

Don Callejon School



Don Callejon School Science Fair April 5, 2012



Dear Families,

The Don Callejon Science Fair will be held April 5, 2012. Qualifying students will represent Don Callejon School at the District Science Fair, May 16th. The information in this packet should help your child plan and complete a science fair project. These projects give the students an opportunity to engage in scientific questioning, maintain accurate records, and apply the skills and processes of scientists to do a project.

Please be aware that students in grade 5 are required to complete a science fair project. Students in grades K-8 can participate in the school science fair, with a complete project. However, only grades 4-8 are able to participate in the district science fair. Winter break would be a good time for your child to start researching a topic for their project. Most projects take time to complete as multiple tests are required to meet the expectations and to get accurate results.

We urge you to support and encourage your child to do his/her best work. Please do not hesitate to contact your child's teacher if you have any questions. All of us at school are looking forward to this exciting and rewarding school event.

Please keep the following dates:

January 9, 2012	Science Fair Proposals are due to the teacher
January 9-January 17	Teachers review & approve/ request edits for proposals
January 17, 2012	Teacher returns approved proposals to students
January 17-March 2012	Students investigate, experiment, collect, & analyze data; Teachers check students' journals, reports, & abstracts
March 2012	Teacher distributes science fair boards <i>upon review of student journal completion, report, and abstract</i>
Fridays, Jan. 13-March 30	Drop-in Science Fair Project Help for Grades 4 and 5 (Mrs. Thorp, Room E1)
Wednesday, April 4, 2012	Science Fair Projects are submitted in the MPR *Your teacher may collect your project sooner*
Thursday, April 5, 2012	Don Callejon's Science Fair! Judging 8:30-11:30 a.m. *Parents are not permitted in the MPR during the day* Public viewing & Awards 6-7 p.m.
Wednesday, May 16, 2012	District Science Fair

Choosing a Topic

- Choose a topic that is safe for you to do. Please DO NOT experiment with vertebrate animals or bacteria.
- Choose a topic that interests you. After you have begun and you no longer find the topic interesting, it is OK to stop and choose another topic. However, make sure you have plenty of time to begin a new one. DO NOT stop and start various projects! You want to give yourself enough time to complete your project!
- Look at the world around you. Use the exploring question “I wonder...” to start asking questions and investigating possible topics.
- Choose a topic from your experience.
- You can find a topic on the internet or in a science experiment book. *Please visit the DCS library site for Science project ideas.*

