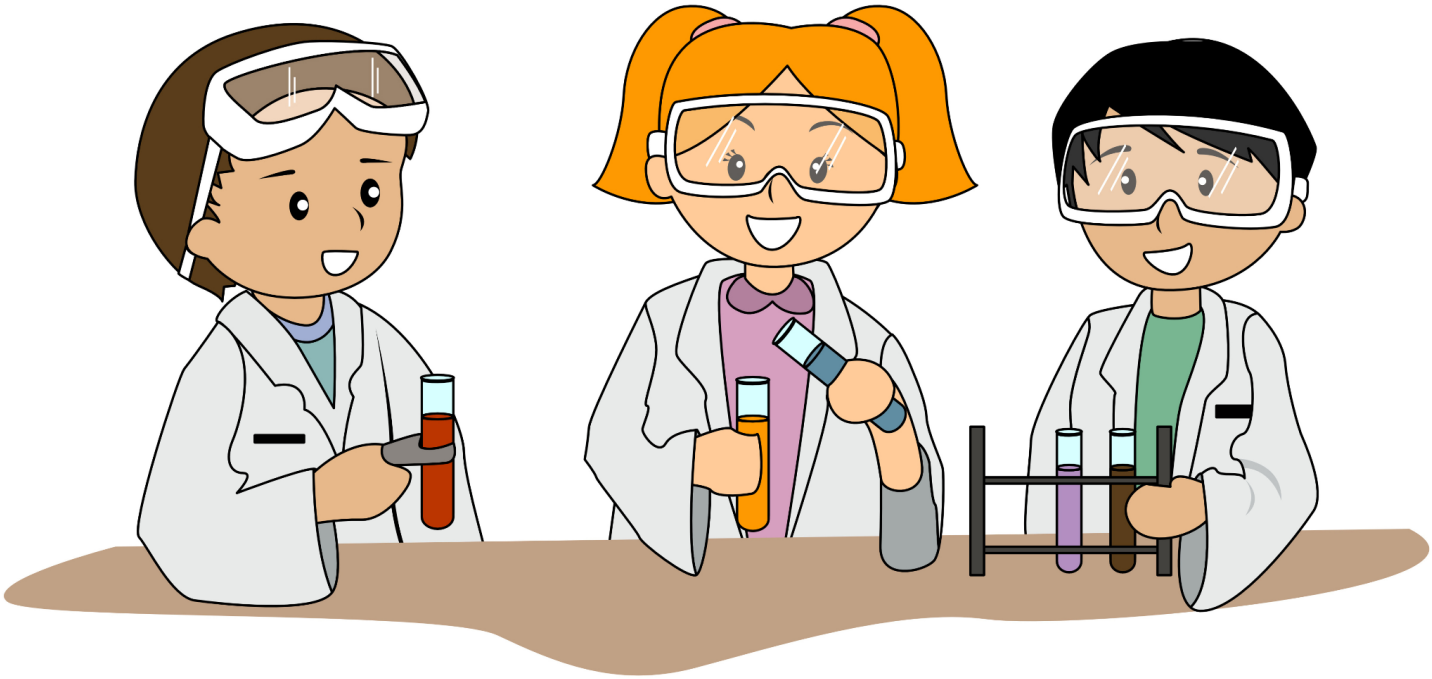
# STFX Science Fair

## Scientific Method Project Information



# Scientific Method Project Information

1. **Choose a topic**. Be sure it interests you. Don't pick one because you think it will be easy. Talk it over with your parents and when you have decided, inform your teacher.

2. **State your purpose as a question**. What is it that you want to find out by doing this project?

3. **Research your problem.** Look at any books/websites that might help you, make observations by simply looking at things, talk to people, and find out as much as possible about your topic. Record all information, including sources, in your Project Notebook.

4. **Form a hypothesis.** What do you ***think*** is going to happen? Based on what you know or found out from step #3, what do you ***think*** the results of your experiments will be? After doing the experiments, it may turn out that your hypothesis was wrong. It is okay if this happens.

5. **Plan your project.** How will you test your hypothesis? What experiments will you do? How will you measure the results? Keep your Project Notebook close by so you can journal everything you do and what happens.

6. **Collect all your materials.** Find a place to keep things where others won't bother them. Let family members know what you are doing so they don't throw your materials away by mistake.

7. **Conduct your experiments.** Remember, the more times you do an experiment the more reliable and accurate the results will be. Do each experiment at ***least three times*** and get an average of the results for your graph. Use something to measure your experiments: a ruler or yardstick if you are measuring distance, a clock to measure time, etc. Check the measurements to be sure you are correct.

8. **Record your data in your Project Notebook.** As you do your experiments, you will want to write down what you saw or found out. Organize this information in an orderly manner. Put the date, time, and any other useful information. Write your measurements clearly.

9. **Draw conclusions.** What did you learn from your experiments? Have you proved or disproved your hypothesis? You made a guess about what you thought would happen. Now tell what really happened. You don't lose points if your hypothesis turned out to be wrong.

