

Seton Science Fair Project

Getting Started:

1. **Select a topic:** Get an idea of what you want to study or learn about.
 - a. Ideas should come from things in your areas of interest. A hobby might lead you to a good topic. What factors influence some aspect of this topic? Can any of these factors be altered? If so, will something change? Is this of interest / importance to you?
 - b. Listen to current news reports. Is there an issue that is of concern to the general public or to a specific group that interests you? Is there anything changeable that could potentially influence this issue?
 - c. Is there a method of doing something that interests you? Is there a technique that could be improved upon? Will an improvement in technique affect you or the public at large?
 - d. Is there a process or piece of equipment that could be modified to show an improvement?
 - e. Pick a question or problem that is not too broad and that can be answered through scientific investigation. Remember- your experimentation must be completed by the beginning of December!
2. **Consider different types of projects:**
 - a. Scientific Method Investigation – experiments with independent variables and control set up.
 - b. Engineering Design Project- design something for which there is a need, evaluate and modify it.
 - c. Computer Systems Design Project
 - d. Mathematics Project- use proofs, solve equations
3. **Research your topic:**
 - a. Use books, internet sources, etc to learn more about your topic. Learn everything you can about the topic in general
 - b. Ask “What is the basic scientific principle that is involved with this idea?”
 - c. Find out if there are unanswered questions or concerns that you might be able to investigate with your project? Investigate the factors (environmental or manmade) that can possibly influence this topic.
 - d. Talk to experts: Ask professionals who work in the field of your topic what questions or problems could be investigated experimentally. Ask what issues would, if addressed experimentally, could be solved and be of help to them in their work.
 - e.
4. **Examine your personal resources:**
 - a. Look at your personal resources at home or at school to see what equipment is available for your use for investigating this issue experimentally.
 - b. Sign up an adult sponsor to work with you throughout your experiment. Get them to commit their help and advice for your project. You will need them to discuss details of your project with you, and help you to solve practical problems along the way. Consider them your cheerleader – do not ask them to do your project for you!
 - c. Consider enlisting the help of interested adults with expertise with the topic you are considering. **These additional adults do not have to be your adult sponsor.**
 - d. Be practical: consider materials and equipment available to you, evaluate the time allowed for the completion of the project Look at your family and school commitments (**Project should be completed by the 1st week of December**).

- e. Ask your adult sponsor to help you decide what question can realistically be answered in your science fair project. If the question posed is important but is too broad, consider addressing a small piece of the puzzle for your science fair project. Leave the bigger question for another scientist.

5. Prepare a Bibliography

- a. List at least 5 good sources, (2 of which are not internet sources).
- b. Follow MLA format for Bibliography

6. Use a Project Data Book

- a. Organize your ideas and what you have learned through your research. Narrow your focus to a particular area of this project.
- b. Decide finally what question you would like to ask. Write this question in your Project Data Book (log book).
- c. List key factors that might affect the outcome of an experiment designed to answer the question chosen.