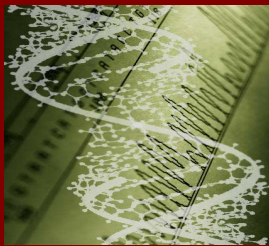


STEP Science Project Guidelines

- ⇒ **NO GROUP PROJECTS:** The project must be done individually.
- ⇒ **PROJECT SUBJECT MATTER:** The idea or question must be related in some way to one of the STEP tours this year. The idea or question should deal with discoveries, inventions or applications of science, math, or technology.
- ⇒ **COST:** Projects should be generally low cost. No pre-molded or manufactured models, please.
- ⇒ **WRITTEN PROJECT SUMMARY:** Write a one to two page summary of your project explaining whether your subject is a Discovery, Invention, or Application of science, math or technology. Explain how your project is important to you and your family and how you think your project will be useful in the future when you are an adult.
- ⇒ **VERBAL PRESENTATION:** You need to be able to explain why you chose your subject, what worked, what did not work, and what you would change to make it BETTER!



HELPFUL WEBSITES:

- <http://www.crystal-clear-science-fair-projects.com>
- <http://www.fsea.org>
- <http://www.sciencebuddies.org>
- <http://www.stemnet.nf.ca/sciencefairs>
- <http://www.cyberbee.com/science/prep.html>
- <http://www.super-science-fair-projects.com>
- <http://www.scifair.org>
- <http://www.doscience.com>



STEP

Student Technical
Enrichment Program

Science Project Information



Helpful Science Project Hints

A successful STEP science project does not have to be expensive or even terribly time-consuming. However, it does require some planning and careful thought. Projects become frustrating when they are left to the last minute and not enough time is left to put the work into it. **You can't rush good science!**

The Question (Or Selecting Your Subject)

Probably the most difficult part of a science project is coming up with a good subject to research. To come up with one:

- ⇒ Think about WHAT INTERESTS you. **Remember, your project must deal with one of the STEP tours.**
- ⇒ Think of a TESTABLE QUESTION about the subject.

You must work to ANSWER A QUESTION, then you will be doing real research. If you are thinking of doing something like volcanoes or tornadoes, will you be asking a question about them or simply building a model? Another problem occurs when students need special equipment to test a question. When you are thinking of your question, ask if it is doable.



Sections of a Science Project

Title

Ideally the title of your project should be catchy, an "interest-grabber," but it should also describe the project well enough that people reading your report can quickly figure out what you were studying.

Background or Purpose

The background section is where you include information that you already know about your subject and/or you tell your project readers why you chose the project you did. What were you hoping to find out from the project?

Prediction or Hypothesis

As soon as you come up with a testable question, you will probably instantly have a hypothesis (prediction) about what the results will be from your testing. Write this down.

Materials and Methods

Once you have come up with a question that you can actually test with materials that you can get easily, you need to figure out how to set up the tests. For example, if you will have a survey for your participants to fill out, get that written up and duplicated. If you will need a chart to write down your test results, get it made. If you take the time to make it look nice, you can include the actual chart or survey in your project write-up.

Results or Data

The results section is where you list the actual numbers (or other data) that you got as you were doing the experiment. You might also include a graph, if your data can be graphed.

Conclusion

In the conclusion you get to tell what you found out from the experiment, or how you interpret your data. This section should be focused on what you learned about your original question and hypothesis.

The Display

To prepare your display, you need to PLAN AHEAD and THINK OF YOUR AUDIENCE. Remember that they weren't there when you did the experiment, so what seems obvious to you will not be obvious to them unless you make it extremely clear.

- ⇒ Ideally, choose a cardboard, "tri-fold" display board. This shape is the most stable and will hold up well.
- ⇒ Once you have written or typed up all of the above sections, be sure you have TITLES for each section that are large and legible (24 point or bigger on the computer). That way if people have questions about some part of your project, they can go right to the section they need to answer their question.
- ⇒ Arrange the sections of the report on the board in a way that is attractive and also logical. The purpose and hypothesis should be easy to see right away. Make it as colorful as you want!

