

Each student is required to submit a research paper. It will be 20% of term -3 grade.

*Students working in a group will be submitting one paper and add additional paper to restate your contribution in the research paper.*

**Research paper should be (4-6 pages; double spaced, Times New Roman Size 12)**

**Submission deadline is April 7, 2020.**

1. TITLE PAGE Topic, your name, school's name, grade, city, province, and postal code)
2. TABLE OF CONTENTS
3. ABSTRACT  
After finishing research and experimentation, you need to write a (maximum) 250-word, one-page abstract. An abstract should include the (a) purpose of the experiment, (b) procedures used, (c) data, and (d) conclusions.
4. ACKNOWLEDGEMENTS
5. INTRODUCTION (Explain your topic. What is it about?)
6. PURPOSE (The purpose of a statement of what you intend to do. What is your goal? What idea are you trying to test?)
7. PROBLEM (What is the scientific question you are trying to answer?)
8. HYPOTHESIS (Explain how you think your project demonstrate your purpose. Make a prediction regarding the outcome of your experiment. State the results you are predicting in measurable terms.)
9. VARIABLES (Independent, dependent, constants, and control group. Be clear about the variables (elements of the experiment that change to test your hypothesis) versus your controls (elements of the experiment that do not change).)
10. MATERIALS (List all materials and equipment that were used. Your list of materials should include all of the ingredients of the procedure recipe.)
11. PROCEDURE (In steps not in paragraphs), if possible, with pictures. Give a detailed explanation of how you will conduct the experiment to test your hypothesis. Be very specific about how you will measure results to prove or disprove your hypothesis. You should include a regular timetable for measuring results or observing the projects (for example, every hour, every day, and every week). Your procedure should be like a recipe – Another person should be able to perform your experiment following your procedure. Test this with a friend or parent to be sure you have not forgotten anything.)
12. PICTURES
13. DATA TABLES (All of your data in tables)
14. GRAPHS!
15. ANALYSIS (Explain your observations, data and results. This is a summary of what your data has shown you. List the main points that you have learned. Why did the results occur? What did your experiment prove? Was your hypothesis correct? Did your experiment prove or disprove your hypothesis? This should be explained thoroughly.)
16. CONCLUSION (Answer your problem/purpose statement. What lessons have you learned from this experience? What is the value of your project? How does your experiment benefit others? )
17. APPLICATIONS & FURTHER RESEARCH (What is the application of your project in daily life/economy? What further study do you recommend given the results of your experiment? What would be the next question to ask? If you repeated this project, what would you change?)
18. BIBLIOGRAPHY List the books, magazines, or other communications you used to research your topic.

Write in complete sentences. Add titles, units and labels where necessary.

Follow your science fair booklet for helpful websites and marking criteria.