**Science Fair Written Report TEMPLATE**

**How to use this document:**

1. **Keep the text in black as it is**
2. **Text in blue should be removed and replaced with your own words**
3. **This is a TEMPLATE. Make a COPY and rename it: “Your Name” Science Fair Written Report**

***DELETE THIS PAGE FROM YOUR FINAL REPORT***

**ABSTRACT**

**The Illinois Junior Academy of Science**This form/paper may not be taken without IJAS authorization.

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CATEGORY | | **TBD** | | | STATE REGION # | | | | **2** |
| SCHOOL | | **Immaculate Conception – St. Joseph** | | | IJAS SCHOOL # | | | | **2002** |
| CITY/ZIP | | **Chicago, 60610** | | | SCHOOL PHONE # | | | | **312-944-0304** |
| SPONSOR | | **Ms. Donnelly** | | |  | | | |  |
|  |  | | | |  | | | |  |
| MARK ONE: | EXPERIMENTAL INVESTIGATION ☒ | | | | |  | | DESIGN INVESTIGATION ☐ | |
|  |  | | | | |  | |  | |
| NAME OF SCIENTIST\* | | | | **Your Name (First and Last)** | | | GRADE | | **8** |
| NAME OF SCIENTIST | | | |  | | | GRADE | |  |
| NAME OF SCIENTIST | | | |  | | | GRADE | |  |
| NAME OF SCIENTIST | | | |  | | | GRADE | |  |
|  | | | | | | | | | |
| \* If this project is awarded a monetary prize, the check will be written in this scientist's name, and it will be his/her responsibility to distribute the prize money equally among all participating scientists. | | | | | | | | | |
| PROJECT TITLE | | | State your question: “The effect of plant growth on soil erosion” | | | | | | |
|  | | | | | | | | | |
| **Purpose: Explain why you are conducting this experiment. What did you want to determine or find out?** | | | | | | | | | |
| **Procedure: Explain your procedure. How did you go about testing your question?** | | | | | | | | | |
| **Conclusion: Explain your results. Briefly describe what happened and if your hypothesis was supported. Explain your final conclusion.** | | | | | | | | | |
| 1) Limit Abstract to 3 paragraphs (about 200 words or less). a) Purpose - what you set out to investigate; b) Procedure - how you did  it; c) Conclusion - based on your results. Label each paragraph.  2) Must be typed, single-spaced on the front of this form. Do not write on the back of this form.  3) Three copies of your complete paper are required at the State Science Project Exposition.  Four copies of your complete paper are required for the State Paper Session Competition.  **This form must be used.** This form **must** be displayed on the front of the exhibitor’s display board. It may be reduced to half a sheet of paper; 8.5 inches (vertical) X 5.5 inches (horizontal). | | | | | | | | | |

**Safety Sheet**

**The Illinois Junior Academy of Science**

**Directions:** The student is asked to read this introduction carefully, fill out the bottom of this sheet, and sign it. The science teacher and/or advisor must sign in the indicated space.

**Safety and the Student:** Experimentation or design may involve an element of risk or injury to the student, test subjects and to others. Recognition of such hazards and provision for adequate control measures are joint responsibilities of the student and the sponsor. Some of the more common risks encountered in research are those of electrical shock, infection from pathogenic organisms, uncontrolled reactions of incompatible chemicals, eye injury from materials or procedures, and fire in apparatus or work area. Countering these hazards and others with suitable controls is an integral part of good scientific research.

In the **box** below, list the principal hazards associated with your project, if any, and what specific precautions you have used as safeguards. Be sure to read the entire section in the *Policy and Procedure Manual of the Illinois Junior Academy of Science* entitled "Safety Guidelines for Experimentation" before completing this form.

Identify any safety hazards here. Explain how you protected yourself and others from harm.

Signed \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Student Exhibitor(s)

Signed\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Sponsor\*

\*As a sponsor, I assume all responsibilities related to this project.

**This Sheet Must Be Typed**

This form **must** be displayed on the front of the exhibitor’s display board. It may be reduced to half a sheet of paper; 8.5 inches (vertical) X 5.5 inches (horizontal).

Descriptive and Interesting Project Title

Your Name

Class

Table of Contents

List sections of your paper and the corresponding page numbers.

Abstract page 1

Acknowledgements

Explain who you would like to thank for helping you throughout the Science Fair process

Purpose and Hypothesis

Purpose

State the precise question you are investigating

Hypothesis

State your hypothesis in an “If...then…” format, explaining the expected outcome of your experiment.

Background Research

**Format:** Double Spaced Paragraphs **Content:** Explain, in a minimum of 5 paragraphs, the background information you have researched pertaining to your experiment. All work should be cited in your Reference List (Bibliography) at the end of your paper. Do not use first person, or directly discuss your experiment. Only discuss background research from reliable websites, books, articles, etc... Refer to your Background Research Outline.

Paragraph 1: Introduction - Explain the big idea, or main focus of your research. Provide insight into the additional details you will discuss in the body paragraphs.

Paragraphs 2-4: Body - Explain the key concepts that you learned through background research. Evidence from reliable sources should be paraphrased and/or quoted. Paragraphs should be organized logically, according to topic.

Paragraph 5: Conclusion - Restate the main focus of your research. Wrap up any important ideas and state how this information is useful and/or important in people’s lives.

Materials and Methods

Materials

* **Format:** Bulleted list
* **Content:** specific materials needed to conduct experiment and record data

Methods

1. **Format**: Numbered list
2. **Content:** Specific steps to follow in order to accurately conduct experiment
3. Include details on controlling variables
4. Include multiple trials/situations

Results and Discussion

Data 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

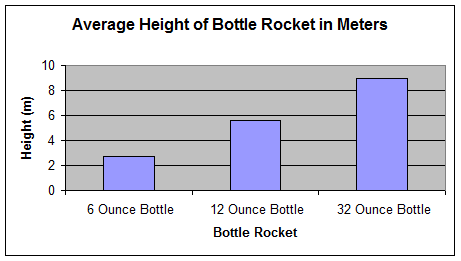
|  |  |  |  |
| --- | --- | --- | --- |
| Trial | 6 Ounce Bottle | 12 Ounce Bottle | 32 Ounce Bottle |
| 1 | 2.1 | 5.7 | 8.4 |
| 2 | 3.2 | 4.8 | 9.0 |
| 3 | 3.4 | 6.2 | 9.6 |

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.



Data Analysis and Discussion

**Format**: Double Spaced Paragraph. **Content:** Describe your results from your tables and graphs 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.”). Discussion should include your evaluation and interpretation of the data and/or results of your investigation, and compare your data to what others have found.

Error Analysis

**Format:** Double Spaced Paragraph. **Content**: Discuss experimental and/or measurement error affecting the conclusion. Ways in which error was/could have been avoided should be addressed.

Conclusion

**Format**: Double Spaced Paragraph **Content:** Summarize the results of the experiment. Refer to the stated purpose and hypothesis. 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. 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.

Reference List

List of all published work referenced in your Background Research

APA format

On its own page