*****VERY IMPORTANT*****

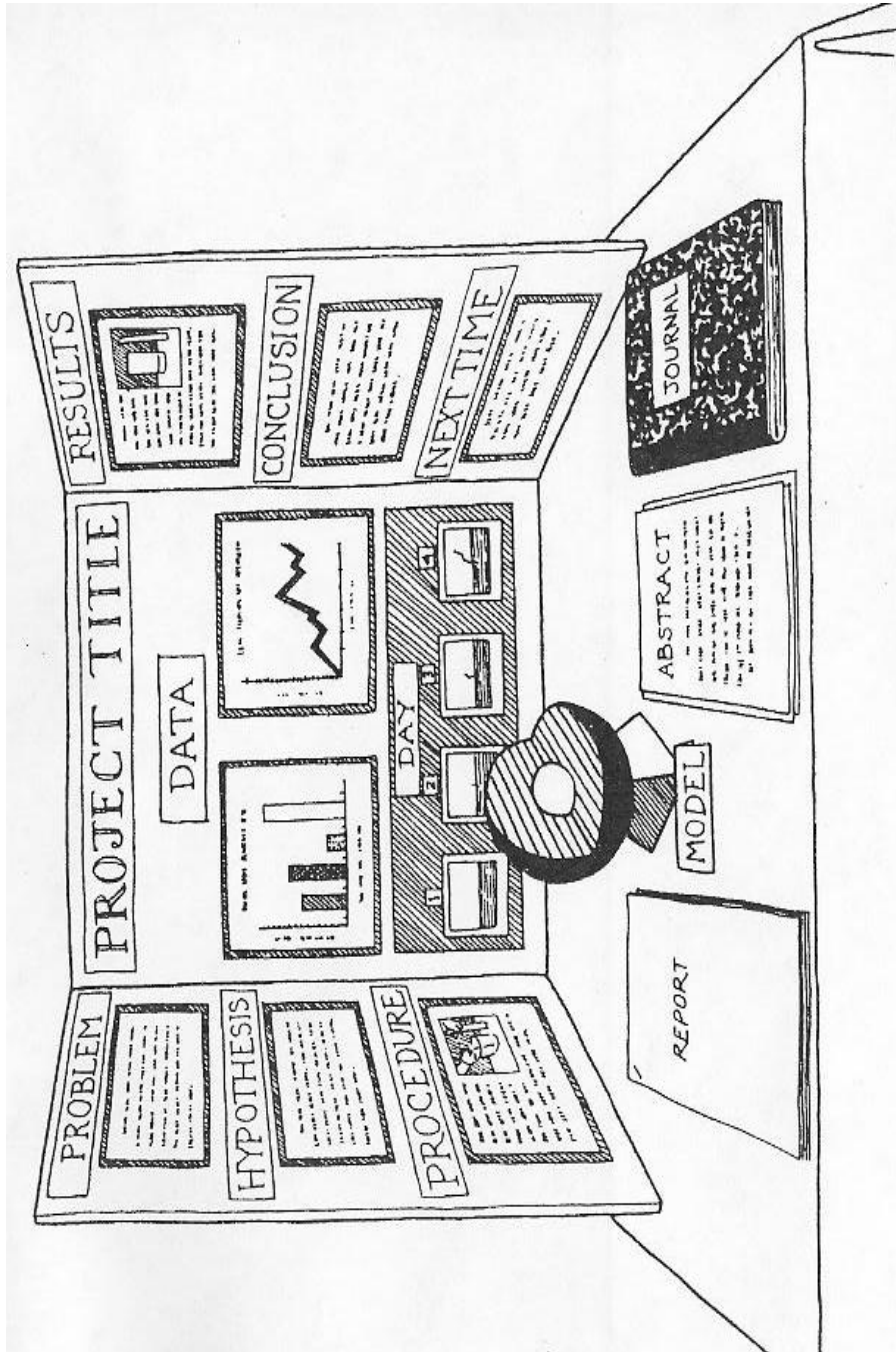
- Keep a journal with your topic and project research. This will be displayed with your completed project.

Name _____

Scientific Method

- 1. Problem:** Ask a question or state a purpose
- 2. Hypothesis:** What do you *think* will happen, based on research?
- 3. Procedure / Materials List:** Plan a procedure to test the hypothesis, considering variables and the number of times tests need to be repeated.
- 4. Results:** Make observations and collect data. Express results using graphs and charts.
- 5. Conclusion:** Make a statement considering all you learned during the process. Was your hypothesis correct? Did anything unexpected happen? Back up the statement with research you did!

Typical Elements for Display Board:



Do's and Don'ts for Project Display

Do use computer-generated graphs

Do display photos representing the procedure and the results.

Do use contrasting colors.

Do limit the number of colors used.

Do display models when applicable. If possible, make the models match the color scheme of the backboard.

Do attach charts neatly. If there are many, place them on top of each other.

Do balance the arrangement of materials on the backboard so it is distributed evenly.

Do use double-sided tape or cement glue to attach the papers to the board.

Do make sure to include a section for Acknowledgements

Don't leave the table in front of the display board empty. Display your models (if any), lab report, and journal here.

Don't hang electrical equipment on the display board.

Don't make the title or heading hard to read.

Don't hand-print the letters on the display board.

Don't attach folders that fall open on the display board.

Don't make mistakes in spelling words or writing formulas.

