

# Information Packet (middle school version)

I spend one day a week with my students in Science Fair Friday, or E-Cyber Monday when working on the project. I have the students complete most of the experiment at school as a part of our overall grade. It carries about a 15% weight for their overall grade. Throughout the whole year I offer extra credit for students who donate new log books to the classroom so that we have a supply. I do not require a board for the project. We complete a powerpoint as a part of their presentation grade. Please email me if you have any questions: [thia.thomas@browardschools.com](mailto:thia.thomas@browardschools.com)

-Ms Thomas

# Safety Contract

I, \_\_\_\_\_, hereby certify that on this day of \_\_\_\_\_, I have successfully completed a review of safety procedures for a science project. I agree to follow the safety guidelines listed below, and I will take every necessary precaution to operate safely throughout my experiment.

- I will follow the safety guidelines of my teacher and my school.
- I will keep my work area neat and free of unnecessary papers, books, and materials. I will keep my clothing and hair neat and out of the way, and I will wear a safety apron and/or gloves if necessary.
- I know the location of all safety equipment (such as the fire extinguisher and first-aid kit) and the nearest telephone.
- I will wear safety goggles when handling chemicals, working with a flame, or performing any other activity that may cause harm to my eyes.
- I will not use chemicals, heat, electricity, or sharp objects until my teacher or parent instructs me to do so, and I will follow the adult's instructions carefully.
- I will be especially careful when using glassware. Before heating glassware, I will make sure that it is made of heat-resistant material, and I will never use cracked or chipped glassware.
- I will wash my hands immediately after handling hazardous materials. I will clean up all work areas before I leave the laboratory, put away all equipment and supplies, and turn off all water faucets, gas outlets, burners, and electric hot plates.

**I understand and agree to the above and all other safety precautions presented to me in class. I am hereby ready to undertake my science project with safety from this day forward.**

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*Student's signature*

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*Teacher's signature*

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*Parent's/guardian's signature*

# Broward County Science Fair

## Individual Contract

Science Fair Due: \_\_\_\_\_

The science fair will count for up to 20% of the overall grade.

### **Student Acknowledgement:**

I will complete an individual entry into the Broward County Science Fair. I understand that along with the freedom and independence of conducting and experiment, I will have to complete all aspects of the project without help from other students or adults. I have reviewed the rules and regulations with my parents/ guardians and understand all the requirements of the project.

Student signature: \_\_\_\_\_ Date: \_\_\_\_\_

### **Parent Acknowledgement:**

I have received the Science Fair Project rules and regulations and have reviewed them with my son/daughter.

He/she will complete a science fair project in class and has my permission to enter the district/school competition. YES NO

He/she will complete a science fair project but does not have my permission to enter the district/school competition. YES NO

Parent/ Guardian: \_\_\_\_\_ Date: \_\_\_\_\_

Please note that the science fair project is a mandatory assignment for 6<sup>th</sup> grade science. This project will account for about 20% of the final grade for 6<sup>th</sup> grade science. We will dedicate every Friday in class to work on the project. This is not an at home assignment, however parent involvement is encouraged.

# Project To Do List

Use this to do list to keep on schedule!! It's easy to procrastinate! Don't fall into the trap!

**Project Due Date:** \_\_\_\_\_

| Item   | Due Date | Ms Thomas Initials<br>when completed |
|--|----------|--------------------------------------|
| Pick Topic-Proposal  |          |                                      |
| Purpose Statement  |          |                                      |
| Variables (independent, dependent, control)                  |          |                                      |
| Hypothesis   |          |                                      |
| Research Paper (optional)                                    |          |                                      |
| Materials  |          |                                      |
| Procedures   |          |                                      |
| Experiment completion proof (pictures to prove to Ms Thomas) |          |                                      |
| Analysis & Discussion  |          |                                      |
| Conclusion   |          |                                      |
| Bibliography   |          |                                      |
| Acknowledgements   |          |                                      |
| Table of Contents  |          |                                      |
| Print Project  |          |                                      |
| Board Layout   |          |                                      |

## Science Fair Timeline

- Week 1- Research Project Topics
- Week 2- Write and submit proposal
- Week 3- Type purpose statement (and research paper)
- Week 4- Type hypothesis and materials
- Week 5- Type procedures and safety concerns
- Week 6- Perform experiment and collect data/observations
- Week 8- Type observations and create graphs and charts from data
- Week 9- Type conclusion
- Week 10- Complete bibliography
- Week 11- Organize science fair paper for submission
- Week 12- Create science fair board

## Important Information

## **Final Report**

Your final report should include:

- Title page
  - Project title, Name, School, and Grade – Do not put Team or Teacher's name on project
- Table of contents
- Every document that you have typed
- Appendix-
  - Any critical information that you feel should be included such as diagrams of your set up, surveys, tests, etc.

