Name _____ Period _____

6th grade 2012 Science Fair Project Timeline

Project Pieces	Due Date
Science Project Introduction Page Title problem hypothesis Variables • **You may not start your project until it has been approved by your science teacher**	Thursday , March 8, 2012 X_____ Science teacher initials
Revisions for Project Introduction page **Research Plan Instructions** Materials Procedures Safety **Laboratory Notebook Check**	Thursday , March 22, 2012
Revisions for Research Plan **Research paper** 5 paragraphs of research 3 sources in MLA format	Thursday , March 29, 2012
Research paper revisions **Rough Draft of completed project**- Power Point presentation- emailed to your science teacher for feedback *see check list and Wind Turbine example	Thursday, April 12, 2012
Completed Project (Power Point presentation, Laboratory notebook, Research Paper, Model*if applicable) *classroom mini-competition will take place to determine which projects will advance to QVMS Fair	Thursday, April 19, 2012
Advancing projects Tri-fold board brought to school	Thursday, May 3, 2012
QVMS Science Fair – for advancing projects	Thursday, May 10, 2012

6th grade Science Project Introduction Page

Title of Project: 6 words/50 characters or less

Problem: must have a question mark?

Hypothesis: addresses problem (what you think will happen and why)

Independent Variable: *what you change on purpose (X axis)*

Dependent Variable: *data you collect, responds to the Independent (Y axis)*

Control group (if applicable): *comparison, not tested, you may not always have a control*

Constant/Controlled Variables: *keeping all conditions the same (the more the better)*

6th grade Science Project Research Plan

Revisions to the introduction:

Title:

Problem:

Hypothesis:

Independent Variable: *what you change on purpose (X axis)*

Dependent Variable: *data you collect, responds to the Independent (Y axis)*

Control group (if applicable): *comparison, not tested, you may not always have a control*

Constant/Controlled Variables: *keeping all conditions the same (the more the better)*

Materials- include all equipment, amounts, size, **metric units**, and brand names

Procedures- complete steps **NUMBERED**. Use operational definition verbiage so that anyone can repeat your experiment. How many trials or subjects used? Include diagrams if necessary. Include **Safety** precautions

Research Paper

Introduction: Please compose a 5 paragraph (minimum) research paper. This should be background information that addresses the independent and dependent variables. Remember to include any important facts you have researched to support your hypothesis and problem.
Paper should be typed.

Formal research papers are written in the third person (no I, or we), no contractions (don't – write out- do not). Pretend you are writing to a judge scoring your project. Your research should follow this format.

- Introduction paragraph Included the nature of the problem with a detailed explanation of its importance.
- 3 body paragraphs The resource has been summarized correctly and the independent and dependent variables have been identified and discussed
- summary Hypothesis is clear, logical and related to the research question; reasons for hypothesis are stated

Sources: You must have at least 3 sources to support your research. Please include all citation information (MLA Format) for each source. You may use Citation Machine to format your citations, the example page in the science fair packet or library worksheet.
http://citationmachine.net/index2.php?isbn=&mode=form&nameCnt=1&reqstyleid=1

YOUR CITATIONS SHOULD FOLLOW THE FIFTH PARAGRAPH AND SHOULD BE LISTED IN THE ORDER THAT YOU DISCUSSED THEM, NOT IN ALPHABETICAL ORDER (SEE PAGE 45 OF YOUR RULES AND GUIDELINES PACKET).

**No wikipedia sources- make sure websites are up to date and valid. Remember you can also include video clips and interviews.

Source 1
MLA Citation:

Quotes:

Summary notes:

Source 2
MLA Citation:

Quotes:

Summary notes:

Source 3
MLA Citation:

Quotes:

Summary notes:

Name: ______________________

Research Paper Rubric

Score: __________/100

Title

0	3	5
No title is given	Title is incorrectly formatted; too long	Title is correctly formatted

Introduction

0	4	7	10
No introduction was written.	Included the nature of the problem with no explanation of its importance	Included the nature of the problem with a brief explanation of its importance.	Included the nature of the problem with a detailed explanation of its importance.

Body Paragraphs

0	5	10	15
No body paragraph has been written	The resource has not been summarized correctly and/or the independent and dependent variables have not been identified	The resource has been summarized correctly but the independent and dependent variables have not been identified	The resource has been summarized correctly and the independent and dependent variables have been identified and discussed

0	5	10	15
No body paragraph has been written	The resource has not been summarized correctly and/or the independent and dependent variables have not been identified	The resource has been summarized correctly but the independent and dependent variables have not been identified	The resource has been summarized correctly and the independent and dependent variables have been identified and discussed

0	5	10	15
No body paragraph has been written	The resource has not been summarized correctly and/or the independent and dependent variables have not been identified	The resource has been summarized correctly but the independent and dependent variables have not been identified	The resource has been summarized correctly and the independent and dependent variables have been identified and discussed

Conclusion

0	4	7	10
No research question has been written or it is a topic not a question	The research question is in question format; question is not answerable by data and/or answer easily known	The outcome to the research question is predictable.	In question form; answer not readily found and can be answered with data
No hypothesis has been given	Hypothesis is unrelated to research question; should be stated more clearly.	Hypothesis is clear, logical and related to the research question	Hypothesis is clear, logical and related to the research question; reasons for hypothesis are stated

Bibliography

0	3	6	10
No bibliography has been written	Sources have been given but did not use MLA format and/or only one resource given	Two sources given and formatted correctly using MLA guidelines.	Three sources given and formatted correctly using MLA guidelines.

