

## ANDREWS ACADEMY SCIENCE FAIR HELPFUL HINTS

1. Attach your name to the logbook with a "sticky" note or with tape or in pencil for logbook checks. This helps your science teacher identify your logbook. Remove your name from the logbook before presenting your project at the fair.
2. Make sure that all materials on the display are properly secured and are not hazardous. Do not put valuables on the display.
3. Make sure that a title, background information, problem (question), hypothesis, variables (if applicable), procedure, results (including a graph), and conclusion are clearly posted on the display.
4. Place tabs on each section of the logbook. This helps the judges to locate all the important parts of your project. They will not give points for parts they cannot find.
5. Do enough trials to clearly determine the relationship between Independent Variables and Dependent Variables if doing an experiment. (Trials may vary from 3 to 50, depending upon your project.)
6. Draw pictures and diagrams in your logbook wherever possible. They help illustrate what you are explaining.
7. It is sometimes helpful to use pictures from the Internet, newspapers, magazines, etc., in your background information. Write down the sources where you get the pictures.
8. Ask a helper to take pictures throughout your project. Remember not to include peoples' faces.
9. Anything you put on the display must also be in the logbook. Do not add information to the display that is not also in the logbook.
10. The display can contain all the information in the logbook or a summary of the information in the logbook.
11. Make sure your hypothesis focuses on one thing. Avoid testing more than one independent variable in experiments.
12. Keep the colors used in the graphs on the display consistent with the colors used on the graphs in the logbook. Black and white graphs are fine. Computer generated tables and graphs are also fine.
13. Do state the question so that it shows the relationship between the independent variable (IV) and the dependent variable (DV). Ask yourself, "If I do *a*, what will happen to *b*?"
14. Do state your hypothesis so that it clearly shows an IV-DV relationship. For an experiment the hypothesis should be an "If ..., then....." statement.
15. Example: If \_\_\_\_\_ (IV) is altered, then \_\_\_\_\_ will happen (DV).
16. Use the appropriate judging rubric to judge your own project. Ask someone else to judge your project as well. This way you will know what changes to make before turning in your project.

17. Keep an organized logbook but don't worry about mistakes or spills. The judges aren't looking for spotless logbooks, just complete logbooks that contain all the required information.
18. Don't erase or "white out" mistakes in your logbook. Simply put a line through errors and go on.
19. Do not remove pages from your logbook. Put an "X" across the page and move on.
20. State the variables clearly on the display and in the logbook. Give general definitions of IV, DV, and CV, and explain the specific IV, DV, and CV for your project.
21. Acknowledge any help you received from parents, teachers, and others. Do not give names of helpers, group members, or our school's name.
22. Do have a *control* for experiment studies.
23. Seek help from businesses, universities, and other organizations. Some organizations are known to be very helpful for providing free information. Professors at universities are usually happy to provide information to students doing science fair projects. *Remember to make requests early on in the science fair process.*
24. Use correct spelling, grammar, and punctuation on the display. Have someone else check it for you to get a second opinion.
25. Displays should be neat, attractive, and organized. Information on the display may be hand-written or computer generated.
26. Students should understand and be able to explain everything written in their logbooks. If you do not understand it, don't write it.
27. Tables and graphs should be titled, numbered, and accurately labeled. It is fine to use a computer to make tables and graphs.

Be sure to keep a detailed, day-by-day record of your work on your project. Start a logbook right away! Your logbook may be a simple spiral notebook and written in pencil or ink. You can also organize our work in a folder or binder so you can add printed pictures, articles or graphs.

### **Tips for a Top Quality Log Book:**

1. Make sure to write a statement of your problem and your hypothesis
2. Carefully hand-write your logbook
  1. Note: write in your logbook to record everything you do with your project
3. Identify any mistakes by drawing lines drawn through them BUT not erasing them. In this way, the reader can see where you changed your mind, or discovered an error.
4. Include the results of your trials, if you are doing an experiment. Be detailed!

5. Include your thoughts and observations as your research continues.
6. Include explanations of what you believe your results mean or how you interpreted them.
7. Include information that you found at the library, on the Internet, or from magazines, etc. that relate to your research and include the titles, authors, date of publication and pages you read or gathered information from.

**Gather Information** - Begin gathering information about the idea, information that will give you a good understanding so that you become an "expert" about your topic. In other words, you become a detective and your idea becomes your case.

**Research Plan** - Write out a research plan, or outline, that includes:

- what you are intending to do -- your problem, and hypothesis
- the steps involved -- your procedures and list of materials
- what you think might happen -- your pre-research conclusion
- what safety measures you will employ.