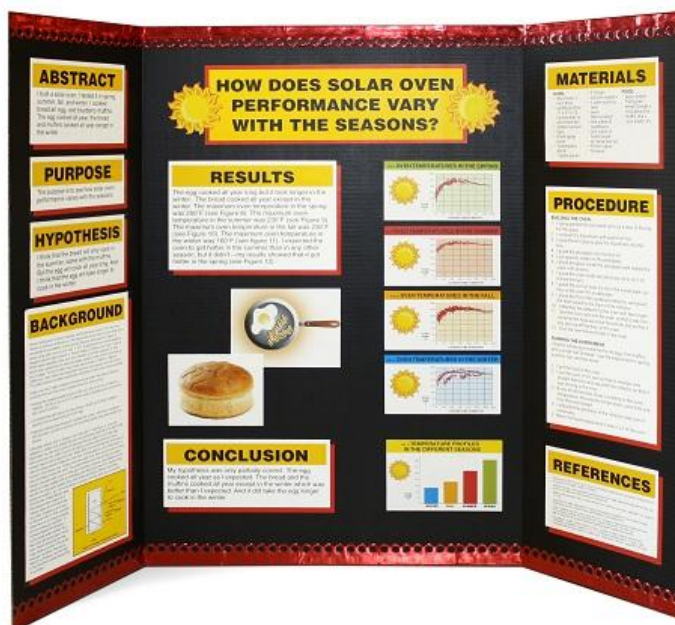


Science Fair Projects

Information Packet:

2014



Middle School

MARIA REGINA SCHOOL

Gardena, CA 90249

Science Fair Projects

Dear Middle School Parent/Student:

It is time for the Science Fair! Once again, our middle school students will have the opportunity to show off their technological and scientific expertise through experimentation or invention using the Scientific Method. *Resist the temptation to make a display or do a demonstration. **Try to answer a question or solve a problem.*** The requirements are stated in this packet, so please read the entire packet

The Science Fair is mandatory for all middle school students. I strongly encourage that you start your science fair project early, especially if your project involving observation and recording of data over a period of time such as a week or two to complete.

We are very excited and proud to have this opportunity made available to our students. Remember, the Science Fair Project is one the student can do pretty much by himself or herself, with guidance from adults (parents and/or teacher) as needed. If you have any questions, please do not hesitate to ask your (child's) Science teacher.

Good Luck!

SCIENCE FAIR DUE DATES:

Topic Proposal due:	April 4, 2014
Projects due:	April 28, 2014
Science Fair:	April 28-30, 2014

Science Fair Projects:

What is the Science Fair?

The science fair is an opportunity for the students to work their way through the process of scientific inquiry to answer a question. It is not a demonstration project: such as a volcano or an electric motor.

What is process of scientific inquiry?

1. Form a Question/Problem Statement
2. Make a Prediction/Hypothesis
3. Design an Experiment (Procedure, Materials, Safety Concerns)
4. Conduct the Experiment and Collect Data
5. Analyze the Data
6. Draw a Conclusion Based on the Results of the Experiment

What are the requirements?

The students will need three different components to finish this project. First, they are required to design and carry out an experiment (of a topic approved by Mrs. Robbins) guided by the scientific method. This is where they keep track of all their thinking as well as what happened during their experiment. Next, the students will be asked to create a tri-fold display board that presents information about their question and what they found out. Finally, the students will be asked to prepare an oral presentation to give to the class about their project. Students should be prepared to answer questions about their project after their formal presentation.

Here is a quick review of the requirements:

1. Design & Carry out Experiment
2. Tri-fold Display Board
3. Oral Presentation

Project Outline – Experiment:

The **Science Fair project** reports the answer to a **scientific question or problem** by way of an experiment using the “Project Outline” below.

DISPLAY BOARD:

The display will showcase the entire experiment. It should include all steps of the **scientific process**. The board should be attractive and visually pleasing.

REPORT:

The report is an extended lab write-up. The report includes 1-2 pages of research on the experiment’s topic.

ORAL PRESENTATION:

We will also require the students to present their experiments to the class. We encourage the students to practice these speeches at home.

LAB WRITE-UP:

Research Question: This is the statement that explains the purpose of your experiment. We phrase it in the form of a question.

Research: You will need to do research on your topic not only for your research paper but also to form a hypothesis. You can’t form an opinion until you have some facts.

Hypothesis: A hypothesis is an educated guess about the outcome of your experiment. After you have completed your research, there are a couple of ways to state your hypothesis. However, you must state your hypothesis using the If...Then format.

Materials and Procedure: Materials should be in a list form. The procedure should be a step-by-step detailed guide to how you completed the experiment. Someone else should be able to follow your steps to complete the experiment themselves. Be sure to include the amounts of materials (ex. 3 pieces of paper, ½ teaspoon of sugar).

Results: This is where you incorporate the outcome of your experiment. You may do this in a variety of ways. Examples include: charts, graphs and photographs. I would advise that you choose more than one way to represent your data. Keeping a journal would be a good way to make sure you are collecting all of your data. This is where your “numbers” will go.

