

***Joaquin Miller Elementary
School Science Fair
Grades 4 and 5***

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Investigate!!

Use the Scientific Method

- **Question** Ask a question that tests something.
- **Research** Gather information about the topic
- **Hypothesis** *educated guess(es) *write an if...then statement based on the research.
- **Materials**-items used to conduct investigation
- **Procedure**-What you did-**Photos/Diagrams/Pictures**
- **Data/Results/Observations**
 - *put information in a chart, list, or sentences
 - *5 senses details *measurements
- **Conclusions** Vocabulary learned, Analyze-Compare/contrast, cause/effect, Claims with evidence, and some reasoning)


Where do you get an idea for your investigation?

- Science fair books
- Google “4th grade science fair investigations”
- Internet
 - <http://www.jpl.nasa.gov/education/sciencefair/>
 - <https://www.education.com/science-fair/fourth-grade/#grade:fourth-grade>
 - <http://www.lascifair.org/>
- Volcano projects will not be approved.
 - Instead, the student might investigate **kitchen or cooking chemical reactions science fair projects.**

Important!

Project Idea Form

Miller School Science Fair 2020

 Science Fair!

The Science Fair will be held **April 14th** for 4th graders and **April 16th** for 5th graders. **Every 4th and 5th grader is required to do a project and display.** Students will bring their projects the day of the science fair unless arrangements have been made with the classroom teacher before the scheduled day.

Students may purchase a science fair tri-fold display board before school (8:15-8:25 A.M.) or after school (2:55-3:10 P.M.) in room 43. The price of the boards is \$5.00; cash only. Profits go towards our Team Jaguar Fundraising Committee which helps with educational programs here at Miller School.

Students may work with a partner from their homeroom classroom or alone. In the past, some students have had problems meeting up with their partners outside of school and finishing their parts of the project in a timely manner. Other partners have divided up the work well and were able to enjoy their work for the Science Fair.

Miller School Science Fair 2020 Project Idea Form

**Written teacher approval of the project idea is required before beginning.*

***All students must turn in this paper with a parent signature.*

NOTE: If you found the idea for your project in a book or at an internet website, attaching the handout explaining your project would be helpful. You MUST still describe your investigation below.

Student Name _____ Partner Name _____ (optional)

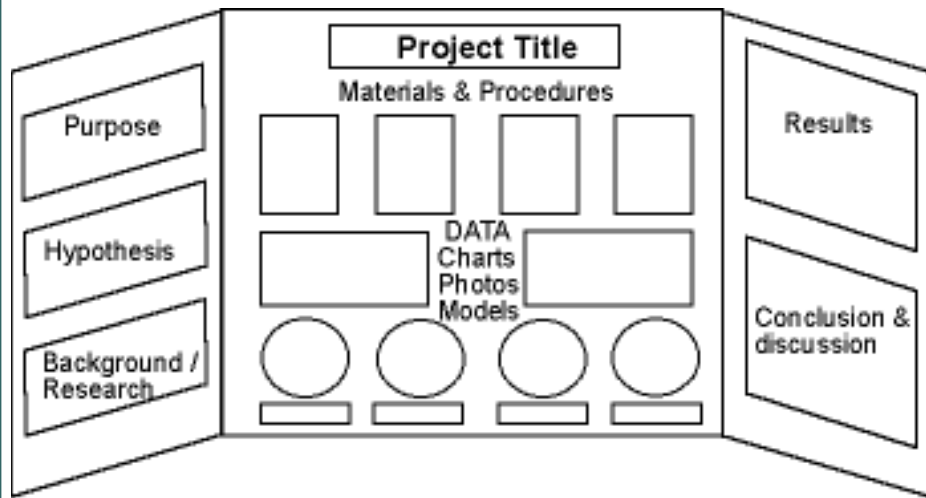
Describe your investigation. (minimum of 2 sentences) *Make sure to specify your guiding question or purpose of this project and the science concepts or vocabulary to be studied.

Parent Signature _____ Date _____ Student Signature _____

Teacher approval: _____

NOTE: Students must receive written teacher approval before starting their investigation.

