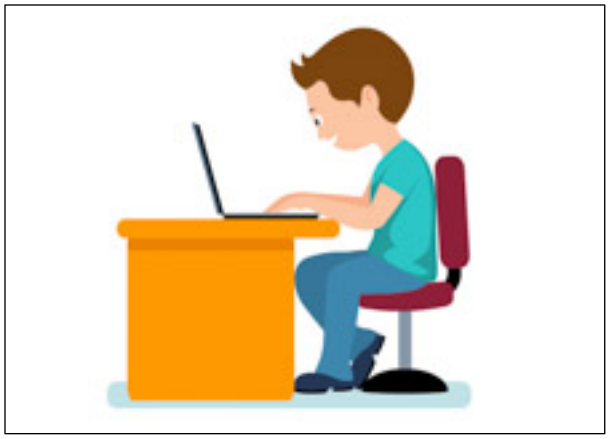

Part 1: The Science Journal

The Science Journal is the first part of a successful science fair project. This is where ALL ideas, thoughts, notes, drawings or sketches, research, information, results and data are written. Everything that happens during your science fair project should be recorded here—the more detail the better! Remember to write a date and time on every page. The science journal will be placed in front of your display board for the judges to read.

It is okay for there to be some mistakes—just be as neat and thorough as possible. When you make a mistake, don't erase. Just put a single line through it so that you can read your ideas again. When you are finished, Proofread Everything Carefully!

STEP 1: State the Research Question
What question are you trying to answer? Ask a question that you can answer through observation or experimentation. What are you trying to discover?

STEP 2: Background Research
This section is optional for students in grades K-2.
This section should be used to help you make a hypothesis. For grades 3-4 include 10 to 15 facts and cite 1 to 3 sources (only 1 may be from the internet.) For grades 5-6, include 20 to 30 facts, using 3 to 5 sources (not all of them may be internet sources.)
Collect facts that are related to your research question. Remember to put the facts in your own words. Under each fact on the list, write down the information about where you found the fact. This information will be used to write your bibliography.
Once you have gathered your facts, organize them in an order that makes sense. Write in paragraphs and include topic and closing sentences for each group of ideas.

STEP 3: Write a Bibliography
Make a list of the sources you used. Be sure to include author, title, publication date.

STEP 4: Make a Hypothesis.
A hypothesis is a statement that predicts the outcome of your experiment, based on what you already know, and proposes an explanation that can be tested. Describe the Independent (manipulated) variable, the dependent (measured) variable, and the controls. State the hypothesis in the form
If _____, then _____, because _____.

STEP 5: List the materials you will use to do the experiment. A common format is to list them items in the order in which you will use them.

STEP 6: Describe the Procedure
The procedure describes the experiment in a step-by-step sequence. It may help to think of the procedure as a recipe, in which every step is clearly explained. How will the materials be measured, and how will they be used. Any other person should be able to follow the procedures you write and get the same, or similar, results.

STEP 7: Perform the Experiment
Follow the procedures exactly, conducting the experiment at least 3 times. If you realize that the new steps or materials are needed, you may go back and revise Section 7, but do not change the hypothesis. Then repeat the procedures at least 3 times again.

STEP 8: Record the Results
Record your observations before the procedure begins and after each step. Record details results of each test on a data table. Results should always be explained in a written format first, followed by graphs, charts and tables. Make sure to document the procedure with photographs.

STEP 9: Make a Conclusion
After collecting the data, make a conclusion. According to your results, was your hypothesis proven or disproven? (Remember, it is okay for your hypothesis to be disproven.) Was there anything in the experiment that you would change if you performed a second test?
How could you change or expand this experiment if you were going to do it again? What did you learn? How could this information be used to help people or make the world be a better place?

STEP 10; Write an Abstract (recommended for grades 5-6)
An abstract is a one-page summary of your project. The abstract is meant to give a quick explanation of your project to someone before they start to examine your display. Include research question, hypothesis, procedures, results, and conclusion in a shortened form.

STEP 11: Acknowledgements (optional)
Thank the people who helped you with your project.