

SCIENCE PROJECT: FRESHMAN PHYSICAL SCIENCE

Detail & Schedule of Required Submittals

A science project is a great opportunity to be creative and explore new and interesting topics. It is a positive experience to become involved with a science project and as such is a requirement for the Honors Sections of Freshman Physical Science. Students in the non-Honors sections may additionally (*in fact are encouraged to*) participate. Students who fulfill the requirements for each checkpoint (*as indicated and scheduled below*) will earn a number grade (*100% maximum*) for each checkpoint submittal, the cumulative average of which, for any given quarter, will represent 10% of their total grade for that quarter.

Project Options:

Categories: “**Original Experiment**”* or a “**How It Works**” type of project.

Groups: Groups may be of one or two students.

CHECK POINTS	ORIGINAL EXPERIMENT	HOW IT WORKS
1 st Proposal	10/20	10/20
Final Proposal	11/01	11/01
Research/References Identified	11/28	11/28
1 st Procedures	1/02	N/A
Brief Presentation	TBA (<i>Long Block Extra Time</i>)	TBA (<i>Long Block Extra Time</i>)
Final Procedures	2/26	1/02 (<i>Draft Report</i>)
1 st Collected Data	3/12	N/A
Final Collected Data	3/19	N/A
Final Written Report	3/26	3/26
Science Project Presentation	4 th Quarter (<i>TBA</i>)*	4 th Quarter (<i>TBA</i>)

Checkpoint Guidelines:

1st Proposal- The *proposal form* must be submitted (*typed*) in full. Students will be given the go ahead or asked to make changes for their “Final Proposal”.

Final Proposal - Students who were asked to make changes to their first proposal or who have otherwise decided to change their proposal, must submit a new *proposal form* to be evaluated for permission to continue the project, and students wishing to qualify for the official Massachusetts State Science Fair must additionally present a bound logbook with 3 appropriately sized columns to record “dates”, “work time” and “details of work done”.

Research - Students with must have adequate citations/references of scientific concepts directly involved with their experiment/project. A minimum of five references must be cited, two of which must be a non-internet type references. Internet references must be “dot-edu” or “dot.gov” or a written explanation must be provided as to why the selected

source is to be considered reliable. Students may be asked to obtain more information, better or more references, on relevant concepts by the time their *Written Report* is due.

1st Procedures- (*OE Only*) Students must have a numbered list of steps that they will follow to gather their data. Students may be asked to rework these by the Final procedures due date.

Final Procedure – (*OE Only*) Students must hand in an acceptable procedure, operational definitions section, and a controlling variables section.

Written Report- Each student must pass in a completed “Science Project” report (*see specific report requirements posted elsewhere on this tab of “foundationsofphysicalscience.org”*).

Presentation Plan - Each group must have a presentation plan intended for judges, that lasts no more than 5 minutes. The plan must include:

- A) reference to their poster board
- B) demonstrate the major topics/procedures (*hands-on if possible*)
- C) explain the most relevant science concepts at an appropriate level.
Original Experiment Category must also...
- D) explain their experiment variables, procedures, data, and conclusions.

~~Presentation Trial - Each group must give a practice presentation to the teacher.~~

Science Project Presentation - Each group must successfully give a polished presentation at the some time (*TBA 4th Qtr.*) of their science project while concurrently fulfilling the below listed requirements.

- A) A self standing exhibit no larger than 198 cm high, 122cm wide, and 76 cm deep.
- B) Research paper with bibliography (*fulfilled by written report above*).
- C) A one page summary (*fulfilled by written report above*).
- D) Materials necessary for the exhibit and demonstration(s).
- E) A 3-5 minute oral presentation.
- F) A logbook of daily work.

NOTES:

Whether or not a Bromfield Science Fair will be held this year - only an “Original experiment” will be considered eligible for possible consideration to go on to the Worcester Regional event on March 09, 2007.

Those individuals doing an “Original Experiment” who wish to be considered for possible entry on to the Worcester Regional event in March 09, 2007, must follow all regulations of the Massachusetts State Science Fair committee (*see www.SciFair.com*).

TBA => To Be Announced.

* Those students - looking to compete in the WRSEF at WPI on March 9th - must schedule their presentation / teacher review for early in the week of 03-05-07.