Unacceptable for Display

Live animals

Microbial cultures or fungi, living or dead (e.g., mold, bacteria)

Animal or human parts

Liquids, including water

Chemicals and/or their empty containers (including caustics, acids and household cleaners)

Open or concealed flames

Batteries with open-top cells

Combustible materials

Aerosol cans of household solvents

Controlled substances, poisons or drugs

Sharp items such as syringes, knives and needles

Gases

Science Fair Evaluations and Presentations

Evaluation Expectations:

- Judges will be looking for original ideas
- Be able to state your problem clearly
- Be able to define your variables and controls used
- Be knowledgeable about any equipment used
- Be able to explain how you conducted experiments
- Have Science Journal complete with all collected data and research (Repeat your experiment several times to verify results)***
- Spend an appropriate amount of time (NOT ONE DAY) to complete project
- Have measurable results
- Use tables, graphs, & illustrations to interpret data
- Use research to interpret data collected***
- Collect enough data to make conclusion

Presentation Expectations:

- Present an attractive & interesting display that shows creative ability and originality
- Have a complete and comprehensive report
- Answer questions accurately
- Refer to display during oral presentation
- Justify conclusions on basis of experimental data
- Summarize what you learned

Guidelines for Written Portion

A. Journal – *this is your diary of chronological events. Your entries should be dated.*

- Research on topic (cite your sources!)
- Question
- Hypothesis
- Materials List
- Procedure
- Observations (daily / weekly) qualitative and quantitative observations recorded throughout entire project
- Conclusions

B. Report (on your findings)

1. Title Page
2. Table of Contents
3. Introduction
4. Experiments / Data
 - a) *Purpose*
 - b) *Materials*
 - c) *Procedure*
 - d) *Tables / Graphs / Charts / Diagrams*
5. Results (facts) and Conclusion (your analysis)
6. Bibliography
7. Acknowledgements

C. Abstract – a one-paragraph summary of your project

Model – optional (restricted to the size of a shoe box)

Category (please circle) **Physical** **Life** **Earth**

Project # _____

District Science Fair Rubric

Title _____

Student(s) _____

School _____

Grade Level _____

Score (White, Red or Blue) _____

Comments _____

Criteria	White Ribbon	Red Ribbon	Blue Ribbon
Scientific Investigation	Designs and conducts an experiment that shows limited understanding of the scientific method and is lacking in the hypothesis, controls, and variable. _____	Designs and conducts an experiment that shows a solid understanding of the scientific method. This may be evident in the hypothesis, control, and variables. _____	Designs and conducts an experiment that shows a sophisticated understanding of the scientific method and is evident in the hypothesis, controls, and variables. _____
	Repeats experiment less than adequately to support conclusions. _____	Repeats experiment adequately to support conclusions. _____	Repeats experiment more than adequately to support conclusions. _____
Conceptual Understanding	Shows a limited understanding of science concepts and information. _____	Shows solid understanding of science concepts and information. _____	Shows sophisticated understanding of science concepts and information. _____
Communication	Gives clear but incomplete explanations. _____	Gives clear and complete explanations. _____	Gives complete and well-elaborated explanations. _____
	Illustrations and data provide some support for explanations. _____	Illustrations and data are accurate and support explanations. _____	Illustrations and data are accurate, detailed and support explanations. _____
Scientific Thinking	Provides no field notes. _____	Provides field notes. _____	Provides well documented field notes. _____
	Draws conclusions with inaccurate or incomplete data and observations. _____	Draws conclusions with some data or observations. _____	Draws conclusions based on evidence from data and observations. _____

