

## Prepare for science fair

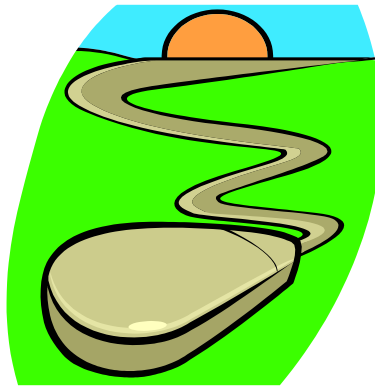
Looking for a unit that will quickly get students on task and allow them to use science process skills and the Internet? Preparing your students for a science fair project will accomplish all of the above. I use computers and the Internet to help students prepare, research, carry out, and present their projects.

Students work in pairs at five classroom computers with online connections. In preparing students to do their projects, I introduce them to a web browser program preset to open up to a homepage I designed with Claris Homepage. This homepage displays links that I have found useful in teaching the science fair process (see Resources).

Because this is typically the first opportunity my students have at using a web browser, I take a very structured approach. I prepare a corresponding worksheet, *How to Do a Science Fair Project*, that guides students step by step to open the web browser, click on the links, read the material, view the photographs, and answer questions at each of the websites (see next page). In this way, students learn how to use the software while also gathering information on doing science fair projects. One third of the class works on the Internet, another third watches the video "How to Prepare a Science Fair Project," and the remaining third works in

pairs on a worksheet I designed to correlate with the handbook accompanying the video.<sup>1</sup> As students rotate through the computer, video, and handbook stations, they learn through three different approaches.

Next, I assign a second worksheet on science fair topics and ideas that corresponds to different links on the same homepage. These sites highlight completed projects and offer lists of topic questions. While some



students work on the computers, others look for project ideas in classroom books and resources. After completing the online overview of topics and the hard-copy search, students generate a list of possible science fair topics.

Students also become proficient in conducting library research on their chosen topics. They use InfoTrac to look through periodical listings, Catalog Plus to search for books in local libraries, and CD-ROM encyclopedias to gather information. Once students have gathered their research materials, they use word processing programs to write

literature reviews and research papers on their topics. After students complete their experiments, they return to the computers again, using a spreadsheet program to organize, graph, and analyze the raw data.

After the topics have been chosen, the library research completed, and the experiments done, students use my homepage one more time with a worksheet titled Presentation (see next page). Again, one third of the students work on the worksheet at the computers, another third uses the handbook to answer worksheet questions, and the remaining students view projects from last year, on display in the classroom. Many of the previous year's science fair winners are invited to class to give advice on the presentation and procedures in science fairs.

I have found that using computers motivates my students to produce high-quality research papers, backboards, and presentations. Some of the students have even won at the county level science fair. Our next challenge is publishing these winning projects on the Internet.

### Reference

1. *How to prepare a science fair project*. 1993. 26-minute videotape. Catalog #10690VA, \$99. United Learning, (800) 424-0362.

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## How to do a science fair project

Start by double-clicking on the web browser program icon. A homepage titled "Science Fair" will appear onscreen. Find the link "Steps to Prepare a Science Fair Project" and click on it. Read each step and then answer the questions below.

1. How many steps are there to doing a science fair project?
2. List the steps and write a sentence describing each one.

Click on the "Back" button to return to the homepage. Find the link "Practical Hints" and click on it. Read the hints and answer the questions below:

3. How many hints are listed?

4. List any four of the hints on your sheet of paper. Click on the "Back" button. Find and click on the link "Outstanding Projects." Click on the link "1996."

- Find the project done by Julie Burris and click on the word "Click" near her project.
5. What happened when you clicked on "Click"?
  6. List all of the titles you see on her backboard.
  7. What is her question?
  8. What is her hypothesis?
  9. Does her conclusion agree with her hypothesis?
- Click on the "Back" button to return to the homepage.

## Presentation

Click on the link "Science Fair Workshop." Read the text and answer the questions below.

1. What type of first impression do you want to make on science fair judges or viewers?
2. What four things should your display do?
3. How can you use colors to your advantage on your backboard?
4. What should the project title do?

5. List the information that should be on each panel of a three-sided exhibit. Use the diagram below.
6. List two ways to make your display look professional.
7. List two problems you might run into.
8. List three things you should do during your oral presentation.
9. List all items that your written report should contain.

### Resources

- Steps to Prepare a Science Fair Project: [www.isd77.k12.mn.us/resources/cf/steps.html](http://www.isd77.k12.mn.us/resources/cf/steps.html)
- Science Fair Homepage: [www.stemnet.nf.ca/~jbarron/scifair.html](http://www.stemnet.nf.ca/~jbarron/scifair.html)
- Science Fair Workshop: [www.eduzone.com/tips/science/showtip4.htm](http://www.eduzone.com/tips/science/showtip4.htm)
- Project listings: [www.usc.edu/CMSI/CalifSF/History/1996/By\\_Category.html](http://www.usc.edu/CMSI/CalifSF/History/1996/By_Category.html)
- Topic sheets: [www.eduzone.com/tips/science/second.htm](http://www.eduzone.com/tips/science/second.htm)
- Project resource guide: [www.ipl.org/youth/projectguide/](http://www.ipl.org/youth/projectguide/)
- Mentorship program: [www.usc.edu/CMSI/CalifSF/Advisor\\_Program/](http://www.usc.edu/CMSI/CalifSF/Advisor_Program/)
- Practical hints: [www.scri.fsu.edu/~dennisl/CMS/special/sf\\_hints.html](http://www.scri.fsu.edu/~dennisl/CMS/special/sf_hints.html)
- Outstanding projects: [www.oxnardsd.org/campus/frem/sci/sfp.html](http://www.oxnardsd.org/campus/frem/sci/sfp.html)