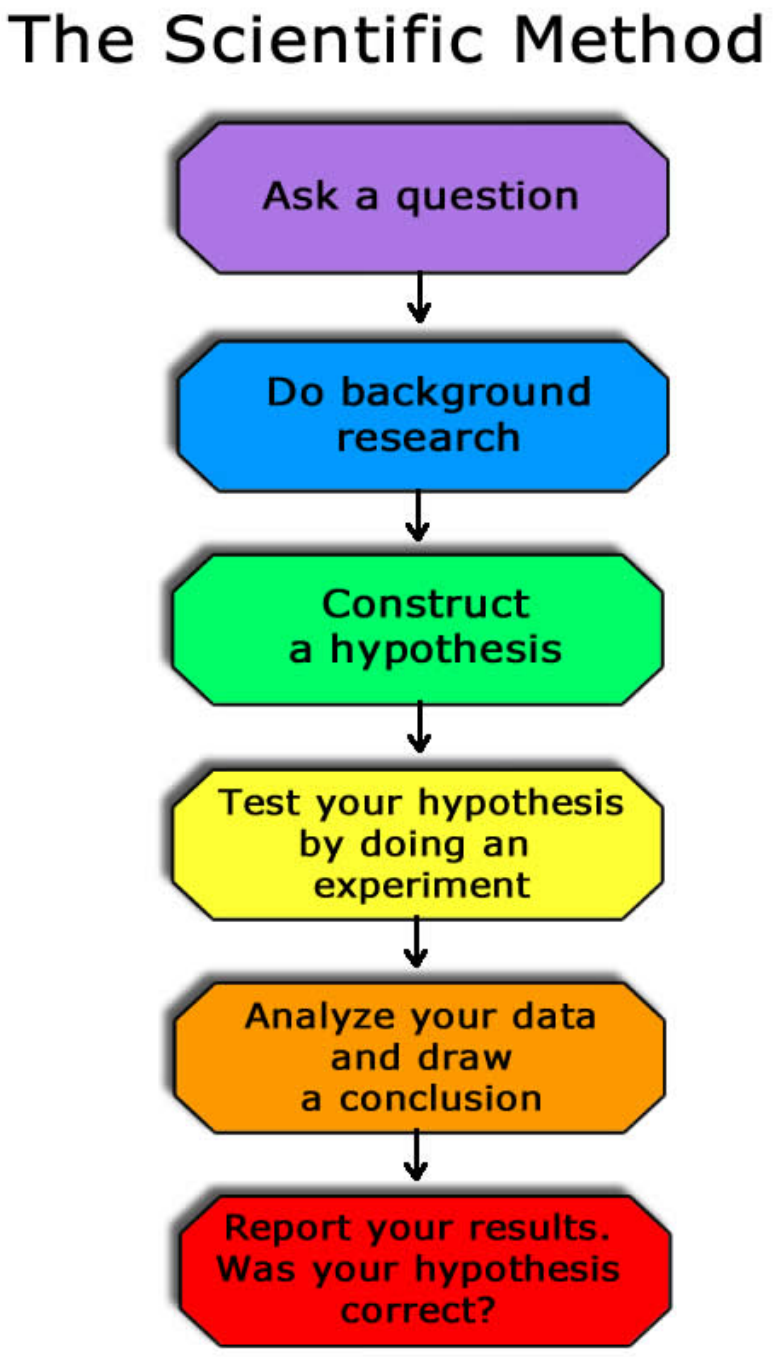
10. **Prepare your titles, charts, graphs, drawings, and diagrams.** Make them large enough to see, neat, and colorful. (See the picture on the next page for an example.)

11. **Construct your science fair display.** Get your cardboard display board from your teacher so you can show all your work and have your hands free to point to sections when you give your presentation.

12. **Prepare and practice your presentation for the judge(s).** Be able to tell about what you used, what you did in your experiments, and what you found out. Know it well enough that you don't have to read it from the display.

13. **Plan a timeline so you don't leave everything until the last minute.** If you need help, tell your parents and your teacher, the earlier the better.

14. **Relax and Enjoy yourself.** You will do a **GREAT** job!



# SCIENCE METHOD PROJECT SUMMARY TEMPLATE

Topic:_____
_____

Question (Statement of Purpose)
(*Written as a Question*)

Hypothesis: If……, then I think…..

Materials I will need:

Procedures: (Detailed Steps)

# Creating a Scientific Method Display Board

**Have a good hypothesis.** You should always start your hypothesis out with "I think that..." Include an "If...then..." statement. It's one that shows a cause and effect relationship. For example, "I think that if a plant receives light filtered through a green piece of plastic, then it will produce more leaves."

**Make your board visually pleasing and easy to read.** Make sure your lettering is even-spaced and all items are spelled correctly. Use contrasting colors, and limit the number of colors used to make your board less "busy." Display photos representing the procedure that you went through and your results. Use computer-generated graphs and charts if you can. If you are using multiple charts, place them on top of each other so that the top chart can be lifted to reveal the ones below.

**Balance the arrangement of materials on the display board.** This means evenly distributing the materials on the board so that they cover about the same amount of space on each panel. Attach your papers with rubber cement, double-sided tape, or scrapbooking glue dots. School glue causes paper to wrinkle. Don't leave large empty spaces on the display board.

**Display your models (if any), report, copies of your abstract, and your project notebook on the table in front of your board.**

**Keep any electric cords invisible by having them behind your display board.**

**Don't forget that you are an ambassador for your learning.** This means that your attitude and behavior influence how people at the fair, including judges, think about you. ***Always be the best you that you can be!***