

Project Research

Once you have completed the topic research and selected a topic, you are ready to begin your project research.

This research is generally more thorough than topic research. Project research is the process of collecting information from knowledgeable sources, such as books, magazines, software, librarians, teachers, parents, scientists, or other professionals. It is also data collected from exploratory experimentation. Read widely on the topic you selected so that you understand it and know about the findings of others. Be sure to give credit where credit is due and record all information and data in your journal.

How successful you are with your project will depend largely on how well you understand your topic. The more you read and question people who know something about your topic, the broader your understanding will be. As a result, it will be easier for you to explain your project to other people, especially a science fair judge. There are two basic kinds of research—primary and secondary.

PRIMARY RESEARCH

Primary research is information you collect on your own. This includes information from exploratory experiments you perform, surveys you take, interviews, and responses to your letters.

Interview people who have special knowledge about your topic. These can include teachers, doctors, scientists, or others whose careers require them to know something related to your topic. Let's say your topic is

about the speed of dinosaurs. "Who would know about dinosaurs?" Start with your science teacher. He or she may have a special interest in dinosaurs or know someone who does. Is there a museum with dinosaur exhibits nearby? Owners of rock and mineral shops may have an interest in fossils and could provide information. Contact the geology department of a local university.

Before contacting the person(s) you want to interview, be prepared. You can do this by making a list of questions that you want to ask. You can even discuss what you know about your topic with someone who knows nothing about it. In so doing, you will be forced to organize your thinking and may even discover additional questions to add to your list. Once your list is complete, you are ready to make your call. Simple rules of courtesy, such as the following, will better ensure that the person called is willing to help.

1. Identify yourself.
2. Identify the school you attend and your teacher.
3. Briefly explain why you are calling. Include information about your project and explain how the person can help you.
4. Request an interview time that is convenient for the person. This could be a telephone or face-to-face interview. Be sure to say that the interview will take about 20 to 30 minutes.
5. Ask if you may tape-record the interview. You can get more information if you are not trying to write down all the answers. It

may be that the person is free when you call, so be prepared to start the interview.

6. Be on time, and be ready to start the interview immediately. Also, be courteous and end the interview on time.
7. Thank the person for the time given and the information provided.
8. A written thank-you note should be sent after the interview, so be sure to record the person's name and address.

You may write letters requesting information instead of interviewing, or write letters in

addition to interviewing. Check at the end of articles in periodicals for lists of names and addresses where more information can be obtained. Your librarian can assist you in locating current periodicals related to your topic. If your project deals with a household product, check the packaging for the address of the manufacturer. Send your letter to the public relations department. Ask for all available printed material about your topic. Send your letter as soon as possible to allow time for material to be sent. You can use a form letter similar to the one shown here to make it easier to send it to as many different people and organizations as you can find.

Lacey Russell
231 Kids Lane
Woodlands, OK 74443

August 31, 2005

The Dial Corporation
15101 North Scottsdale Road
Station 5028
Scottsdale, AZ 85254

Dear Director:

I am a sixth-grade student currently working on a science project for the Davin Elementary Science Fair. My project is about conditions affecting bacterial growth. I would greatly appreciate any information you could send me on the "anti-bacterial" properties of your product. Please send the information as soon as possible.

Thank you very much.

Sincerely,

Lacey Russell

SECONDARY RESEARCH

Secondary research is information and/or data that someone else has collected. You find this type of information in written sources (books, magazines, and newspapers) and in electronic sources (CD-ROM encyclopedias, software packages, or on-line services, such as the Internet). When you use a secondary source, be sure to note where you got the information for future reference. If you are required to write a report, you will need the following information for a bibliography or to give credit for any quotes or illustrations you use.

Book

Author's name, title of book, place of publication, publisher, copyright date, and pages read or quoted.

Magazine or periodical

Author's name, title of article, title of magazine, volume number and date of publication, and page numbers of article.

Newspaper

Author's name, title of article, name of newspaper, date of publication, and section and page numbers.

Encyclopedia

Title of article, name of encyclopedia, volume number, place of publication, publisher, year of publication, and page numbers of article.

CD-ROM encyclopedia or software package

Name of program, version or release number, name of supplier, and place where supplier is located.

Documents from on-line services

Author of document (if known), title of document, name of organization that posted document, place where organization is located, date given on document, on-line address or mailing address where document is available.

USE YOUR RESEARCH

Now you are ready to use the project research information and data collected to express the problem, propose a hypothesis, and design and perform one or more project experiments. The project research will also be useful in writing the project report. The following chapters, 6 through 9, guide you step-by-step through a sample project from start to finish. You may want to read these chapters more than once and refer back to them as you progress through your project.