**Title**

By

**First and Last Name**

**Month Day, Year**

**Washington Jr High & Academy**

Homeroom #

Change or delete any text that appears in yellow. There should not be any highlighted text or directions in your final paper.

**ABSTRACT**

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

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CATEGORY | | **Physics, Chemistry, biology etc** | | | STATE REGION # | | | | **9** |
| SCHOOL | | **Washington Jr High & Academy** | | | IJAS SCHOOL # | | | | **9024** |
| CITY/ZIP | | **Joliet 60433** | | | SCHOOL PHONE # | | | | **815-727-5271** |
| SPONSOR | | **Your science teacher** | | |  | | | |  |
|  |  | | | |  | | | |  |
| MARK ONE: | EXPERIMENTAL INVESTIGATION | | | | |  | | DESIGN INVESTIGATION | |
|  |  | | | | |  | |  | |
| NAME OF SCIENTIST\* | | | | **Your Name** | | | GRADE | | **Your grade in school** |
| 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 | | | Title of experiment | | | | | | |
|  | | | | | | | | | |
| **Purpose:**  Type purpose here. Explain the scientific reason behind your experiment (ex. To test Newton’s third law of motion). | | | | | | | | | |
| **Procedure:**  **Write in paragraph form a summary of your procedure** | | | | | | | | | |
| **Conclusion:**  Begin typing your conclusion here. State whether or not hypothesis was supported or not supported. Include an explanation based upon at least 2 specific examples from your data. | | | | | | | | | |
| 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 these introductions carefully and fill out the bottom of this sheet. The

science teacher and/or advisor must sign in the indicated space. By signing this sheet, the sponsor

assumes all responsibilities related to this project.

**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 safety practices is an integral part of good scientific research. In the **chart** 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.

|  |  |
| --- | --- |
| Possible hazards | Precautions taken to deal with each hazard |
| What hazard did you encounter (ex: Liquids can splash)  DO NOT write-Parental supervision! | What was your solution (ex: Wear safety googles0 |

Specific safety practices related to materials requiring endorsement sheets should be detailed on the specific endorsement

sheet and not included on this safety sheet.

Please check off any other possible endorsements needed. Include these documents in your paper and on your board.

\_\_\_\_\_Humans as Test Subjects –for any projects involving humans including survey administration;

\_\_\_\_\_Microorganisms-for any projects involving bacteria, viruses, yeasts, fungi or protozoa;

\_\_\_\_\_Non-Human Vertebrates -for any projects involving fish, amphibians, reptiles, birds or mammals;

\_\_\_\_\_Tissue Culture-for any projects involving growing eukaryotic tissues or cell cultures;

\_\_\_\_\_Letter from institution where research was done or IJAS SRC, if an exception to the IJAS rules has been granted...

|  |  |  |
| --- | --- | --- |
| SIGNED |  |  |
| Student Exhibitor(s) | | |
| SIGNED |  |  |
| Sponsor \* | | |
| \*As a sponsor, I assume all responsibilities related to this project. | | |

