Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

This packet must be placed in the back of your written report. Be sure to write your name on the form.

Science Fair Project

Science Fair Project Elements

1. **Science Fair Project Timeline**

The student must follow the timeline and due dates. Any items turned in late will result in one point deduction per day. See rubric page 6.

1. **Written Report**

The entire report will be typed (12 pt. font), double-spaced, and placed in a binder or folder with a clear plastic front. You can choose from Arial, Courier, New, or Times New Roman fonts. This is a formal presentation of your science research project. See rubric page 7-8.

1. **Display Board**

Includes title, abstract, purpose, problem, hypothesis, materials, procedure, tables, charts, pictures, graphs, diagrams, results, conclusion, and next steps in a neat and organized format. See rubric page 9.

1. **Oral Presentation**

Students will present the Science Fair Projects to the class. See rubric page 9.

Written Report

This will be the actual order of your written report.

**Title Page:**  Students need to have a title that reflects their science project. . Type only the project title; center the project title. Type your name, school, and grade level on your title page.

**\*Abstract:** This can only be done when your experiment is complete. It gives a summary of the project in a brief, but thorough paragraph form. This is a one-page, 250 –word maximum summary of the entire project. The abstract should give a fairly accurate idea of the entire project. It should summarize the purpose, procedure, results and conclusions of your investigation; therefore, it is one of the last items done. The abstract is written **after** you have completed the experiment, and is the summary of the experiment. 150-250 words written in **past tense.** Should answer **3** basic questions. (1) What was the researcher trying to do? (2) What actually happened? (3) What significance do the actual findings have? This should be written in terms of the researcher. In order words, it should be written in third-person.

**Table of Contents:** A list of where to find specific information in the written report. Include page numbers **(placed behind the Abstract summary).**

**Introduction:** This is a statement of your purpose, problem, and hypothesis.

**1.\* Purpose: the reason for conducting the research and doing the experiment. The** purpose of this experiment is to determine\_\_\_\_\_\_\_\_\_\_\_\_\_\_. I became interested in this experiment when \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. The information from this experiment will help others by\_\_\_\_\_\_\_\_\_.

2. \***Problem:** the question the research answers in question format-the scientific question to be solved. It should be an open-ended question that is answered with a statement, not a yes or no. Ex: “How does the color of light affect the growth of a plant?” This is pretty much your topic.

3. **\* Hypothesis:** The ‘educated guess’ that is the answer to the problem. It is statement with a reason. The experiment is designed to test this hypothesis. The hypothesis is a cause and effect statement**: If** (what you plan to test) , **then** (what you think will happen).

**Research (A review of the literature)**

A 2-3 page summary in paragraph format of all the information you have gathered from reference materials. This is a report of all information related to the subject telling what was learned about the problem, using reference materials (books, magazine articles, personal communication, internet, etc.) before and during the experiments.

**\*Methods and Materials**

1.  **\*Materials:** a bulleted list of any supplies necessary to complete your study of the problem and testing your hypothesis. Be sure to include the quantity of any items listed. Example: 500 mL of water.

1. **\*Procedures:** step-by-step process used to carry out the experiment. The experiment must be done at least three times to increase the validity of the results. It should be detailed so that someone would be able to repeat the experiment. Use numbers to list steps beginning with a verb (like in a recipe). Do not use pronouns in listing the steps.

**Example:**

1. Measure 500 mL of de-ionized water into three plastic cups
2. Time the reaction with a stopwatch with 0.1 second accuracy
3. Place each type of AA alkaline batteries into each plastic cup
4. Record results
5. Repeat steps two more times.

**\*Data**

\* Includes tables, graphs, and observations (students must include at least one table or graph) Use metric system of measurement.

**\*Conclusion**

Written in paragraph form, summarize the results of the experiment. Restate your objective. Summarize the procedure. Explain your results. Would you do anything different next time? Explain why you accepted or rejected your hypothesis. The conclusion specifically summarizes what was discovered, how the results compare to the hypothesis and why the hypothesis was correct or incorrect. Review how the data related to any information learned while doing background research.

**\*Application**

A summary about how the project relates to real world problems or situations. How is the experiment of practical value? How can the experiment serve others?

**Bibliography**

**Properly formatted** list of all sources and reference materials used. **Must use a minimum of 3 sources.** Visit [www.easybib.com](http://www.easybib.com) a free site that builds a bibliography and all you have to do is plug in your information for help.

**Acknowledgements**

Gives credit to anyone who has helped during the project. It is not a list of names, but a short paragraph stating the names of people who helped and how they helped.

**\*Starred items must also be on the DISPLAY BOARD\***

**Science Fair Display Board**

**Project Display Board:** Each student will be given **one** project display board compliments of Toledo Public Schools. After all the research, experimentation, time & effort spend on the preparation for the science fair project, your presentation should show off your hard work. **Be professional. Boards will be graded on: Professionalism, Scientific thought, Thoroughness, and Neatness.** All items must be typed and placed in the correct location and order.

