



## 2nd Quarter Science Experiment Project

Dear Parents,

As Twenty First Century citizens, students will also have to make some of the toughest decisions of any generation, based on their understanding of emerging science and technology. Science projects involve students in the practices of science and engineering, requiring them to apply those skills to a topic of interest to them. Doing science is key to understanding science. Our second quarter project will incorporate these ideas and they will have to produce a science project and presentation due on **Tuesday, January 16, 2017**. Hands-on scientific investigation and invention are the focus of the scientific project. Over the next few weeks, your child will need to design, test, analyze, and present a project that uses scientific methods to solve a problem. The sky's the limit! Please note that all of the work will be done at home. Students will be given specific project guidelines. Parents are encouraged to offer emotional support and reminders, but to allow children to do the projects by themselves. Please make time to visit the public library and/or use the internet to assist your child with project research. Remember this is a multipart project. Your child must complete the science journal, display board, and presentation in order to receive full credit. Don't hesitate to call or email with any questions. Thank you very much in advance for your support!

Sincerely,  
Third Grade Team

## Project Guidelines

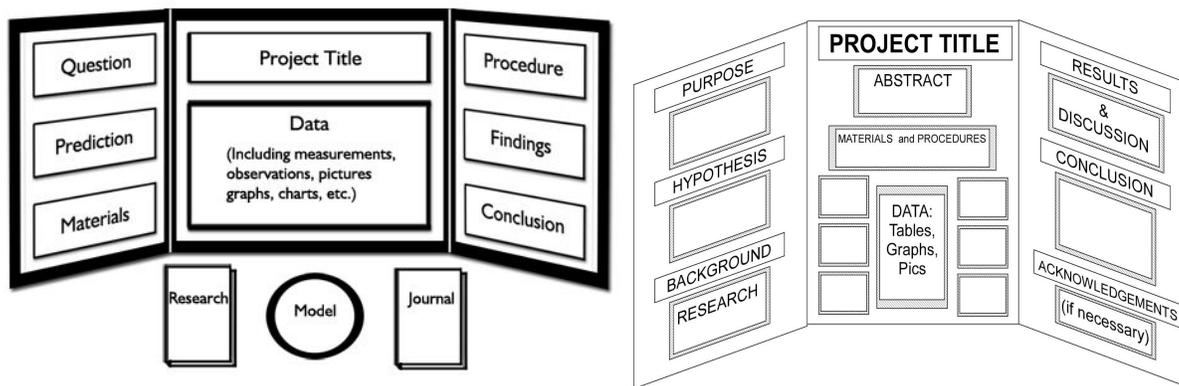
### Part 1: Science Journal

The science journal is where ALL ideas, thoughts, notes, drawings or sketches, research, information, results, and data are written. Everything that happens during your science project should be recorded here- the more detail the better! Remember to write a date and time on every page. The science journal will get turned in and displayed along with the display board. It is okay for there to be some mistakes--just be as neat and thorough as possible.

Your science journal must include the following:

- Research question- What question are you trying to answer? Ask a question that you can answer through observation or experimentation.
- Purpose- What is your reason for asking this question? What are you trying to discover?
- Background Research- This should help you make a hypothesis. Collect facts that are related to your research question. Put the facts in your own words. Organize them in an order that makes sense.
- Hypothesis- A statement that predicts how an experiment will turn out and why it will happen that way based on what you already know. What do you think the answer will be to your research question? Hypotheses are often written using an "If.....then....., because..." format.
- Materials/Procedure- List the materials that were used during the experiment. Describe the experiment in a step-by-step sequence. How will your materials be used, and how and when will they be measured? Each step should be carefully explained.
- Results- This should be a detailed record of the results of your tests and observations. Include notes, charts, tables, and graphs in your journal.
- Conclusion- According to your results was your hypothesis proven or disproven? Is there anything in the experiment that you would change if the hypothesis was retested? What did you learn from the experiment? How could you use this information to help people or make the world a better place?

### Part Two: The Display Board



Display boards should be easy to read and appealing to look at. Information on the display board should be typed and carefully proofread. The board should include the following: Title, research question, hypothesis, materials, procedures, results (including any graphs, tables, charts, and pictures), and conclusion.

### Part Three: The Oral Presentation

Presentations should be 5-10 minutes in length. Be prepared, practice your presentation as many times as possible. Present your entire study including your research question, purpose, background research, hypothesis, materials, procedures, results, and conclusion. Make sure that you share any special challenges or unexpected outcomes. Be prepared to answer questions at the end of your presentation.

#### Website Resources:

<https://nc.discoveryeducation.com/>

<https://www.sciencea-z.com/>

<https://www.sciencebuddies.org/science-fair-projects/project-ideas/third-grade?p=4>

<http://www.all-science-fair-projects.com/>

<http://www.ipl.org/div/projectguide/>

<http://www.sciencemadesimple.com/projects.html>

<http://www.juliantrubin.com/fairprojects.html>

#### Project Timeline:

<b>Assignments</b>	<b>Due Date</b>
Select a Research Question and Purpose	12/15
Conduct Background Research, Hypothesis, Materials and Procedures List, Conduct Experiment in Science Journal	12/15-1/15
Science Journal, Display Board, and Oral Presentation	1/16

## Science Project Rubric

Student Name(s): \_\_\_\_\_

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

Project Elements	Possible Score	Score
<b>Presentation:</b> <ul style="list-style-type: none"> <li>• Neatness</li> <li>• Clarity of Text</li> <li>• Use of images, graphics, tables, and graphs</li> </ul>	10	
<b>Science Journal and Display Board</b> Includes: Testable question references a cause and effect relationship and a measurable change OR Proposed solution/invention references a specific outcome and a measurable change	10	
Background Research is diverse, multiple sources, complete citations	10	
Hypothesis is based on background research	10	
Variables are clearly defined (independent, controlled, dependent) – may be worded as “What I changed,” “What I kept the same,” and “What I measured”	10	
Materials are appropriate and a detailed list is given	10	
Procedure is sequential and describes the investigation clearly	10	
Data: Quantitative data: numbers, standard metric units, scale made up by the student Qualitative Data: words, descriptions of physical or behavioral changes	10	
Analysis: describes the trends or patterns found in the data; may have comments on reasons for trends or patterns	10	
Conclusion: based on analysis of the data; acceptance or rejection of hypothesis or success of invention/solution; suggestions for further efforts	10	
<b>Total Score</b>	100	
<b>Comments:</b>		