

Taken from the *Science Day Standards* ( <http://ohiosci.org/sds.htm> )

## Research Notebook

Students doing research projects are required to keep a bound research notebook from the very beginning of gathering ideas and references from which information will be obtained to write the research plan and eventually write a research report. Record the date on the page every time you record something in the notebook. When you begin your experimentation, be sure to record experimental setups and conditions, observations, measurements, calculations, graphing results, discussions of the results and conclusions. Include other records such as photographs and notes of discussions with your supervisor, advisor or mentors. Your judge may ask to see the records you have of your research.

See this link for What makes a great science lab notebook:

<http://www.sciencebuddies.org/mentoring/project-laboratory-notebook.pdf>

## Research Report

**Each project must include a research report** covering in detail all of the work, references consulted, and acknowledgment of assistance received. The experimental data, statistics, notes, and computations should be recorded in a research notebook. The report should include a description of the work, the results, and the conclusions. This report should follow an accepted form of technical reporting and be checked for correct punctuation, spelling, and grammar preferably by an English teacher. If possible, the report should contain illustrations in the form of photographs, sketches, graphs, data tables or charts that contribute to the effectiveness of the material presented. The Ohio Academy of Science recommends the following format for sections of the research report:

- Title page including the date and name of student
- Table of contents [optional for reports fewer than 10 pages]
- A single paragraph abstract with project title and name of student (250 words or fewer)
- Introduction-(background, problem and hypothesis or technological design statement)
- Methods and materials used to study problem
- Results including an analysis of collected data with graphs, tables, photographs and diagrams to illustrate investigation
- Discussion including conclusions and implications for further research.
- References or Literature Cited. **Do not use the term bibliography.** Technically a bibliography is an exhaustive list of perhaps thousands of references on a limited topic and is not used in most scientific reports.