## **Research log**

- The research log is a day-to-day record of everything that you did in your project. It is PROOF of what you did. The logbook must accompany the report folder for the school and county science fair.
- A composition book or small spiral notebook may be used for the entries.
- The logbook should include:
  - Student's name, school name, and teacher on the front cover.
  - Write in black or blue pen, NO PENCIL!
  - Each entry must be dated at the top, numbered at the bottom, and describe what was done each day.
  - Include entries describing the times research information was found and briefly describe it. Record resource information; remember it is NOT just websites.
  - Put descriptions of equipment used in entries, including any that was built.
  - Place data collected in trials recorded in the logbook.
  - Observations or other thoughts of the researcher must be included.
  - Show calculations.
  - Include contacts such as scientists, engineers, and other sources or assistance should be included.
  - **When in doubt, include it in the logbook.**

## **Display Board or Powerpoint.**

- The display is optional. Please refer to the example displayed in the classroom for details.



# Science Fair Purpose Statement

Due: \_\_\_\_\_

You will TYPE a purpose statement for your science fair project.

You will type up your proposal and include your variables for your project.  
Your purpose statement must:

- Be a typed document. Use Microsoft Word (the blue W on the screen)
- Should be written in paragraph form.
- Should be written in the third person format. (no I , We, Me or My)
- Include all the information from your purpose statement
  - The topic and project you are choosing.
  - The procedure that you plan to complete
  - Why you are completing the project
  - What you expect to learn from the project.
- Your independent variable, dependent variable, and the control.

Save the document and you may print the page to place in your science fair folder.

### Example Proposal Template:

The topic of this science fair project is LIST THE NAME OF THE EXPERIMENT. The student researcher plans to LIST ALL THE PROCEDURES THAT YOU PLAN TO COMPLETE.

The researcher chose this topic because LIST THE REASON WHY YOU CHOOSE THIS PROJECT. The researcher hopes to learn LIST WHAT YOU WANT TO LEARN FROM THE PROJECT.

# Science Fair Hypothesis

Due: \_\_\_\_\_

You will TYPE a hypothesis for your science fair project.

Your hypothesis must:

- Be a typed document. Use Microsoft Word (the blue W on the screen)
- Should be written in paragraph form.
- Should be written in the third person format. (no I, We, Me or My)
- Should include all the following information
  - If.. (what the researcher plans to do)
  - Then... (what the researcher wants to happen)
  - Because... (researched proof to support the hypothesis)

Save the document and you may print the page to place in your science fair folder.

## Example Hypothesis Template:

If the researcher LIST WHAT YOU PLAN TO DO IN THE EXPERIMENT, then the researcher will LIST WHAT YOU THINK WILL HAPPEN DURING YOUR EXPERIMENT. The researcher knows this will happen because LIST WHY YOU KNOW YOUR HYPOTHESIS WILL BE CORRECT. (use your research)



# Science Fair Research Paper

Due: \_\_\_\_\_

You will TYPE a research paper for your science fair project.

Your research paper must:

- Be a typed document. Use Microsoft Word (the blue W on the screen)
- Should be written in paragraph form font 12.
- Should be written in the third person format. (no I , We, Me or My)
- Should include all the following information:
  - Any random or background information that someone needs to know.
  - The proof for the hypothesis. You have to provide researched proof to place in your because part of the hypothesis.
  - At least 3 paragraphs of information.
  - Use three sources of information for your research.
  - Do not mention your experiment this is only background information.
- Hint: You may want to research each material, and each variable and your procedures. This will help you find topics to write about and research.

Make sure that you write down all the sources that you use. You will need this information for your bibliography.

Save the document and you may print the page to place in your science fair folder.