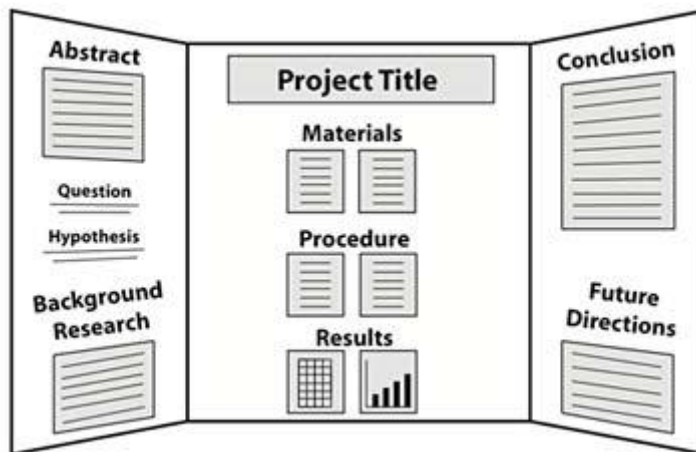
Conclusion: You will begin the paragraph by restating the purpose, the question you asked, and your hypothesis. You need to discuss how your data supports or rejects your hypothesis. If you were not correct, you can state why. Use the data you collected to **answer your original research question**. Overall, what did you learn? How can you improve on the experiment?

VISUALS:

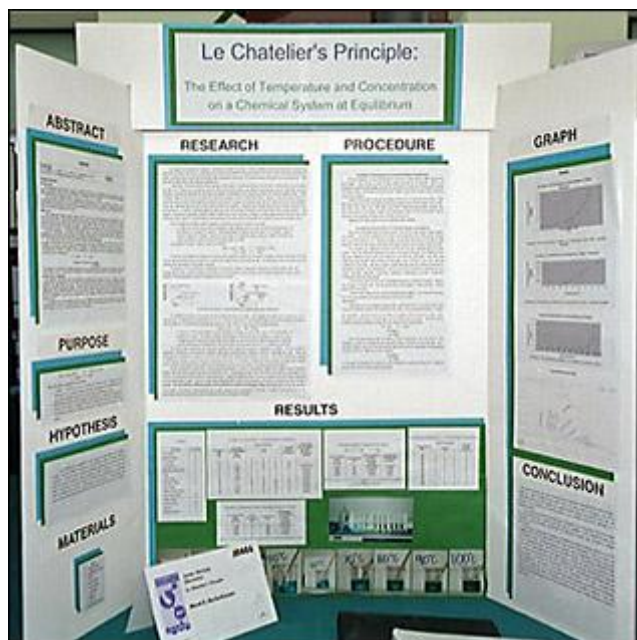
You need to incorporate lots of visuals into your project. These can be charts, graphs or pictures. If you have people visible in your pictures, make sure to cover their faces (unless you have their permission).

Key Info: Display Board

- For your science fair project, you need to prepare a **display board** to communicate your work to others. Use a standard, three-panel display board that unfolds to be 36" tall by 48" wide.

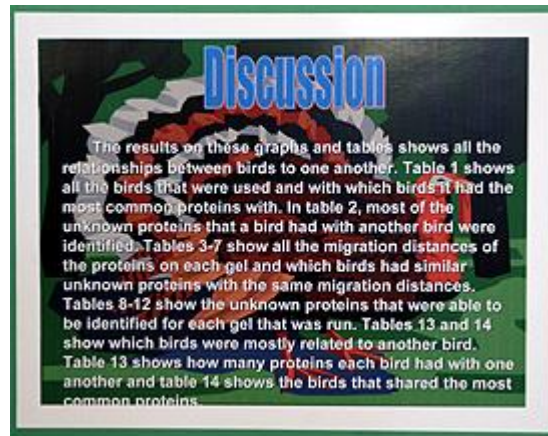


- Organize your information like a newspaper** so that your audience can quickly follow the thread of your experiment by reading from top to bottom, then left to right. Include each step of your science fair project: Abstract, question, hypothesis, variables, background research, and so on.



- Use a font size of at least 16 points** for the text on your display board, so that it is easy to read from a few feet away. It's OK to use slightly smaller fonts for captions on picture and tables.
- The title should be big and easily read from across the room.** Choose one that accurately describes your work, but also grabs peoples' attention.

- **A picture speaks a thousand words!** Use photos or draw diagrams to present non-numerical data, to propose models that explain your results, or just to show your experimental setup. But, don't put text on top of photographs or images. It can be very difficult to read.



This sample shows how difficult it can be to read text when you print it on top of an image. Don't do it!

Online Web Sites about Science Fair Project:

Science Buddies:

www.sciencebuddies.org/

Science Fair Topics:

www.accessexcellence.org/RC/scifair.html

School Discovery

<http://school.discoveryeducation.com/sciencefaircentral/Getting-Started/idea-finder.html>

All Science Fair Projects

www.all-science-fair-projects.com

The Ultimate Science Fair Resource

<http://scifair.org/>

The NEED Organization

www.need.org/Science-Fair-Projects

Source:

http://www.sciencebuddies.org/science-fair-projects/project_display_board.shtml