**This Sheet Must Be Typed and** 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).

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Microorganism Endorsement**  **The Illinois Junior Academy of Science**  These rules will be strictly enforced for the State Science Exposition. No region should send a project to the State Exposition that does not meet these regulations. Students and sponsors doing a microorganism project must complete this form. The signature of the student or students andthe sponsor indicates that the project was done within these rules and regulations. Failure to comply with these rules will mean the disqualification of the project at the state level. This form must follow the Safety Sheet in the project paper and on the project board.  1. This area of science may involve many dangers and hazards while experimenting. It is the sole responsibility of all teacher(s)/sponsor(s) to teach students proper  safety methods and sterile techniques.  2. The Illinois Junior Academy of Science prohibits the use of primary or secondary cultures taken from humans or other vertebrate animals in any project because  of the danger from unknown viruses or other disease-causing agents that may be present. Pure cultures of microorganisms known to inhabit vertebrate animals may  be obtained from reputable suppliers and used in proper settings.  3. Microorganism experiments must be conducted in a laboratory such as science classroom or research facility.  4. Projects involving viruses and recombinant DNA should be done with the help of a professional and should comply with the National Institutes of Health (NIH)  Guidelines unless the project is limited to a kit obtained from a legitimate supply house.  5. All cultures should be destroyed by methods such as autoclaving or with a suitable NaOCl (bleach) solution before disposal.  Complete all boxes of the following chart.   |  |  | | --- | --- | | Genus and species of  organism(s) being used. |  | | Name of the reputable  source of the organism(s)  being used. |  | | Method of disposal of  the organism(s) being used. |  | | List the location where the  lab work was conducted. |  | | Describe the use of  microorganisms in this  project. |  | | Other precautions taken  to ensure microorganisms  are used safely in this  investigation. |  | | | |
| The signatures of the student or students and sponsor below indicate that the project conforms to the above rules of the  Illinois Junior Academy of Science. | | |
|  |  |  |
| (Sponsor)\* |  | (Student) |
|  |  |  |
| (Date) |  | (Student) |
|  |  |  |
| \*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).  **Check box if exception/approval letter from an institution where research was done, or the IJAS SRC is required and attached.** | | |

**Acknowledgements**

Type acknowledgements here. Must be in complete sentences and include the full name of the person(s) that you are acknowledging and why.

**Table of Contents**

**Abstracti**

**Safety Sheetii**

**Endorsementsiii**

**Acknowledgementsiv**

**Purpose4**

**Hypothesis4**

**Background Research4**

**Materials4**

**Procedure4**

**Results4**

**Conclusion4**

**Reference List4**

**Purpose**

Type purpose here. Explain the scientific reason behind your experiment (ex. To test Newton’s third law of motion).

**Hypothesis**

Type hypothesis here. Must be in “if then because” format.

**Background Research**

Type background research here. Must include information from all 5 of your sources. Each source must be cited in APA format within this section. Research must make a connection between your experiment and the science behind it. Do **NOT** list your sources in this section.

**Materials**

* List materials here.
* .
* .

**Procedure**

1. Begin typing procedure here.
2. .
3. .

**Results**

Directions: Change the IV1-3 to your actual IV and include your actual units.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Trial 1**  **(units)** | **Trial 2**  **(units)** | **Trial 3**  **(units)** | **Average (units)** |
| **IV 1** |  |  |  |  |
| **IV 2** |  |  |  |  |
| **IV 3** |  |  |  |  |

**Copy and Paste graph from your power point here. Make sure to correct anything you lost points on in the power point otherwise you will lose them again.**

Begin typing description of results in words. Discuss the averages and only talk about the trials if something unusual happened. Include your error analysis-explain why there are differences between each of the trials. Make sure to correct anything you lost points on in your presentation. If you are in 8th grade include your standard deviation.

**Conclusion**

Begin typing your conclusion here. State whether or not hypothesis was supported or not supported. Include an explanation based upon at least 2 specific examples from your data. Cite 3 sources from your background research that support your conclusions and make a connection. This should read like a CER (Claim Evidence Reasoning).

Example: My hypothesis was supported. The lighter the ball the farther it flew. The data shows that the lighter ball travelled 2 times farther than the heaviest ball. The heaviest ball only travelled on average 2m; whereas, the two lighter balls travelled 3m and 4m. According to V.M Ingram (2016), there is an inverse relationship between mass and distance. This means that the heavier an object is the shorter the distance it will travel when subject to the same force. You will need to cite 2 more sources but I think you get the idea ☺.

**Reference List**

You need at least 5 sources. Two sources need to be actual books. They should be listed alphabetically using APA style. For information on how to create a source using APA format. See Perdue Owl. There is a link on my website Please delete prior to printing..

**Double Check and re-read your paper. Make sure all highlighted text has been changed and deleted!**