

# SAB WORKSHOP III

## Writing the report, building the display and making a winning presentation

Presentation is an important part of your project, so take the time to plan and practice the presentation you will make to the judges.

### **Science Fair Presentation Basics**

Most presentations of science fair projects are made in a poster format. A neat, organized and professional-looking poster will obviously communicate your work better than a sloppy, disorganized one. Do not postpone poster preparation to the last minute.

Professional posters have the same basic subheadings as a scientific paper. These subheadings are: Title, Abstract, Introduction, Methods, Results, Discussion, and Bibliography (Sources).

Follow the fair rules regarding poster size.

### **Title**

The title should be a short, descriptive statement about the project. It should be ten words or less in length and printed in large letters so that people can easily read it from a short distance away. Be scientific and imaginative without getting too fancy with words.

### **Abstract**

This should be a paragraph that summarizes the poster. Brief statements about the purpose, methods used, results and conclusions should quickly tell the reader the overall significance of the project.

### **Introduction (Background Information)**

This section should provide readers with some background information about the project. One should assume that readers have little specific knowledge about the project. The introduction should inform the audience of the purpose of the project, why the project was done (What question(s) were being asked by the investigator?), and provide general information necessary for the reader to understand the project. The introduction should conclude with a statement of the hypothesis that will be tested. This part of the poster usually requires the investigator to use several resources to learn about the subject under investigation, and to find out what other scientists have discovered

about the subject in the past. The investigator provides a bibliography (Source list) at the end of the poster telling readers where the information used came from.

### **Methods**

This is a description of the procedures and materials used in the experiment. Relevant information that was used in setting up the experimental conditions (variables held constant, controls, etc.) should be described.

### **Results**

In this section of the poster, the data gathered during the experiment should be summarized. This is best done in either tables or graphs. Tables and graphs should be titled, axes labeled, and be neat and readable. Mention how many times the experiments were repeated and if statistical analysis was done (where necessary)

### **Discussion**

After reviewing the results of the experiment, the investigator must decide if the hypothesis was supported or disproved. The investigator should express his/her reasons for this conclusion in this section of the poster. Also where necessary, the project should be critiqued looking for possible weaknesses in design or reasons that may have influenced the results or what can be done to improve the work in future.

### **Bibliography**

A list of the sources of information used in the work in alphabetical order should be presented.

### **Acknowledgement:**

Help obtained (equipment, ideas, lab access, chemicals and other resources) should be acknowledged.

**DEMONSTRATION MATERIALS** which illustrate a scientific principle, equipment or materials used, or enable others to retrace your steps "hands-on" will make an exhibit more interesting and help others understand your discovery. Make sure your displays pass the safety check. Place all materials in front of your poster display. If your experiment involves animals, dangerous chemicals or valuable equipment, take photographs to illustrate your work instead. Exhibits will be left in the hall for a few days and examined by many other students and their families. You will not want to risk damage or loss to yourself or others. Exhibit items should present no hazards to observers who may view the display.

### **Written report and log-book:**

Spend time on writing a good and concise report of your work (with introduction, literature review, materials, methods, results with graphs and figures and discussion). Present your report and your log-book with raw data, dates collected, analysis etc. for judges to review. It is not the quantity or the number of pages in your report, but the quality of your work that will catch the judges' attention.

### **Meeting the judges:**

- Greet the judges and introduce yourself
- Tell how you became interested in this topic
- Give some background information about the topic.
- State the purpose of your investigation
- Discuss your review of literature.
- Describe in a step-by-step fashion the procedure you followed for conducting your investigation. Point to sections of your display and refer to charts, graphs, and photographs. If you have equipment on display allow the judges to examine it.
- Explain the results of your experiment and be sure to discuss controls and variables.
- Identify the conclusions that you could logically draw from the experiment.
- Discuss any future plans you may have to continue research or experimentation related to your topic. Include a few statements about any changes you make in your scientific approach during your early investigation.
- Ask the judges if they have any questions. If you don't know an answer say so, and indicate you will look into it. Keep your cool. Be respectful, patient and polite, even if you think the questions are annoying or repetitive.
- Thank the judges for their time and any suggestions they may have offered to improve your project.

Good manners, nice clothes, and enthusiasm for what you're doing will help to impress the judges. It is wise to make a special effort to look neat and well dressed. You are representing your work. Your appearance shows how much pride you have in yourself, and that is the first step in introducing your product, your science project.

Here are some tips:

- Wear nice clothes.
- Be polite and practice good manners.

- Make good eye contact with your judges and be sure to give each judge your attention. Don't just look at one.
- Stand up straight and to the side of your exhibit
- Speak with enthusiasm, clarity, and assuredness
- Don't do anything to distract the judges such as shuffle your feet, chew gum or look at the ground.
- Relax, smile and have FUN.

## Presentation and Judges' Evaluation

Practicing an oral presentation will also be helpful for the science fair. The judges give points for how clearly you are able to discuss the project and explain its purpose, procedure, results, and conclusion. The display should be organized so that it explains everything, but your ability to discuss your project and answer the questions of the judges convinces them that you did the work and understand what you have done. Approach the judges with enthusiasm about your work.

**Judging Information** Most fairs have similar point systems for judging a science fair project, but you may be better prepared by understanding that judges generally start by thinking that each student's project is a regular average project. Then, he or she adds or subtracts points from that. A student should receive points for accomplishing the following:

1. Project Objectives
  - Presenting original ideas
  - Stating the problem clearly
  - Defining the variables and using controls
  - Relating background reading to the problem
2. Project Skills
  - Being knowledgeable about equipment used
  - Performing the experiments with little or no assistance except as required for safety
  - Demonstrating the skills required to do all the work necessary to obtain the data reported
3. Data Collection
  - Using several sources to collect data and research
  - Repeating the experiment to verify the results
  - Spending an appropriate amount of time to complete the project
  - Having measurable results
4. Data Interpretation
  - Using tables, graphs, and illustrations in interpreting data
  - Using research to interpret data collected
  - Collecting enough data to make a conclusion
  - Using only data collected to make a conclusion
5. Project Presentation (Written Materials, Interviews, Displays)

- Having a complete and comprehensive report
- Answering questions accurately
- Using the display during oral presentation
- Justifying conclusions on the basis of experimental data
- Summarizing what was learned
- Presenting a display that shows creative ability and originality
- Presenting an attractive and interesting display

### **Do's and Donts at the Fair**

**Do** bring activities, such as a book to read, to keep yourself occupied at your booth. There may be a lengthy wait before the first judge arrives, and even between judges.

**Do** become acquainted with your neighboring presenters. Be friendly and courteous.

**Do** ask neighboring presenters about their projects, and tell them about yours if they express interest. These conversations pass time and help relieve nervous tension that can build when you are waiting to be evaluated. You may also discover techniques for research that you can use for next year's project.

**Don't** laugh or talk loud. This may affect the person nearby who is being judged.

**Don't** forget that you are an ambassador for your school. This means that your attitude and behavior influence how people at the fair think about you and the other students at your school.

GOOD LUCK!!

Prepared for the SAB by Harish Khandrika