

Science Fair (7th & 8th Grades)



1. Everyone **must** participate! Students are now allowed to work in pairs.
2. Your project will be graded. You will receive a combined grade for your project's content and presentation.
3. **The Science fair judging will take place on March 30, 2011-Wednesday.** Your displays/projects/power point slides **Must** be **set-up March 29. Bring in Projects March 29. (Tables in the gym will be set-up on March 28)**

4. Do **not** wait until the last minute to select your project. Organization is the key to a successful outcome. Various web sites and research materials will be available to help you in your search. Order supplies early!
5. Notes **must** be organized and kept neat. An outline is **required**.
6. **** Outline is due in NOVEMBER!!!!!! (November 19, 2011)**
7. Information/research **must** be presented in detail. A journal, notebook, scrapbook, power point **or** research paper **must** be included with your project.
8. Do **not** choose a project that is too difficult, too dangerous, or beyond your level of comprehension. Your teacher **must** approve project.

Guidelines/Recommendations for Science Projects

Title

The title should accurately reflect what is in the project. If possible, decide on the title near the completion of your project.

You may place your name on the project.! You will also be assigned a number.

Introduction

Look up information and read carefully. Use at least **3** references about your subject. If you don't understand what is in one source you should find others that make the basic principles clear to you. Ask questions and take notes.

- a. **Organize** the information so that it is clear to you before you write.
- b. Learn and use **correct terminology** to avoid mistakes in your writing.
- c. Use **diagrams** if helpful, but include their source so you don't **plagiarize**.
- d. Use short sentences, but include important **principles** and **definitions**. You are teaching the reader your subject so that they can understand your project.

Materials

List everything that you used. Include size, quantity, type, etc...The manufacturer and/or source of a material or equipment should be given whenever possible.

Hypothesis

The purpose of an experiment or series of experiments is to test a hypothesis or answer a question.

- a. Choose a realistic hypothesis; it sets the direction of your project.
- b. Avoid projects that are activities or demonstrations.

Method

Designing or selecting a method is the *most important* part of every scientific project. Your choice of method can make the difference between large errors and inconclusive results and small errors, better accuracy, and meaningful results.

To select a suitable method you must aim to **isolate one variable, maintain other conditions constant, and use a "control" sample if you require a basis for comparing samples.**

A **variable** is something you change during an experiment or from one experiment to the next. A **constant** is a condition maintained unchanged during an experiment or series of experiments. **Isolating one variable** involves keeping all conditions constant except for one. However, it is not always possible to control everything that affects an experiment. When this is the case, it is necessary to design an experiment that uses one or more **"control"** sample(s). The purpose of the control sample is to provide a basis for comparison to other samples that are treated differently.

Method

When you write the “method” portion of your report, give a clear overview describing your experimental design. Describe how you set up your materials so you could proceed with testing your hypothesis. Describe variables, constants, control samples (if used), what you intend to observe or measure, and how. Diagrams showing equipment or materials are helpful, and be sure to identify and label components.

Procedure

When you are ready to run experiments be sure to record the observations and data. Use a notebook or binder. Record the date of each experiment and use tables whenever possible.

Your report should give clear steps to each experiment. If all the experiments in a series follow exactly the same procedure except for the change in a variable, then you need to write the entire procedure only for the first experiment and briefly describe the change made for each subsequent experiment.

Results

Tables summarizing variables and observations or numerical results are very helpful **provided that you organize the information in a logical sequence**. This helps you to identify trends that lead to conclusions. Use graphs or charts whenever possible. Graphs are excellent for displaying numerical data. Without graphs discoveries may be missed.

Conclusion

Consider your hypothesis and discuss whether or not your results support it. Be truthful about negative or inconclusive results. In this section discuss why experiments succeeded or failed, what the sources of error are, and what new experiments can be conducted to further explore your hypothesis.

References

Give **all** sources in proper bibliographic format. Also **acknowledge** all individuals who gave advice or helped.

***Use a journal, scrapbook, notebook, power point or research paper to present your project

***Use an outline and web diagram