Spelling, Grammar and Punctuation

0	3	6	10
Several mistakes can be found throughout the paper. In excess of 6 mistakes total	Many mistakes can be found throughout the paper. 4-5 mistakes.	Some mistakes can be found throughout the paper. 2-3 mistakes.	Few or no mistakes can be found throughout the paper. 0-1 mistake(s).

SCIENCE ENGINEERING FAIR OF HOUSTON
SCORING SHEET FOR INDIVIDUAL & TEAM PROJECTS

A copy of the scoring sheet used for the SEFH place award judging of individual and team projects is shown below. Special Award judges may or may not use a similar scoring method since the nature and purpose of their awards varies from agency to agency.

PROJECT TITLE_____PROJECT NO._____

JUDGING PHASE _____ JUDGE _____ JUDGING TEAM_____

For Team Projects: NO. OF STUDENTS ON TEAM ____ NO. OF STUDENTS PRESENT FOR JUDGING_____

ASSIGN A MAXIMUM SCORE OF 10 POINTS IN EACH CATEGORY BELOW

PROJECT OBJECTIVES	1. Creativity and originality	
	2. Clear statement of objectives; identification of all relevant variables	
PROJECT DESIGN	3. Creativity and originality	
	4. Knowledge and understanding by student of the scientific or engineering principles relevant to the project (if team project consider each team member)	
	5. Adequacy of scientific or engineering approach used; use of relevant literature	
PROJECT EXECUTION	6. Thoroughness of experimentation or development used to reach objectives; proper recording of data in laboratory notebook	
	7. Level of skills and effort used by the student to carry out the project; amount of work done by the student; understanding of equipment or techniques used to obtain data (if team project consider each team member)	
PROJECT CONCLUSIONS	8. Conclusions consistent with the data obtained and with the relevant principles of science or engineering (if not, is there an adequate explanation of the inconsistency)	
PROJECT PRESENTATION	9. Quality and coherence of the oral presentation within the time allotted (usually about 5-10 minutes)	
	10. Quality and clarity of the display, including the organization and presentation of data	
	TOTAL SCORE (maximum = 100)	
	NORMALIZED SCORE Obtain normalized score by ranking projects according to total score and assigning a normalized score of 100 to the first project, 95 to the second, etc.	

NOTES:

1. Projects continued from previous year(s) should be clearly identified as such with a Roman numeral at the end of the project title. For example--"Pollution in Lake Houston, II" would indicate a continuing project being entered in the fair for the second time. These projects should be judged only on what has been done since the last fair.

2. Judges should not solicit any information from an entrant that would identify the student, their sponsor, or their school. If such information is required, the judge should contact the judging chairperson or special awards chairperson.

COMMENTS:

6th grade Science Fair Presentation Check List

All of the followings must be included in your digital presentation
Refer to the Wind Turbine Power Point Example

- **Title**- is short, clear, and reflects the main idea of the experiment (6 words or less and max. 50 letters characters)

- **Problem**- is stated in the form of a question

- **Hypothesis**- (include what you think will happen and **why**)

- **Research Paper and Bibliography** – minimum of 5 paragraphs, bibliography should be in MLA format

- **Variables**- the following must be present and labeled
  1. Independent variable
  2. Dependent variable
  3. Control group (if applicable)
  4. Constants/controlled variables

- **Materials**- includes all equipment, amounts, size, **metric units**, and brand names

- **Procedures**- complete steps **NUMBERED**. Use operational definition verbiage so that anyone can repeat your experiment. How many trials or subjects used?
  Include **Safety** precautions

- **Observations & Interpretation of Data**- clearly stated on project board, lead to inferences

- **Charts/Data table-** organize your data

- **Graph** –Be sure to labeled axis (x and y), title, scale/interval is consistent, and appropriate graph is chosen (suggest that this is computer generated)

- **Photos**- this is the only way we know you did the experiment. Be sure your clothing does not identify QVMS. You can also use photos to explain procedures.

- **Conclusion & Discussion**
  Brief summary in paragraph form – based on observation – refer back to your hypothesis. Should you accept or reject your hypothesis?

- **Future Research**-Based on your experiment, what other questions arise and prompt you think of future research.

Other items that need to be present with the project board

- **Laboratory Notebook**- every student is responsible for his/her laboratory notebook. Read page 4e for the guidelines. (One Laboratory Notebook is required for each individual, even for team projects.)

- **Abstract-**Read p. 44 to learn how to write an abstract. You should have extra copies available to distribute to your judges. Max 250 words. It should be placed separately from your research paper (this is if the judges do not have time to read your entire research paper)

- **Research paper & Bibliography** need to be present during judging and should be kept in a tab folder or binder. All surveys must be kept in a binder along with the tests and permission forms. Be sure to include a Table of Contents on the first page of your research paper. You can add acknowledgements (optional). Thank those who helped you with your project. Place this in the end of your research paper.

- **Models**: if applicable