Science Fair

North Shore Middle School

2010 - 2011

Science Fair participation is <u>required</u> for all Science students.

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Science Fair
"The Adventure Begins"

- **OVERVIEW:** Every year North Shore Middle School holds its Science Fair as an opportunity for the students in 7th and 8th grade to explore a better understanding of a scientific question of their choice. Throughout the process of testing a hypothesis, or educated guess, that the students have developed they begin to understand the importance of asking questions to increase knowledge and understanding. When the projects are due each teacher will select a specific number of students to represent their classmates at the Annual Science Fair. The students and their projects will be judged in four different categories. The students that place in each category will receive a trophy, an exclusive "winners only" field-trip, and the recognition of their peers and teachers for a job well done.

- **INTRODUCTION:** The following material provides students with all necessary information regarding their participation in the 2010-2011 North Shore Middle School Science Fair. Due Dates for Science Fair are as follows:
  - Project Topic Proposal due Dec. 1st for 8th grade/ Dec. 8-9 for 7th grade
  - Preliminary Journal Check due Dec. 15th for both grade levels
  - Lab Journal Check Jan. 5th for 8th grade/ Jan. 6-7th for 7th grade
  - Project Due Jan. 19 for 8th grade/ Jan. 20-21st for 7th grade
  - Science Fair is February 9th 2011 for both grade levels

- **North Shore Middle School Science Fair**:
  - **February 9th 2011**

All students will be required to use a Tri-Fold Poster Board to present all of their findings

(The project board can be found at any store that sells school supplies or arts & crafts supplies)

Useful resources for Science Fair Project:
http://www.lessonplanspage.com/SciExperiments.htm
http://www.stevespanglerscience.com/experiments/

SCIENCE FAIR CATEGORIES

Science Fair Projects will be developed for and submitted under one of the following categories:

- **BIOLOGY**
- **CHEMISTRY**
- **CONSUMER SCIENCE**
- **PHYSICS**

CATEGORY EXAMPLES

CHEMISTRY: physical chemistry, organic chemistry, inorganic chemistry, material, plastics, metallurgy, etc.

BIOLOGY: animal genetics, ornithology, ichthyology, herpetology, entomology, animal ecology, anatomy, paleontology, cellular physiology, animal biorhythms, animal husbandry, cytology, histology, animal/human physiology, neurophysiology, invertebrate biology, etc.

PHYSICS: Any project whose content that deals with matter and energy and their interactions in the field of mechanics, heat, light, electricity, sound, nuclear.

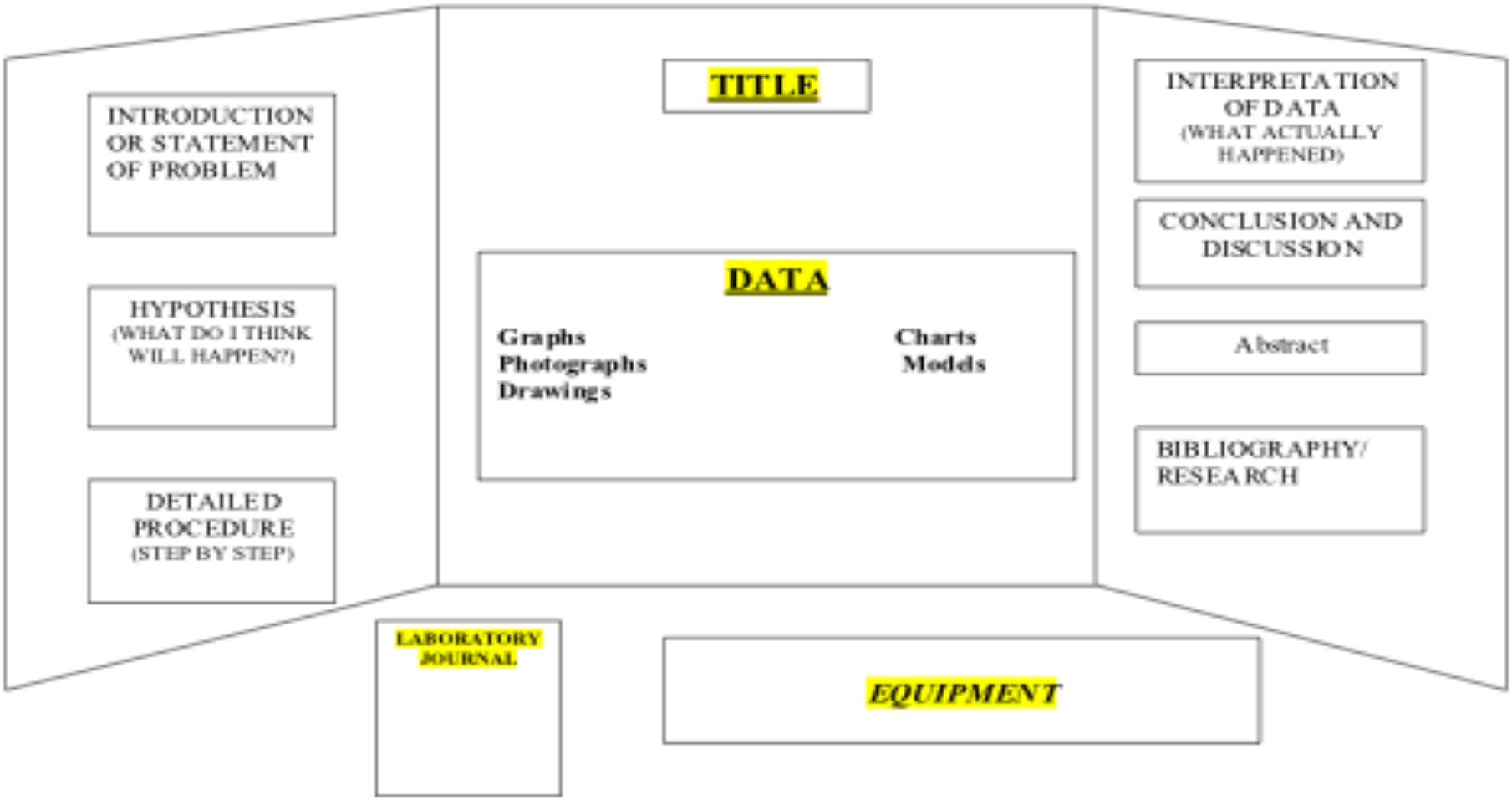
CONSUMER SCIENCE is the study of providing for the well-being of individuals and households in the context of how they are influenced by marketplace institutions and communities

