



Science Fair Background Research Plan

Background research is necessary so that you know how to design and understand your experiment. To make a **background research plan** -- a roadmap of the research questions you need to answer -- follow these steps:

1. Identify the keywords in the question for your science fair project. Brainstorm additional keywords and concepts.
2. Use a table with the "question words" (why, how, who, what, when, where) to generate research questions from your keywords. For example:

What is the difference between a series and parallel circuit?

When does a plant grow the most, during the day or night?

Where is the focal point of a lens?

How does a java applet work?

Does a truss make a bridge stronger?

Why are moths attracted to light?

Which cleaning products kill the most bacteria?

Throw out irrelevant questions.

3. Add to your background research plan a list of mathematical formulas or equations (if any) that you will need to describe the results of your experiment.
4. You should also plan to do background research on the history of similar experiments or inventions.
5. Network with other people with more experience than yourself: your mentors, parents, and teachers. Ask them: "What science concepts should I study to better understand my science fair project?" and "What area of science covers my project?" Better yet, ask even more specific questions