

## Research Paper Requirements (DUE JANUARY 7)

A good paper includes the following sections:

1. Title Page and Table of Contents
  - a. The title page and table of contents allows the reader to follow the organization of the paper quickly.
2. Introduction
  - a. The introduction sets the scene for your report. The introduction for your report.
  - b. The introduction includes the purpose, your hypothesis, problem, an explanation of what prompted your research, and what you hoped to achieve.
3. Materials and Methods
  - a. Describe in detail the methodology you used to collect data and make observations.
  - b. Your research paper should be detailed enough so that someone would be able to repeat the experiment from the information in your paper.
  - c. Include detailed photographs or drawings of self-designed equipment.
4. Results
  - a. The results include data and analysis. This should include statistics, graphs, pages with your raw collected data, etc.
5. Discussion
  - a. This is the essence of your paper.
  - b. Compare your results with theoretical values, published data, commonly held beliefs, and/or expected results.
  - c. Include a discussion of possible errors.
  - d. How did the data vary between repeated observations of similar events? How were your results affected by uncontrolled events? What would you do differently if you repeated this project? What other experiments should be conducted?
6. Conclusions
  - a. Briefly summarize your results.
  - b. State your findings in relationship of one variable with the other.
  - c. Support those statements with empirical data (one average compared to the other average, for example).
  - d. Be specific; do not generalize.
  - e. Never introduce anything in the conclusion that has not already been discussed.
  - f. Also mention practical applications.
7. You should always credit those who have assisted you, including individuals, businesses, and educational or research institutions.
8. References/Bibliography
  - a. Your reference list should include any documentation that is now your own.
  - b. Three sources are required.
  - c. Bibliography should follow MLA format.

## Abstract (DUE JANUARY 11)

After finishing research and experimentation, you need to write an abstract. The abstract needs to be a maximum of 250 words on one page.

## Requirements

1. Purpose of the experiment
2. Procedures used
3. Data and conclusions

## Format of Abstract

Title of Project

Name

Central Wilkes Middle School, Moravian Falls, NC

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Body of abstract

## Display Board (DUE JANUARY 10 - 11)

1. Good title
  - a. Your title is an extremely important attention-grabber.
  - b. A good title should simply and accurately present your research and depict the nature of the project.
  - c. The title should make the casual observer want to know more.
2. Take photographs
  - a. You might want to take photographs of important parts/phases of your experiment to use in your display.
  - b. Photographs or other visual images of human test subjects must have signed consent forms.
  - c. Credit must be given for all photographs. ("Photograph taken by ..." or "Image taken from ...") If all photographs are taken by the same person or come from the same source, one prominent credit line may be used.
3. Board Requirements - use neat, colorful headings to make your board stand out
  - a. Problem/Purpose
  - b. Hypothesis
  - c. Materials
  - d. Procedure
  - e. Photographs of experimentation
  - f. Data collected
    - i. Highlight your results using key graphs that show the relationships of the two variables tested.
    - ii. Use the graphs to give a "picture" of the data to your viewers.
    - iii. These graphs will provide an easier method of viewing the data rather than just seeing the recorded quantitative data.
  - g. Analysis of data
  - h. Conclusion