*(The following information was taken from the website,* [*http://faculty.washington.edu/chudler/fair.html*](http://faculty.washington.edu/chudler/fair.html) *and was written by Lynne Bleeker; Science teacher, science fair organizer and judge.)*

A successful science fair project does not have to be expensive or even terribly time-consuming. However, it does require some planning and careful thought. Projects become frustrating to students, parents and teachers when they are left to the last minute and thus don't have the chance to be as good as they possibly can. You can't rush good science!

**THE FOLLOWING 11 SECTIONS ARE WHAT NEED TO BE DISPLAYED ON YOUR SCIENCE BOARD.**

**1. 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. You will want to write your Title and Background sections **AFTER** you have come up with a good question to study.

**2. 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?

**3. The Question (Or Selecting Your Subject):** Probably the most difficult part of a science fair project is coming up with a good subject to research. I suggest to my students that they:

A. think about WHAT INTERESTS them.
B. think of a TESTABLE QUESTION about the subject.

If you are doing a project about something that interests you, you will likely enjoy the research more and stick with it long enough to get some good data. Remember, you are being a scientist. Scientists go to work each day because they are interested in what they are studying and because they are curious to know the answers to the questions they are researching.

Some of the best science fair projects I have seen have also been the simplest. For example, I had students whose parents bought "off-brands" of cereal. They wondered if those brands were really any different from the name brands. They bought 3 or 4 different brands of the same type of cereal and asked permission to test them with the whole class. They had their peers evaluate them for taste, appearance, and sogginess in milk after 1 minute. They also did a cost comparison. They got a lot of interesting data! (I won't tell you what they found out in case you want to do something similar!) Other students who like sports have done experiments with the equipment for their sport: Do new tennis balls bounce higher than old ones? Do basketballs that are fully inflated bounce better than flatter ones? These projects just require some tennis balls or basketballs, some volunteer "bouncers" and a meter tape or meter stick!There are many good sources for science fair project questions. Projects involving food - tasting, smelling etc - can be very simple to set up yet also very interesting. "Can blindfolded people taste the difference between ...?" You can also get lots of ideas from science trade books.

**4. 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. It's a good idea to write this down before starting, because it may change as you go about your experimenting.

**5. Materials and Methods:** Once you have come up with a question that you can actually test with materials at your disposal, you need to figure out how to set up the tests. 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 with a straight-edge, you can include the actual chart or survey instrument in your project write-up. This really impresses the judges!

**6. Log Book:** This can be done in a small notebook, or students can make their own. Keep good notes of the things you have tried and plan to include even the "didn't-works" and "mess-ups" in your log book. Make sure to put the date and time beside each entry. Be sure to try your experiment several times to be sure you have enough data to make a logical conclusion. If you tell me that one brand of cereal gets soggier in milk but you've only tried each cereal in one cup of milk, I would suspect that maybe it was a fluke; you need lots of "trials" (generally at least 3; the more, the better) for believable data. Remember, too, that you want to keep all of the experimental factors (variables) the same except the one you are testing. In the cereal experiment, it wouldn't be fair to all of the cereals if you left one brand in milk for one minute and tried the others after two minutes or something like that. Again, GET STARTED EARLY on carrying out your project. You can't still be doing the experiment the day before the project is due and expect to have a first-class write-up!

**7. Pictures:** In science fair projects as in life, "a picture is worth a thousand words." Plan to take pictures of the materials you used and of the experiment as it is being carried out. If you get started early, you will have time to print the pictures out and include them as part of your report. You may also display materials you used and display your experiment if it allows for being moved.

**8. Results or Data:** The results section is where you tell your reader the actual numbers (or other data) that you got as you were doing the experiment. (In the tennis ball experiment, this would be a table with the different brands of balls and the actual heights each of them bounced on each trial.) You might also include a graph, if your data lends itself to it. But you do not tell your interpretation of the data - that's for the last section.

**9. Conclusion:** In the conclusion you finally get to tell your readers what you found out from the experiment, or how you interpret your data. Students often like to use this section to expand upon how much they liked doing the experiment or how much they learned from it ... but really this section should be focused on what you learned about your original question and hypothesis. For example, DID cheaper cereals get soggier in milk faster?

**10. Bibliography:** This is where you write down all books, websites, videos, magazines and anything else you used to gather information for your report.

**11. Your Name and Grade:** Your name and grade should clearly be seen on your display board.

**How to Make a Display Board**

Project displays tend to be another source of great frustration to students, teachers and parents ... but they don't have to be! Again, what you need to do is PLAN AHEAD and then 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 display board that is cardboard and a "tri-fold," meaning that it folds into a middle, and two side sections. (There is an example of this in the foyer by the fountain!) This shape is the most stable and will stand up in the science fair display. I strongly advise against the flimsier poster board, which tends to fall down easily and irritates teachers and judges. The best way to make your board stand out is to paint it or cover it in colourful paper.

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 (I'd suggest 24 point or so 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. Be creative! Use lots of colour and excitement to grab people’s attention! All of the above sections can be done on the computer and printed out, or done **NEATLY** by hand.