currently exists concerning the research project. Reference where the information was found (website, book, article, etc.) is listed, then a paragraph written by the student researcher(s) clearly describing the reference and information it provided for each publication used.

## Hypothesis/Anticipated Results

- Your hypothesis should be something that you can actually test, what's called a **testable** hypothesis. In other words, you need to be able to measure both "what you do" and "what will happen."
- Example:"If a particular independent variable is changed, then there is also a change in a certain dependent variable."
- [How to write a hypothesis](#)
- [Example of how variables relate to your hypothesis](#)

## Materials and Methods

- Should enable others to reproduce the results by duplicating the study. It should be clearly written in third person, encompass all of the materials required.
- This should be **numbered** step by step. What did you do? Someone should be able to replicate EXACTLY your experiment. This should be written in **third person passive tense**.

## Data Collection/Summary of Data

- Insert a screenshot of your data table. (Use proper captions/titles)
- What type of graph will best represent your data?
- Create your graph and insert a screenshot of it. (Make sure you use proper units of measure, labels, and headings.)
  - Captions for each table are placed above the table and a caption for a figure is placed below the figure. Both are at least two point sizes smaller than the point size of the figure's text and are single spaced.
- Write a summary of your data. What are the trends and relationships you see? You should not make a conclusion of your experiment.

## Discussion

- What do the results of the study mean?
- How are they related to what others found in the "Other's Work" section?

## Conclusion

- The conclusion clearly states what should be done and/or changed as a result of the research. Clearly states what the next steps are to continue the research.
- Restate your evidence and explain your experimentation.
- Possible Errors/improvements: This should be presented in a table/ t-chart. Minimum 3, what

could you do to improve upon your project? EVERYONE has errors and improvements

- Real World Connection: practical application, how and why lab is relevant or important and ways to improve for future trials.
- This section should show that the conclusions were drawn from the results of the study and how the results relate to the hypothesis. It should contain a brief recap of the results and show how the results were a foundation for the study. Explanations should be clear if the results were not as expected. Sound reasoning is used to make conclusions that rely on both literature and results. Discussion should reference facts and figures from results section.

### **Summary**

- The summary is two to three paragraphs describing the study conducted. Describes why the student researcher(s) chose to conduct the study, why the study is important to the agriculture industry, how the study was conducted, what was found by conducting the study and how the results apply within the agriculture industry.

### **Acknowledgements**

- Detailed list or paragraph is included acknowledging anyone who assisted with any aspect of the project and how they helped.