**Why A Science Fair Project?**

Science projects give students the opportunity to study a subject of individual interest. Interest is the key word. Science experiments can be developed from topics as varies as water skiing, swimming, basketball, music, art, rocketry, robotics, and computers. Science projects are intended to help students realize that science is found in every niche of the universe. Science projects allow students to:

- Practice the scientific method to use and develop understanding of controls and variables
- Take an open and creative approach to problem solving
- Sharpen their writing skills. Students are encouraged to avoid the use of personal pronouns (I, me, my) and instead use appropriate citation of sources (the researcher).
- Gain skills in library use
- Organize time and develop time management skills
- Develop public speaking by presenting projects to classmates
- Compete in a science fair where students and their projects are recognized for academic achievement. The judging process also provides an invaluable experience in developing poise and quick-answer thinking

**Using the Scientific Method**

The standard expectations for an individual science project are listed below. Students are expected to meet these minimum standards.

1. Research a selected topic.
2. Ask a question that can only be answered through scientific testing. This is called the problem question.
3. Write a hypothesis that will help answer the question.
4. Design and experiment to answer the scientific problem question.
5. Maintain a scientist’s data notebook.
6. Complete a formal written report that includes:
   - Problem question
   - Statement of purpose
   - Background research
   - Hypothesis
   - Procedure
   - Materials
   - Results
   - Conclusion
   - Bibliography

7. A backboard display or required information including an abstract.

8. Complete all necessary forms prior to each deadline.
**Library Research**

You must research your topic so that you are up to date with the latest developments on the chosen topic. This will help you to understand the importance of what is being done. You should use the library, the internet (avoiding www.wikipedia.com), books, scientific articles in magazines, and personal interviews of knowledgeable people in order to have solid research. I have provided students the following site: http://search.ebscohost.com as a reliable source for research.

When you find useful information you should:

- take written notes on it for your report
- record where you found the information
- save it for your bibliography

**It is very important that information be written in your own words. Plagiarism will get you a zero for the research portion of the science fair project.** Your library research can be between 2 and 4 pages. Some topics may be difficult to research because there may be a few other scientists that have explored the same topic.

List the books or website that you will use to find information on your topic. Remember to use www.easybib.com or www.bibme.org to create your bibliography.

**Draw Conclusions**

State outcomes of the experimentation and explain what conclusions have been made/what has been learned. Describe how this knowledge might be applied in the future. If further investigations seem appropriate, describe them. Was the hypothesis accepted or rejected? Before writing a conclusion, all data must be carefully examined.

**The Conclusion should include the following:**

1. The statement of purpose.
2. The Hypothesis and a statement claiming to have proven or disproved your hypothesis.
3. A description of any problem or unusual events that happened during the experiment.
4. What the experimenter would do differently the next time.
5. A revised hypothesis is the data failed to prove the original hypothesis.

**Write a Bibliography**

A bibliography is a list of books, articles, encyclopedias, and other sources used to research topic and write a paper. In a bibliography, certain facts are recorded about the materials. The list is always to be arranged in alphabetical order.

- Use the MLA format to make each entry.
- You may use www.easybib.com or www.bibme.com to help you format the bibliography correctly.
The following is an outline sheet (you could use as a guide) you must write your paper on a separate sheet of paper and combine all sentences.
You do not put “S1 and Fact 1 is...” when you hand write it.

First paragraph
Example: S1 = Sentence 1

S1 Hook (sentence to grab reader’s attention) _____________________________________________
S2 Title of your project ______________________________________________________________
S3 The three topics that I researched for my science fair project are ___________, ___________, and ___________

Second paragraph

S1 The first topic that I researched for my science fair project was ____________.
S2-S6 5 Facts ________________________________________________________________
S7 Researching and finding those facts taught me… ____________.

Third paragraph

S1 The second topic that I researched for my science fair project was ____________.
S2-S6 5 Facts ________________________________________________________________
S7 Researching and finding those facts taught me… ____________.

Fourth paragraph

S1 The third topic that I researched for my science fair project was ____________.
S2-S6 5 Facts ________________________________________________________________
S7 Researching and finding those facts taught me… ____________.

Fifth paragraph

S1 The three topics that I researched from my science fair project are ____________, ____________, and ____________.
S2 I have learned that (list 1 fact for first topic) _______________________________________
S2 I have learned that (list 1 fact for second topic) _______________________________________
S2 I have learned that (list 1 fact for third topic) _______________________________________
S5 I enjoyed this project because (do not say it was fun!) _______________________________________.
