

Check List for Your Independent Semester Science Project Write Up

(This is for your notebook or binder in front of your 3-panel display board. An asterisk (*) in front of a numbered item on the list below means you should make two copies of that item, one for the display board, and one for the notebook or binder in front of your display board.)

Title Page comes first in the Notebook – 10 words or fewer in the middle of the paper. It can be a short and snappy title. The question you ask in number 4 below is a declaration of your exact question in a sentence or two and could be the title on your front Title Page if it is not more than ten words long. Put your First and Last Name in the lower right hand corner, and then under it put the name of your class, and then your teacher's name. Then under that put Mount Everest Academy, and the date: January 24, 2020.

Next comes a **Table of Contents** page with: **Headings page #**

1. Abstract – This is a one page (at most) write up that is written last and summarizes the most important parts of your entire project. It should have 3 relatively short but carefully crafted paragraphs. Paragraph one should let people know what you were trying to find out. Paragraph 2 should tell them the main procedures you used to find that out. Paragraph 3 should answer the question you were asking about.

***2. Introduction** - A brief look at the background and goals of your topic. Something short but meaningful about why you are interested in this topic and why people might be interested in finding out about the topic you have chosen.

3. Background Research – This is your written report about the information you discovered entailing the history and interesting facts about the ideas related to your topic of interest. 5 pages minimum with at least 3 Bibliography references for your sources of information included is a proper goal.

***4. Statement of the Problem or Purpose** – The question you will attempt to answer. It is basically your goal. Example: What is the effect of the Independent Variable (what you are changing) on the Dependent Variable (what you are measuring)?

***5. Hypothesis** – An educated guess about the answer to your question/problem.

***6. Materials** – A list of everything you used for your experiment. Especially the tools you used to get the measurements that were important for you to get your data.

***7. Procedures** – A step-by-step description of how you did your project in the order you did your testing and data gathering. Let us know at the start of this list where you conducted your experiment (garage, patio, school classroom, back yard, kitchen, ...). There is a very important part of any scientific investigation called reproducibility where almost anyone could use your list of procedures to readily recreate it and verify what you found out. If your description has any vague parts or really important steps you left out, the reader is frustrated in trying to understand what you did to get your data. Please do not do that to them. Also consider adding diagrams or pictures to help us understand your procedures. You are doing good exploring. Give us the details about that process here.

***8. Data** – Sometimes called FINDINGS. Usually numerical information in lists, spreadsheets, or charts such as measurements that you collected and they should be labeled properly so the reader knows what units of measure you have taken (centimeters, seconds, ...).

***9. Graphs** – Charts summarizing your findings. A good website for making graphs is at Create A Graph Classic (Kid's Zone). The Independent variable will go on the x-axis and the Dependent Variable will go on the y-axis. Or use Excel generated graphs.

***10. Results** – This is where you give the averages of your testing, of your data collection. This is where you rank the results from high to low or vice versa for certain project topics. It is an overview of your findings using words and numbers.

***11. Conclusions** – Of utmost importance. This is where you answer the question you set up in number 4 above. How did your tests and experiments work out? Did your data support or not support your hypothesis? Include a statement of what you thought about your results and what you learned in this experience.

***12. Recommendations** – What are your ideas on possible uses for your findings and suggest any additional tests that should/could be made. What would you change if you did this project again, or could you continue this project another year? In other words, how could it be improved?

13. Acknowledgements – Give thanks to those who gave you assistance.

Possible added features or parts to the Write Up:

An Appendix added at the end – To possibly include Permission Slips for Human Testing, a Glossary of important words you are using to aid the reader, correspondence with scientists or researchers about your topic, extra pictures that do not fit on the board, and almost anything you think is important for people to see.