# Science Fair Materials

Due: \_\_\_\_\_

You will TYPE the materials for your science fair project.  
Your materials page should:

- Be a typed document. Use Microsoft Word (the blue W on the screen)
- Can be written as a list.
- Should be written in the third person format. (no I , We, Me or My)
- Should include all the following information:
  - All the safety information for each material.
  - Every material that you plan to use.
  - Every piece of safety equipment.
  - A paragraph about where you purchased or borrowed each material.

Save the document and you may print the page to place in your science fair folder.

Example Science Fair Project: Why are there spots on the roof of Ms. Thomas's Car?

## Materials Page

### Safety Materials:

- 1) Goggles
- 2) Apron

### Experiment Materials:

- 1) Motorized Automobile

SAFETY: Make sure that you are of the legal age to drive the car.

- 2) Car Cleaner

SAFETY: Make sure that you follow all of the safety concerns that are listed in the car cleaner. Be careful with the soap and water. You should wear goggles.

# Science Fair Procedures

Due: \_\_\_\_\_

You will TYPE the procedures for your science fair project.

Your procedures page should:

- Be a typed document. Use Microsoft Word (the blue W on the screen)
- Can be written as a list.
- Should be written in the third person format. (no I , We, Me or My)
- Should include all the following information:
  - All the safety information for your project. You may want to draw the safety symbols.
  - Every step that you plan to take.
  - Each step should be written with a lot of detail. You should also include the safety concerns with each step.

Save the document and you may print the page to place in your science fair folder.

Example Science Fair Project: Why are there spots on the roof of Ms. Thomas's Car?

## Procedures

Safety concerns:

- 1) Eye protection
- 2) Clothing protection

Experiment Protection:

- 1) The first step is to collect all the materials. You should make sure that you can borrow the car that you are using.

SAFETY: Make sure that you are of the legal age to drive the car.

- 2) Decide where you are going to park the car.

SAFETY: Make sure that you choose a parking lot that has both tree cover and spots without tree covered spots.

# Science Fair Observations, Data & Charts

Due: \_\_\_\_\_

You will TYPE the observations for your science fair project.

Your data page should:

- Be a typed document. Use Microsoft Word (the blue W on the screen)
- Should be written in the third person format. (no I , We, Me or My)
- You may also take pictures during all of your observations.
- If you use human test subjects us human a, b, c... no names.
- Should include all the following information:
  - A list of your observations at each step. WRITE DOWN EVERYTHING that you do.
  - A table or chart with all of your recorded data.
  - Do not forget to label and title your table.
  - All number data has to have units attached to it.

Save the document and you may print the page to place in your science fair folder.

Example Science Fair Project: Why are there spots on the roof of Ms. Thomas's Car?

## Observations

- 1) The researcher observed that there were many small green spots on the roof of the car.
- 2) The spots were removable with car soap and water.

Table- Number of spots after each trial

| Location of Car            | Trial Number | Number of spots | Weather Conditions outside. |
|----------------------------|--------------|-----------------|-----------------------------|
| Under the Gumbo Limbo Tree | 1            | 45              | Sunny and Clear             |
|                            | 2            | 35              | Cloudy                      |
| No tree, in the sun        | 1            | 8               | Sunny                       |

# Science Fair

## Analysis and Discussion

Due: \_\_\_\_\_

You will TYPE the data analysis for your science fair project.

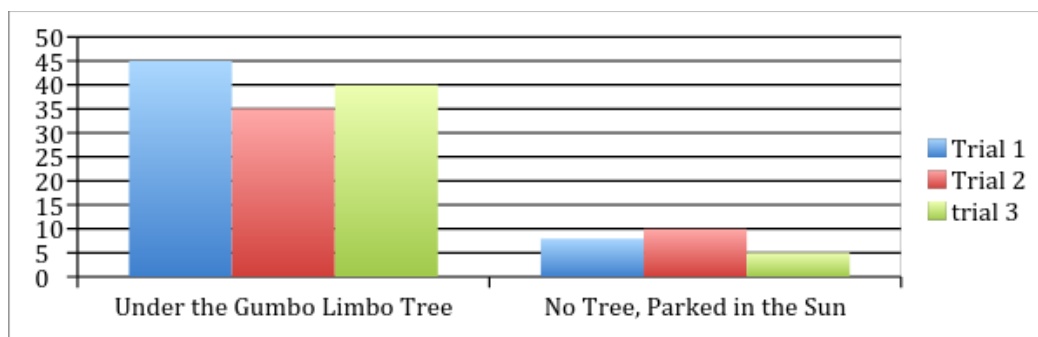
Your analysis page should:

