The Basic 5 Steps of a Science Project

1. **Question**: Ask a question which can be answered by observation and/or experimentation.

2. **Hypothesis**: State your hypothesis. Students will predict what the outcome will be based on their experiences and/or information collected from available resources.

3. **Procedure**:
   
   A. **Material**: List every item which is needed to do the experiment. Include equipment as well as materials.
   
   B. **Method**: List a step-by-step sequence of exactly what is done.

4. **Results**: Display a complete record of your observations and/or results. Note any accidents, mistakes, unusual or unexpected observations and additional information which surfaces. Use graphs and/or charts to present your data.

5. **Conclusion**: Using the data from your results, answer the question asked in Part 1. Then, note any additional comments, explanations of why the results did or did not match your hypothesis. Also note any information, which you learned from your research which would be relevant (include a **Bibliography**).

☠️ Submit a **Notebook** with your project, which will present the Basic 5 Steps in more detail and the **Bibliography**. Although some or all of the information may be displayed on your exhibit, it is strongly recommended that you have a **Notebook** as part of your project.
Written Project Plan

NAME: ___________________________  PROJECT TITLE: ___________________________

________________________________  __________________________________

1. Investigative Question(s) (question to be answered) What is the purpose of your experiment?

2.a. Hypothesis based on Investigative Question, written in the future tense.

2.b. 'If...then...' statement of the Hypothesis
3. **Procedure:**

**Materials Needed (listed vertically)**

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**Method** (numbered step by step instructions)
4. Identify the "Control" (conditions or materials that stay the same) for your experiment

5. Identify the "Variable" (conditions or materials that change; only 1 change at a time) for your experiment

6. Attach Sample Data Sheets you will use to record your data (sketches, log, chart, etc.)

7. Brainstorm ideas on how to graph your data
### Science Fair Judging Rubric

<table>
<thead>
<tr>
<th>Judging Rubric</th>
<th>Project Title:</th>
<th>Total Points:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Part I Scientific Procedure:</strong></td>
<td>IMPRESSIVE</td>
<td>ADEQUATE</td>
</tr>
<tr>
<td>Clear &amp; specific Question</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Clear &amp; specific Hypothesis</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Complete &amp; thorough Method (Step by step)</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Complete &amp; thorough Data (logs, graphs, tables, photos...)</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Conclusion supported by Data</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Conclusion relevant to Hypothesis</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td><strong>Part II Originality:</strong></td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Original topic or approach</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td><strong>Part III Simplicity:</strong></td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Appropriate Materials &amp; Construction</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Clarity of overall project</td>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>

Materials in this packet have been adapted from resources found at [http://www.accessexcellence.org/LC/TL/scifair/](http://www.accessexcellence.org/LC/TL/scifair/)
For almost every science fair project, you need to prepare a **display board** to communicate your work to others. In most cases, you will use a standard, three-panel display board that unfolds to be 36” tall by 48” wide.

**Organize your information like a newspaper** so that your audience can quickly follow the thread of your experiment by reading from top to bottom, then left to right. Include each step of your science fair project: question, hypothesis, background research, procedures, and so on.

**Use a font size of at least 16 points** for the text on your display board, so that it is easy to read from a few feet away. It's OK to use slightly smaller fonts for captions on picture and tables.

**The title should be big and easily read from across the room.** Choose one that accurately describes your work, but also grabs peoples' attention.

**A picture speaks a thousand words!** Use photos or draw diagrams to present non-numerical data, to propose models that explain your results, or just to show your experimental setup. But, don't put text on top of photographs or images. It can be very difficult to read.

Information adapted from [http://www.sciencebuddies.org/science-fair-projects/project_display_board.shtml](http://www.sciencebuddies.org/science-fair-projects/project_display_board.shtml)