

## Science Project

### IMPORTANT DUE DATES: DATES SUBJECT TO CHANGE

Question: 9/12

Research: 9/19

Hypothesis: 9/19

Procedure/Materials: **9/26 - MUST BE APPROVED BEFORE STARTING PROJECT**

Results: 10/24

Conclusions: 10/24

Final Paper & Presentation Board: 10/31

Science Expo in Gardner Hall: 11/6

### REQUIREMENTS:

- Create a science fair project on the topic of your choice following the Scientific Method process.
- Topic/Question to be approved by the teacher
- **DO NOT START THE PROJECT UNTIL ALL OF THE STEPS THROUGH THE PROCEDURE HAVE BEEN APPROVED BY THE TEACHER!!!**
- Conduct an experiment at home using the Scientific Method process.
- Type a report (Times New Roman, 12pt font, double spaced) which includes the question, hypothesis, materials, procedure, results, graphs, and conclusions.
- Create a cover page with your name, title of project, and a picture representing your project in some way
- Place science project report in a clear report cover for display at the science fair!
- Create a presentation board that displays the question, hypothesis, materials, procedure, results, graphs, conclusions, and any pictures relevant to the project either from research you conducted or pictures taken during your experiment.
- All materials posted on the presentation board must be typed in an appropriate font and size for the board.
- We will occasionally use class time to work on your project however, the majority of the project will be conducted at home.

### Guidelines

**EACH SECTION OF THE PROJECT WILL BE SUBMITTED to me via GOOGLE DOC'S AND WILL BE EDITED AND RETURNED via Google Doc's!**

1. Pick a topic that you are interested in studying or researching. If you are interested in your topic you will enjoy the project much more!! Topics can be from something we learned last year, something we are going to study this year, or something you have always wondered about.
  - a. 7<sup>th</sup> Grade – Environmental Science, Ecology, Water Quality, Marine Biology
  - b. 8<sup>th</sup> Grade – Force & Motion, Astronomy, Earth Science, Physical Science, etc

2. Make sure your topic is something that you can easily test or experiment with at home. If needed, you may borrow items from the science room.
3. Create a “**Question**” based on your topic.
4. Conduct **research** about your topic/question using the internet and library.
5. Create a “**Hypothesis**” based on your research/observations.
6. Create a “**Materials**” list.
7. Gather materials
8. Make sure your project has an **Independent variable**, a **Dependent variable**, as well as a **Control!**
9. Create a “**Procedure**” – this is a recipe that you will follow step by step.
10. Be as detailed as possible -use measurements, dates, times, etc.
11. Make sure someone unfamiliar with your project will be able to conduct the **EXACT** same experiment using your procedure.
12. Decide how you will collect your data.
13. Tables, graphs, qualitative data vs. quantitative data
14. Conduct your experiment.
15. **Collect data.**
16. Make sure you have multiple trials (at least 3) and you are only changing 1 variable!
17. Create computer generated tables and graphs from your data taken during your experiment.
18. Type your **Results**.
19. Results are the data tables, graphs, etc in **paragraph** form.
20. Type your **Conclusions**.
  - a. What can you determine from your experiment?
  - b. Did you prove or disprove your hypothesis?
  - c. Did you have any experimental errors?
  - d. What improvements would you make for next time?
21. Create your Presentation Board and be prepared to present your project to the class and display your board at a mini science fair!!

**Resources:**

Site for all information and links - 8th Grade:

<http://grymesresearch.weebly.com/g8-science-fair-project.html>

7th Grade:

<http://grymesresearch.weebly.com/g7-science-fair-project.html>

<https://student.societyforscience.org>

<http://www.education.com>

<http://www.sciencebuddies.org>

<http://www.sparticl.org/>

## Science Project Grading Rubric – Research Paper

	<b>Possible Points</b>	<b>Points Earned</b>
<b>Title Page &amp; Report Cover</b> Question, name, and picture clearly printed and presented in a clear report cover	5	
<b>Question</b> Clearly stated	5	
<b>Hypothesis</b> Presented as an “if-then” statement	5	
<b>Materials</b> List of materials used in experiment	5	
<b>Procedure</b> Numbered list - detailed directions Clearly identifies independent variable, dependent variable, and controls	10	
<b>Graphs/Data</b> Computer generated data tables and graphs	15	
<b>Results</b> Paragraph form of graphs/data tables	25	
<b>Conclusions</b> What do we know now? Improvements Prove/disprove hypothesis Experimental errors	25	
<b>Grammar/Spelling/Punctuation</b>	5	
<b>TOTAL Points</b>	<b>100</b>	

### **Science Project Grading Rubric – Presentation Board**

<b>Presentation Board</b> Well organized (15) Includes all sections of project (35) Visually stimulating (15)	65	
<b>Oral Presentation</b> Clearly knows project (15) Speaking volume is appropriate (10) Able to answer questions regarding project (10)	35	
<b>TOTAL Points</b>	<b>100</b>	