

Science Fair Research Report TEMPLATE

How to Use this Document

Text in BLACK type stays in the document exactly as shown.

Text in BLUE type should be REMOVED and REPLACE with your writing.

This document is READ ONLY, which means you may not save it to the same file name. Use the File – Save As function to save a new document with your changes.

DELETE THIS PAGE.

Interesting & Descriptive Title

Don't be boring!
centered on page

Add pictures, borders, etc to make the title page more
interesting

Project Number: _____

Abstract

Format: The Abstract is a single paragraph that summarizes your entire project. The abstract should be on the first page after the title page, and it should be on a page by itself. **Content:** The first sentence should be your purpose. The second sentence should be your scientific question. The third sentence should be your hypothesis. The fourth sentence should be a brief description of your procedure; do not include details here. The fifth sentence should summarize your results. The sixth and last sentence should be your conclusion, including whether or not your hypothesis was supported.

Introduction

Format: The Introduction Section should begin on a separate page and follow immediately after the abstract.

Purpose

Format: One sentence. Avoid the use of personal pronouns (I, we). **Content:** Explain why you performed this experiment, what you hoped to find out.

Problem

Format: One sentence in question form. **Content:** A **testable** (scientific) question that your experiment tries to answer. Your question should include a reference to your dependent variable. Do not ask “why” questions, they are not answerable through your research here.

Research

Format: One or more paragraphs. Photos, sketches, or illustrations of the information discussed can be helpful to the reader. **Content:** A summary of the information you learned in your research that helped you to form your hypothesis. This paragraph should explain the scientific concepts (ideas) you are exploring, and help the reader understand how you decided what your hypothesis should be.

Hypothesis

Format: One sentence. **Content:** A testable statement, referring to the dependent variable (what you will be measuring). Do not use personal pronouns (I, we). Do not start with “think” or “feel”, as thoughts and feelings cannot be measured scientifically. Do not include explanations, “because...”. The explanation should be in your research section.

Methods

Format: The Methods section may start on a new page, or it may follow on the page containing the introduction section.

Subjects

Format: Simple list. **Content:** Description of what is being tested.

Variables

Independent: **Format:** name of variable **Content:** what you are **changing** on purpose to see how your results change.

Dependent: **Format:** name of variable. **Content:** what you are **measuring** in your experiment

Controlled: **Format:** list of things that could vary (change), but you are keeping the same so that you can be sure that any change in your results is from the change you made to the independent variable. **Content:** complete list of any thing that could change and affect the results, but that you are being careful to keep the same

Materials

Format: List, preferably with one item per line. Lists of items in paragraph form are more difficult to read. **Content:** All materials and equipment used in performing the experiment. Remember to include the device or equipment you used to measure your dependent variable.

Procedures

Format: Numbered list, with each new number beginning on its own line. **Content:** **Detailed** list of steps that would allow another researcher to duplicate your experiment. The more details, the better, in this section. Remember to include **how you measured your dependent variable**. Use only SI (metric) units.

Results

Format: The Results section may start on a new page, or it may follow on the page containing the Methods section. **Content:** The research report MUST include your experimental data, that is, the measurements you took.

Table(s)

Format: A grid to present your numerical results. The table(s) must have a title. Rows and columns must be labeled correctly. Units must be included in the title and/or row and/or column labels. See the examples below (Note: the data is made up, and the averages are approximate). **Content:** You MUST report your raw data for ALL of your trials. Calculate and present averages or trends in a separate table. Use only SI (metric) units.

Height of Bottle Rocket in Meters

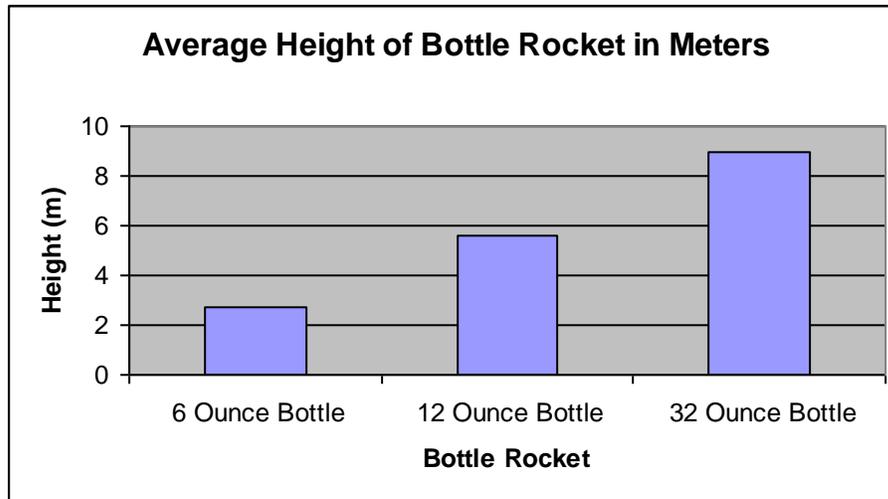
Trial	6 Ounce Bottle	12 Ounce Bottle	32 Ounce Bottle
1	2.1	5.7	8.4
2	3.2	4.8	9.0
3	3.4	6.2	9.6

Average Height of Bottle Rocket in Meters

6 Ounce Bottle	12 Ounce Bottle	32 Ounce Bottle
2.7	5.6	9.0

Graph(s)

Format: Generally it is better to graph the trends or averages rather than the raw data. Do NOT use pie charts unless you measured parts of a whole that add up to 100%; there are almost no instances in which pie charts would be appropriate for these research reports. Use **line** graphs or **bar** graphs. If Time is one of your variables, always put it along the X (horizontal) axis. Graphs should have a meaningful title. X and Y axes and data series should be labeled. Only SI (metric) units should be used and they should be clearly shown on the graph. Use color if at all possible. **Content:** Averaged data or raw data with trend lines to make results more easily seen.



Analysis

Format: Paragraph. **Content:** Describe your results in words. Do not include long lists of numbers, readers will refer to your data tables for that. Describe the differences between trials in terms of percent or size of the change ("Trial 1's result was 50% larger than Trial 2's, but 25% smaller than Trial 3's."). State whether or not your hypothesis was supported, and how it is supported.

Discussion

Format: The Discussion section may start on a new page, or it may follow on the page containing the Results section.

Conclusion

Format: Paragraph **Content:** Summarize the results of the experiment. Compare your results to your hypothesis and state whether or not your hypothesis was supported. Explain why the results turned out the way they did, referring to your research, materials, and procedures.

Application

Format: Sentence or short paragraph. **Content:** Describe how your project relates to real world situations.

Recommendations

Format: Paragraph. **Content:** Describe how you would improve the project if you were to do it again. Make suggestions for how your research could be extended. Explain any mistakes you think you made and how they could be avoided if you were to do the project again.

Bibliography

Format: The Bibliography must be on its own page. This page should be the last page of the research report. Formatting is VERY IMPORTANT in the bibliography. Sources should be listed in alphabetical order. Follow the guidelines for the different types of source materials in your hardcopy packet, or use this website: <http://www.bibme.org/> to build your bibliography, and then copy and paste the correctly formatted information here. **Content:** List all of the resources (books, magazines, web sites, personal interviews, package labels, etc) used in your research and doing the experiment.