What should be on your display board?



https://padlet-uploads.storage.googleapis.com/235168283/e0bec1f605364864b18d3e95e45a1d71/Science_Fair_Displays_Elem.pdf

- Project Title & Names
- Purpose or question
- Hypothesis
- Materials
- Procedure
- Research: What is the science? vocabulary?
- Data/Results/Observations:
 - *What did you see, measure, feel...?
 - *DESCRIBE
 - *Photographs
- Conclusions: What did you learn? (5+ sentences)

Data/Results/Observations



- **Pictures** should be included to show your investigation of this topic over time.
- Write **observations** in a **chart** or **list**.
- **Describe** what you observe.
- Use your 5 senses to describe.

Data/Results/Observations

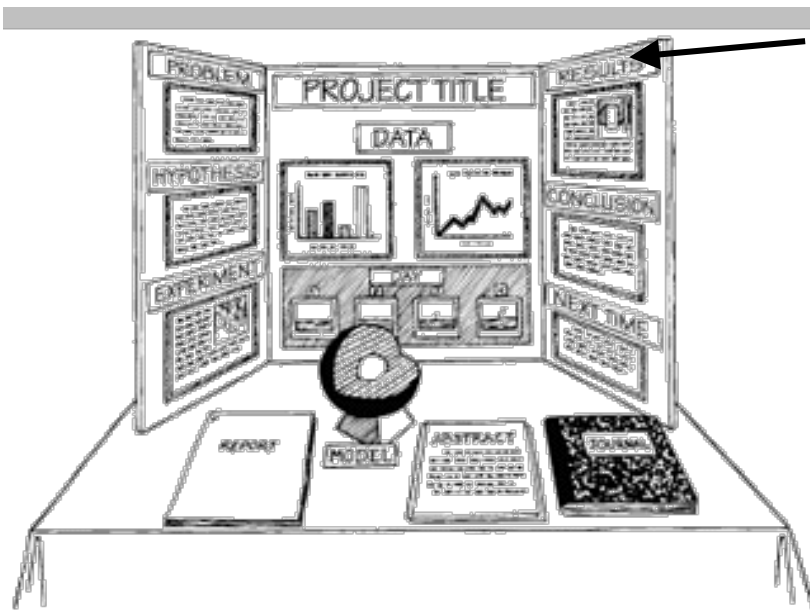


Figure 7.1 Example of a Good Display

- Measure something.
- State the facts.
- DO NOT explain why something happened. That should be written in the “conclusions” part.

Conclusions * More than 5 sentences.

- What did the student realize from the observations or data?
- What vocabulary was learned?
- Make connections and state claims. Then state your evidence (from chart of data).
- To earn a 4, critical thinking sentences are required: Compare/Contrast; Cause/Effect; Main ideas (generalizations) with supporting details; Problems that came up and solutions.

Science Fair Success Criteria

- ___ Board is **organized** with NAME, headings and information
- ___ Background **research** done and clearly stated **Vocabulary!**
- ___ **Hypothesis** stated. – if and then statement(s).
- ___ **Procedure** is clearly stated. – numbered list!
- ___ **Data/results/observations** included. -**chart/list, photographs**
- ___ **Explanation** of some science concept(s). Explains science with sentences.
- ___ **Conclusions** included. Minimum of 5 sentences.
- ___ **Critical thinking details** are required: Compare/Contrast; Cause/Effect; Problems that came up and solutions.
- ___ Student able to **express understanding & answer questions** about the project

How much do parents help?

- Students should keep a folder that includes:
 - notes from reading about the science concept(s)
 - gather data possibly in a chart or list
 - rough drafts
- Guide and answer their questions with questions.
- You may know the answer, but help them to discover it themselves. Guide them.

How much do parents help?

- The student is expected to write/type the information in their own words.
- Although neatness is very good, it's not the main focus.
- Make sure the web site is run by a large, recognized group such as a college or organization.
 - *.org, .gov. or .edu are generally trustworthy for accuracy of content

Important to Remember!

- DO NOT print from Internet & paste on display.
- DO NOT tell the student what to type. Guide them.
- Starting on Thursday, March 5th, display boards will be sold in room 43 at 8:15 AM and at 2:55 PM for \$5, cash only.

Important to Remember

Tuesday, April 14th
11:05 A.M.-12:10 P.M.

- Students bring their projects/boards with them in the morning.
- Students and teachers will set-up in the classroom.

Parents are invited! Check-in through the office first.

- Students will present their projects to parents and 5th graders who will walk around and browse the different projects.
- Students may want to have a few notecards with information that they want to share.

Thank you!

We hope you will enjoy
investigating with your child about
science!