BIBLIOGRAPHY

A bibliography is required with your science fair project. You need a minimum of three sources. The bibliography should be found on your display board right under the abstract. The bibliography should also appear in your journal/log book and it is part of your science fair proposal.

www.easybib.com is a good site for students to use in creating their bibliography entries

PROJECT BOARD SETUP



THIS BOARD ***EXAMPLE*** SHOWS THE TYPE OF INFORMATION AND MATERIAL NORMALLY INCLUDED IN A PROJECT DISPLAY. DISPLAY DOES NOT HAVE TO BE ***EXACTLY*** LIKE THIS

LAB JOURNAL

One of the most important parts of the science fair project is your lab journal. Did you know that a scientist's lab journal is actually a legal document? Because of this, it is important that the guidelines listed below are followed for your science fair project.

LAB JOURNAL GRADING RUBRIC

Along with the previous information given on the journal content use this grading rubric to assist you in properly setting up the journal.

You will have 3 instances to have your journal checked for points/credit. Your journal will be checked for: (1) preliminary set-up; (2) adherence to scientific method, research and bibliography and/or works cited; and (3) at the science fair for your data, results, conclusion, and abstract.

PRELIMINAY SET-UP (50 points)

____	2 points	Use of **prebound journal/notebook**
____	1 points	**Front cover** contains a **TITLE** and the time period covered.
____	1 points	**First page** reserved for **TITLE**
____	2 points	Next 2 pages reserved for **TABLE OF CONTENTS**
____	1 points	**All remaining pages are numbered in ink** on the top outside corner of each page (number to 20 and then add numbers as pages are used
____	2 points	**"Acknowledgements"** page (tell who helped you, express thanks, etc.)
____	3 points	Next 3-5 pages contain **"Research and Bibliography and Works Cited"**
____	8 points	**Separate pages are used** for each of the following parts of the **Scientific Method: PROBLEM, HYPOTHESIS, MATERIAL & PROCEDURES, OBSERVATION & DATA, RESULTS** (including graphs, etc.) and **CONCLUSION.**

____ **TOTAL Points**

THE ABSTRACT

An abstract is a short version of your research project. It should be about 250 words, fit on one page, and contain no more than 5 paragraphs addressing the following:

1. **THE PURPOSE** – Why did you do your project? What was the question you wanted to answer? What was the problem you tried to solve?

2. **THE HYPOTHESIS** – This is a "best guess" explanation of what you think your experiment will prove.

3. **PROCEDURE**:

    a. **Research** – Briefly explain your research plan. How did you gain information about your project?
    b. **Experiment** – Mention the goal and outcome of any experiments. Did they prove or disprove your hypothesis?

4. **RESULTS** – What were the most important facts learned from the project?

5. **CONCLUSION** – What did your results mean? What were some variables that you did not count on? Can you compare the results to anything else you know? Do your results give you any ideas for future research?

SCIENCE FAIR PROJECT GRADING RUBRIC

STUDENT NAME: _____ DATE: _____

PERIOD: _____ TEACHER: _____

TITLE	**5 points_____**
PURPOSE	**5 points_____**
HYPOTHESIS	**10 points_____**
PROCEDURE	**15 points_____**
DATA/RESULTS	**15 points_____**
CONCLUSION	**10 points_____**
LAB JOURNAL	**20 points_____**
BIBLIOGRAPHY	**5 points_____**
ABSTRACT	**15 points_____**

TOTAL POINTS: _____

This grade counts as _____

PROJECT PROPOSAL APPROVAL FORM

Name:_____
Date: _____
Class Period: _____

THIS FORM NEEDS TO BE COMPLETED, SIGNED BY YOUR PARENTS AND RETURNED TO YOUR TEACHER.

SCIENCE FAIR PROJECT OUTLINE:

- **PROBLEM** - *What question are you trying to find an answer to?*

- **HYPOTHESIS** – *What do you think will be the answer to the problem?*

- **MATERIALS** – *List the supplies you will use.*

- **METHODS/PROCEDURES** – *Write a clear step by step description of what you are going to do to test your hypothesis. Include what types of data you plan to collect, what safety measures will be necessary and what you are measuring.*

- **METHODS/PROCEDURES (continued):**

- BIBLIOGRAPHY:
    1. –
    2. –
    3. –

The above project complies with the rules and regulations outlined in the Science Fair packet.

Student Signature:_____ Date:_____

Parent Signature: _____ Date:_____