Display

Conclusion

Abstract

Descriptive Title

Student’s Name

Materials and Methods

Next Steps

Problem

Results

Pictures

Hypothesis

Written Report

First and Last Name:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Science Teacher’s Name:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

School:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Title:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Category:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

To the left is an example of the index card that will be taped to the back of your display board

Science Fair Project Timeline & Rubric

Student’s Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Project Topic\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Project Title\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Project Category\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Timeline Rubric:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Date Due** | **Part Due:**  | **Total Points** | **Points Earned/grade** | **Comments** |
| **March 19th** | **Project Proposal:** What are you going to do? (needs to be approved)**Hypothesis** (what you think the results will be)**Procedures** (What you will be doing in detail)**Materials** (all materials you will need for your experiment) | **20** |  |  |
| **March 26th** | **Research:** 2-3 page summary of the information you have gathered from your references. | **10** |  |  |
| **March 26-April 23rd** | **Conducting experiment and recording results:** You should be hard at work at home and/or at school. | **20** |  |  |
| **April 23rd** | **Results, conclusion, acknowledgements, facts, pictures, graphs/tables, and abstract due. This means that at this point your entire research report is due!** | **30** |  |  |
| **May 14-May 21st** | **Final and Complete Project (All prior elements finished** | **20** |  |  |
|  | **Total Points** | **100** |  |  |

**\*Dates are subject to change**

|  |  |  |
| --- | --- | --- |
| Science Fair Written Report-Components Rubric | **Points Possible** | **Points Earned** |
| **Title Page:**The title is in the form of a **question** | **2** |  |
| **Abstract:**Written **after** you completed the experiment, ans is the summary of the experiment. 150-250 words written in **past tense.** Should answer **3** basic questions. (1) What was the researcher trying to do? (2) What actually happened? (3) What significance do the actual findings have? | **10** |  |
| **Table of Contents:**Neatly organized with page numbers and correct format | **3** |  |
| **Purpose:**The purpose of this experiment is to determine \_\_\_\_\_\_\_\_. I became interested in this experiment when\_\_\_\_\_\_\_\_. The information from this experiment will help others by\_\_\_\_\_\_\_\_\_\_. | **3** |  |
| **Problem:**The problem is the question that you are trying to answer | **5** |  |
| **Research (Background Information)**Includes necessary **background** information. Two-page minimum. Introduction that describes the concepts and techniques used in the experiment. | **10** |  |
| **Hypothesis:**Include a **hypothesis** if needed for the lab. (If/Then Statement) | **5** |  |
| **Materials:**List all supplies and measurements used (ex. 3 ml of water) | **5** |  |
| **Procedure: Replicatable:**Begins eachstep with a verb. Each step in the process is numbered. Steps are neat, simple, and direct. **Correctly identified the variables** | **10** |  |
| **Data Collection/Observations:**Explains observations. May be written in paragraph form, diary entries, photographs, charts, or graphs. Every chart, graph, and/or photograph requires an explanation. | **10** |  |
| **Results:**Summary of what happened in the experiment. Only gives facts. | **5** |  |
| **Conclusion:**Written in paragraph form, summarize the results of the experiment. Restate objectives. Summarize procedure. Explains results. Would you do anything different next time? Explain why you accepted or rejected your hypothesis. Interpret and analyze your results. | **10** |  |
| **Application:**Summarizes how the project relates to real world problems or situations. How is the experiment of practical value? How can the experiment serve others? Four sentences minimum | **5** |  |
| **Recommendation:**States any changes or improvements or gives possible extensions to research . Three sentences minimum | **5** |  |
| **Acknoledgements:**Not a list of names, but a short paragraph stating the names of people who helped and how they helped. | **2** |  |
| **Presentation:**Creative. Organized. Neat. Entire report is typed (12 pt. font), double-spaced and placed in a binder or folder with a clear plastic front. **Bibliography** is correctly formatted. | **10** |  |
| **Total Points** | **100** |  |

Science Fair Display Board Rubric

|  |  |  |  |
| --- | --- | --- | --- |
| **Components** | **Total Points** | **Points Earned** | Comments |
| **Display Board:**Neatness/Appearance | **20** |  |  |
| **Scientific Method:**Complete and ordered Correctly | **40** |  |  |
| **Thoroughness:**Contains labels, sections, format followed | **25** |  |  |
| **Conventions:**Grammar; Mechanics | **15** |  |  |
| **Total** | **100** |  |  |

Science Fair Oral Presentation Rubric

|  |  |  |  |
| --- | --- | --- | --- |
| **Components** | **Total Points** | **Points Earned** | **Comments** |
| Student states the title of the project | **10** |  |  |
| Student describes the project’s purpose, problem, and hypothesis. | **20** |  |  |
| Student clearly explains the procedure. Points out pictures, diagrams, or other objects on display, and describes the results. | **20** |  |  |
| Student discusses the conclusion and any application or practical uses to society, as well as give a very brief discussion on the background material. | **20** |  |  |
| Student has knowledge of, pronounces properly, and understands all the terms associated with the written report. | **10** |  |  |
| Student maintains eye contact with the audience and speaks clearly and slowly | **10** |  |  |
| The presentation is limited to 3-5 minutes. Student asks the audience “Do you have any questions?” | **10** |  |  |
| Total | **100** |  |  |