8th Grade Invention Rubric

Category: (please circle) **Physical** **Life** **Earth**

Project # _____

District Science Fair Invention Rubric

Title: _____ Student(s): _____

School: _____ Grade: _____ Score (White, Red or Blue): _____

Comments _____

Criteria	White Ribbon	Red Ribbon	Blue Ribbon
Problem Identification	<p><i>Uses a "made up" problem that does not apply to real-life.</i></p> <p><i>Identifies a problem unclearly.</i></p>	<p>Uses a real-life problem.</p> <p><i>Identifies a problem that already has solutions.</i></p>	<p>Uses a real life problem that shows in depth understanding.</p> <p>Identifies a unique problem.</p>
Solution to the Problem	<p>Solves a problem in an impractical way.</p>	<p><i>Solves a problem in an appropriate but somewhat impractical way.</i></p>	<p><i>Solves a problem in a creative/amusing way that has real-life applications.</i></p>
Research	<p>Conducts some research <i>but</i> has little or no knowledge of similar products or processes.</p> <p>Paragraphs written without sources.</p>	<p>Conducts research and has documented evidence to show there are no similar products or processes.</p> <p>Paragraphs written with one-two sources.</p>	<p>Conducts extensive research and has carefully documented evidence to show there are no similar products or processes.</p> <p>Paragraphs written with multiple sources.</p>
Quality of Construction	<p>Poorly designed and constructed.</p> <p>Materials inappropriate to the task.</p> <p>Works poorly or not at all when demonstrated.</p>	<p>Adequately designed and constructed.</p> <p>Materials appropriate to the task.</p> <p>Works most of the time when demonstrated.</p>	<p>Well designed and constructed.</p> <p>Materials show attention to detail and craftsmanship.</p> <p>Works flawlessly when demonstrated.</p>
Presentation-Oral	<p>Reluctant, disorganized presentation.</p> <p>Unaware of audience.</p> <p>Lacks knowledge of invention.</p>	<p>Clear, organized presentation</p> <p>Aware of audience.</p> <p>Explains invention thoroughly.</p>	<p>Enthusiastic engaging presentation.</p> <p>Speaks to intended audience.</p> <p>Takes explanation of invention one step further.</p>
Display Board	<p>Limited design and layout.</p> <p><i>Too little or too much color; graphics are incomplete or unclear.</i></p> <p><i>Lacks required elements.</i></p> <p><i>Poor writing demonstrated; lacks organization; has grammar and punctuation errors</i></p>	<p>Appropriate design and layout.</p> <p>Adequate use of color and graphics.</p> <p>Has required elements.</p> <p><i>Adequate writing demonstrated; organized; has a few grammar and punctuation errors.</i></p>	<p>Exceptional design and layout.</p> <p>Excellent use of color and graphics</p> <p>Goes above and beyond required elements.</p> <p><i>Excellent writing demonstrated; organized; has no grammar and punctuation errors.</i></p>

Science Fair Central



Starting Your Project - Six-Week Schedule

(Page 1)

Taking on a science fair project might seem like a huge task, but it doesn't have to be an overwhelming experience. Use the timetable below to think through the steps in the process and follow a clear schedule.

Date of the science fair _____		
Date to begin working on project _____ (Six weeks before science fair opening date)		
Scheduled Weekly Events	Scheduled Completion Date	Actual Completion Date
Week 1 <ul style="list-style-type: none">* Choose a topic or problem to investigate.* Start a journal to keep all your notes and research along the way.* Begin primary research: Write for information from experts, such as scientists, businesses, and government agencies. Set up interviews when necessary.* Begin secondary research: Search printed sources (books, journals, magazines, and newspapers) and electronic sources (Internet and software).		
Week 2 <ul style="list-style-type: none">* Change your topic or problem if necessary.* Decide how to set up your investigation or experiment, including the procedure and necessary materials.* From your initial research, write your hypothesis.* Continue your research using the best resources you found.* Interview experts for more information.		

Starting Your Project - Six-Week Schedule

(Page 2)



Scheduled Weekly Events	Scheduled Completion Date	Actual Completion Date
Week 3 <ul style="list-style-type: none">* Complete initial research. Set up outline for written report.* Start your experiment or demonstration collection. Record observations in your journal.* Begin collecting or buying materials for your display.		
Week 4 <ul style="list-style-type: none">* Work on first draft of written report.* Continue to record observations from your experiment in your journal.* Write down or sketch preliminary designs for your display.		
Week 5 <ul style="list-style-type: none">* Write second draft of your report.* Start assembling display unit.* Begin designing signs, labels, charts, graphs, or other visual aids for display.* Write text for background of display and plan its layout.* Continue to record observations from experiment.* Take any photographs you need.		
Week 6 <ul style="list-style-type: none">* Complete your experiment or collection. Analyze observations and write up your results.* Write, type, and proofread final version of written report.* Have photographs developed and enlarged.* Type explanations or background information and mount them on your display.* Finish constructing your display, including graphs, charts, and visual aids.		

