Creating Your Science Fair Display

- The display should be mounted on a display board that can sit on top of a table and stand up by itself.
- The display must fit into a space 36 inches high and 48 inches wide.
- Your display should be easy to read, neat, and organized. Please see the sample display layout for suggested organization.
- Use color, photographs, drawings, graphs, tables, and charts to emphasize your findings and draw viewers' interest.
- Your display should include all the sections listed below.

Sections to include in your Science Fair Display

1. **Title** *is a statement describing an investigation.*
   - The title of your project should be a complete sentence.
   - The title should state how the independent variable and the dependent variable in your investigation are related.
     Sample: "The Effect of the Changes in the independent variable on the dependent variable."
2. **Question** *describes the focus of the investigation.*
   - You question should be testable.
   - Write your question so someone else can easily understand what you are asking.
3. **Hypothesis/Prediction** *is a statement of the relationship of an independent and dependent variables to be tested in an investigation; it predicts the effect that the changes purposely made in the independent variable will have on the dependent variable. It may or may not include a justification.*
   - Your hypothesis/prediction should make a statement about what you think will happen.
   - Your hypothesis/prediction should relate the independent variable to the dependent variable.
4. **Experimental Design**
   - Using the five components below, describe the design of your investigation.
     - **Independent variable:** *the variable that is changed on purpose by the experimenter*
     - **Dependent variable:** *the factor or variable that may change as a result of changes purposely made in the independent variable*
     - **Constant/control variables:** *factors in an investigation that are kept the same and not allowed to change or vary*
     - **The control group:** *the part of an experiment that serves as a standard of comparison; a control is used to detect the effects of factors that should be kept constant, but which vary; the control may be a "no treatment" group or an "experimenter selected" control*
     - **Number of repeated trials:** *the number of times that a level of the independent variable is tested in an investigation or the number of objects or organisms tested at each level of the independent variable*
5. **Procedure**
   - Describe the steps you followed to complete your investigation.
   - Write the steps in the order you completed them.
   - Check the procedure carefully for accuracy, ensuring that a stranger would be able to follow your procedure if you gave it to them.
   - If you are using part of a procedure from your textbook or from the teacher, you may reference that procedure instead of re-writing it.
6. **Results**

- Include at least one data table and one graph to represent your data. In addition, other representations of data may be used to show results.

  Data Table
  - o Give your data table a title.
  - o Make a table containing vertical columns for the independent variable and dependent variable.
  - o Subdivide the column for the dependent variable to reflect the number of trials.
  - o Order the values of the independent variable, preferably from smallest to largest.
  - o Record values of the dependent variable.
  - o Calculate the average results of each trial and record the values.
  - o Use correct units of measurement.

  Graph
  - o Give your graph a title.
  - o Draw and label the *x* and *y* axes of the graph. Place the independent variable on the *x*-axis, and the dependent variable on the *y*-axis.
  - o Determine an appropriate scale for the *x* and *y* axes; subdivide the axes.
  - o Use correct units of measurement.
  - o Provide a legend.
  - o Decide the most appropriate form to plot the data (line, bar, or pie graph)

7. **Discussion**
   - Write a paragraph summarizing the results in words.
   - Summarize data trends on the graph/table.
   - Write a second paragraph including the trends or patterns in your results.
   - Write a third paragraph that describes the science knowledge that supports your results.
8. **Conclusion**
   - Restate your question.
   - State a claim on whether the hypothesis/prediction is supported by evidence.
   - State your most important result.
   - Give an explanation that relates your evidence to something you have learned about science.
   - Provide suggestions for further investigations based on your results.
9. **Literature Cited:** *If you referenced any sources, such as books, articles, or websites, list them in this section with the title, author, year, and URL (if website).*
10. **Oral Presentation**

    Effective communication of project including:
    - Relating scientific concepts to project
    - Describing design principle
    - Explaining data analysis
    - Discussing future studies