- Be a typed document. Use Microsoft Word (the blue W on the screen)
- Should be written in the third person format. (no I , We, Me or My)
- Should include all the following information:
  - A paragraph that details any patterns that you noticed in your observations and data.
  - Your paragraph should include and reasons why you think the patterns existed.
  - A graph of your numerical data.
  - Do not forget to label your graph .

Save the document and you may print the page to place in your science fair folder.

Example Science Fair Project: Why are there spots on the roof of Ms. Thomas's Car?  
Data Analysis Graph

Graph- Number of spots after each trial



# Science Fair Conclusions

Due: \_\_\_\_\_

You will TYPE the conclusions for your science fair project.

Your conclusion page should:

- Be a typed document. Use Microsoft Word (the blue W on the screen)
- Should be written in the third person format. (no I, We, Me or My)
- Should include all the following information:
  - Was your hypothesis accepted or rejected.
  - Describe how the data accepted or rejected your hypothesis.
  - Describe ways that you could have made the project better.
  - Do not change your hypothesis to match your data.

Tips... Before writing your conclusion answer the following questions

Paragraph 1

- 1) Was your hypothesis correct?
- 2) How would you improve your procedure?
- 3) What problems did you encounter and what mistakes occurred?
- 4) What may have caused experimental error?

Paragraph 2

- 5) From your data and observations, what other things have you learned?
- 6) How is the knowledge you gained from this project important to you?
- 7) If you could continue experimenting, what would you test next?

Save the document and you may print the page to place in your science fair folder.

Example Conclusion Template:

In the experiment LIST THE NAME OF THE EXPERIMENT it was observed that the hypothesis LIST THE HYPOTHESIS was CORRECT OR INCORRECT. It was observed that by completing the procedures LIST THE PROCEDURES THAT YOU WOULD CHANGE contributed to the results. In the future, the experimenter should GIVE ADVICE TO PREVENT MISTAKES to prevent mistakes.

# Science Fair Acknowledgments

Due: \_\_\_\_\_

You will TYPE the acknowledgments for your science fair project.

Your acknowledgement page should:

- Be a typed document. Use Microsoft Word (the blue W on the screen)
- Should be written in the third person format. (no I , We, Me or My)
- Should include all the following information:
  - A “Thank-you” to anyone who has assisted you for any reason,
  - Do not include the science teacher or any students.
  - Use formal names of anyone who helped you and describe what they did.

Save the document and you may print the page to place in your science fair folder.

## Example Acknowledgment Template:

The researcher would like to thank LIST THE NAME OF A PERSON TO THANK, for LIST WHAT THEY DID TO HELP YOU.

# Science Fair References and Bibliography

Due: \_\_\_\_\_

You will TYPE the bibliography for your science fair project.

Your references page should:

- Be a typed document. Use Microsoft Word (the blue W on the screen)
- Should be written in the third person format. (no I , We, Me or My)
- Should include all the following information:
  - References are in MLA format.
  - Five sources, at least 2 are books. No WIKI- Related sources
  - You can use “son of citation” “easybib.com” “citationmachine.com” or the Microsoft word document elements section.
  - Make sure that you are collecting all the information from your sources as you are working.

Save the document and you may print the page to place in your science fair folder.



## Science Fair Board Display

Due: \_\_\_\_\_

Now you will create a display board for your project. Make sure that you include all of the items listed on this paper. Make sure there are no faces in your pictures.

On the left panel

- Your materials (as a list, you do not have to include extra details from your report)
- Your procedures (as a list, you do not have to include extra details from your report)

In the middle

- The title
- Your project question
- Your statement of purpose (why you chose this project)
- Your hypothesis (If, then, because) Make sure to include your "proof" in the "because" section.
- Your data and analysis (make sure that you create a chart or a graph)

On the right panel

- Your conclusions
- Your applications

Make sure that it is neat, colorful, and unique.

