6th Grade Science Fair

Due Dates

Proposal	November 30, 2007 (Blue and green day classes)
Research Paper	December 14, 2007 (Blue and green day classes)
Complete Project	February 5 (Blue day) and February 6 (Green day)

Proposal

The following information needs to be included in the proposal. Each team member needs to turn in an individual copy. Students are required to hand in a typed copy of the following:

____ *Title*
6 words or less, no more than 50 characters

____ *Problem*
Stated in the form of a question

____ *Hypothesis*
A statement about the relationship between the manipulated/independent and responding/dependent variables that can be tested. Include what you think will happen and **why**. If, then, because format required.

____ *Material*
Be sure to include equipment needed, amounts, sizes, and brand names

____ *Variables*
The following must be present and labeled:

1. Manipulated- the variable that is purposely changed (tested) by the experiment
2. Responding- the variable that responds (measures change caused by the manipulated/ independent variable) to change
3. Control- the standard for comparing experimental results (experiment without the involvement of the manipulated/ independent variable)
4. Constants- all factors that remain the same and have a fixed value (variables not tested)

____ *Safety Precautions*

____ *Procedures*
Step by step instructions for carrying out the experiment. Clear enough for someone else to do the experiment without talking to you

____ *Bibliography*
3 sources for proposal: 2 from books, 1 from internet

As soon as your project has been approved by your science teacher, begin your experiment.

Science Fair Research Paper

This is **not** a process paper. It does not describe the steps of your experiment or your results. Your research paper is an informative summary that includes facts, findings, and background information on your topic.

Checklist

____ Collect information on index cards, you will be asked to submit these to your science teacher

____ 3-5 references, cited MLA style

____ Typed, 12 point font and double spaced

____ Title including the following:

1. Title of your project in center of page
2. Your name
3. Pin Oak Middle School
4. Cluster 6C

____ Minimum of 5 paragraphs, maximum of 10

____ Introduction paragraph

____ 3 body paragraphs

____ Summary/ conclusion paragraph

____ Works cited **and** bibliography
Make sure your 3-5 sources are MLA formatted and in alphabetical order

Please refer to the grading rubric for assessing the research paper

Each team member must complete and submit their own research paper

Research Paper Rubric

Topic	
Well defined, interesting topic	…5
Sufficient choice of topic	…4
Topic is unfocused	…3
Organization	
Material is well organized, flows from one point to the next	…5
Average organization, some problems of flow of ideas	…4
Poor or no organization	…3
Spelling, Grammar, and Punctuation	
Few or no mistakes (0-2)	…5
Some mistakes (3-5)	…4
Several mistakes (6+)	…3
Works Cited	
3-5 sources are cited correctly, in alphabetical order	…5

(at least 2 from books and 1 from internet)	
At least one source is cited incorrectly or sources are not listed in alphabetical order	…2
No sources are cited	…0

Note cards

Note cards are present with reference cited on each	…5
Note cards are present	…3
Note cards are absent	…0

Total	…25
X4	…100 points

Laboratory Notebook

A properly maintained laboratory notebook is one of a researcher's most valuable tools. It contains the permanent written record of the scientist's activities from both experiment and observation, to conclusions. The act of writing in the notebook forces the researcher to stop and think about what he/ she is about to do and what is actually done.

Guidelines

Failure to follow these guidelines will result in deductions from the final project grade

1. The notebook should be written in a composition book, remaining bound
2. Front cover of the notebook should contain a title and time period covered for data recorded in the book. Your name must be present as well and can be covered during judging. All remaining pages should be numbered on the top outside corner of the page. The table of contents should be added as the project progresses.
3. All written entries in the notebook should be done in **ink**.
4. The right hand pages should be used for making formal entries. The left hand pages should be for calculations, doodling, scratch paper, etc. All right hand pages should be dated when information is recorded on them.
5. No pages should be removed from the notebook. If an error is made in recording something, it should not be erased; a single line should be drawn through the information.
6. Photographs, computer printouts, etc. should be properly labeled and taped or glued onto one of the right-handed pages.
7. All observations should be recorded using the appropriate SI unit.

In summary, a project is not supposed to be an attractive document; it is a working document. Yes it may have a few stains and spills on it. However, the entries should be legible, complete, reasonably neat, and logically presented.

Science Fair Checklist

All of the following must be on your project board and or present on the due date

_____ Title- 6 words or less, no more than 50 characters

_____ Abstract- summary of your entire paper and project in one paragraph – should be placed separately from your research paper

_____ Problem- stated in the form of a question

_____ Hypothesis- in the proper if, then, because format

Materials- includes all equipment, amounts, size, and brand names

Variables

1. manipulated/ independent
2. responding/ dependent
3. control
4. constants

_____

Procedures- detailed so that anyone can follow your experiment

1. Numbered
2. Include safety precaution
3. Photos- to explain procedures
4. How many trials or subjects used?

_____

Observations- clearly stated on project board, lead to inferences, at least 5 photos on board

_____

Results
Table that organizes data
Graph- axes labeled, title, appropriate graph type is chosen

_____

Conclusion
Brief summary in paragraph form – based on observations – refer back to your hypothesis. **Questions for the future, what new questions do you have after completing your experiment**

_____

Bibliography
Include 3-5 properly written sources, must be present in the research paper and on the board

_____

_____ Laboratory notebook, see lab notebook checklist