

## **What to include in your Science Fair Research Paper:**

Your paper will be written in APA format. (<http://www.apastyle.org/>)

A tutorial discussing the basics of an APA paper which also has links to download sample sections of an APA paper can be viewed here: <http://flash1r.apa.org/apastyle/basics/index.htm>

A second sample paper in APA format can be downloaded here:  
<http://owl.english.purdue.edu/owl/resource/560/18/> - this paper is not a research paper and does not have a results section but is useful to see how to setup the title page and other sections.

A third example: <http://www.my.ilstu.edu/~jhkahn/APAsample.pdf>

Overall, your paper should be written in the past tense, avoid the pronouns 'I' and 'We' and will include the following...

### ***Title Page***

The title of your project should be centered on the page and also include:

- your name
- your teacher's name
- the due date

### ***Abstract***

Write a short summary of your project that includes the problem, hypothesis, general procedures, main results, and conclusions. This should be between 150 to 250 words.

### ***Introduction***

Here you should discuss your problem/question--why or how you came to study this topic and why it is important to study. Summarize information from your background research that is necessary to understand your problem. *Make sure you cite!* Explain how you decided upon your experimental design including the independent and dependent variables. Conclude by stating the purpose of your study and your hypothesis about the results.

### ***Methods and Materials***

In paragraph form, describe the materials and procedures used to conduct the study. Provide enough detail to allow the reader to repeat the experiment. Include amounts in the materials, precise descriptions of the samples you took, any apparatus you constructed, or methods of data collection.

## **Results**

This is your data that you collected--whether observational/surveyed (qualitative) or numerical (quantitative). This data must be presented in two ways:

1. tables
2. charts and/or graphs

Note: If you have a lot of raw data and you are just graphing averages then you can just table the averages also. Raw data should be included in the "Appendix" section at the end of the paper.

Any statistical analysis of your data should also be shown in this section. You should include sample calculations, if appropriate.

## **Discussion/Conclusion**

- This section focuses on your descriptions and interpretations of your results.
  - § Emphasize your major findings.
- Restate the purpose of your study, your major findings, and whether your hypothesis was supported by your data.
- Compare your findings with any research that was previously done.
  - § *Make sure you cite!*
- Discuss any possible sources of error in your results, either from chance occurrences or from your experimental design.
- Finally, make suggestions for improved experimentation methods and recommendations for further study.

## **Bibliography**

Books, journal articles, websites, or people cited or used for information in the paper in APA format.

## **Acknowledgements**

Credit assistance received by mentors, parents, teachers and other sources.

## **Appendix**

Include information that is too lengthy for the main section of the paper: raw data; extra tables or graphs; copies of surveys or tests; and diagrams of special equipment.