



EXPERIMENTAL PROJECT

DEVELOPING A SCIENCE FAIR EXPERIMENTAL PROJECT USING THE SCIENTIFIC METHOD

For Kindergarten through 5th Grade

Conduct an experiment using ***The Scientific Method***. It includes asking a question, doing some preliminary research, making a hypothesis, planning and conducting your experiment, and analyzing your results.

I. PROBLEM

State the problem – one sentence in the form of a question. Choose a topic in which you are interested in learning more about.

II. PRELIMINARY RESEARCH

Research, read, watch science videos, contact resource people who may help. Incorporate prior knowledge.

III. HYPOTHESIS: Form a hypothesis as a one-sentence statement.

The hypothesis is an educated guess (your best guess) based on your preliminary research.

IV. EXPERIMENT

- A. Materials:** Plan and collect the materials you will need for your experiment. It is best to borrow, make, or use inexpensive materials.
- B. Procedure:** Plan the steps of your experiment carefully. Conduct your experiment.
- C. Observe and record data:** Plan how you will record your data. Record what happens during your experiment.
- D. Results:** Summarize findings in the form of data tables, graphs, and drawings. Write an explanation of your findings.

V. CONCLUSION

The **conclusion** answers the hypothesis. What did you learn from your experiment? Was your hypothesis proven? Why or why not?

ELEMENTARY EXPERIMENT

WRITTEN REPORT CONTENT

Kindergarten through 5th Grade

★ **TITLE PAGE**

See *Written Report Format* on next page.

★ **PURPOSE**

In three sentences or less, tell why you did your science project on the topic you chose.

★ **ACKNOWLEDGEMENTS**

In one or more sentences, say “Thank You” to those who have helped you with your project. You should include those who gave you guidance, materials and the use of facilities or equipment.

★ **TABLE OF CONTENTS**

List each of the following sections and the page numbers for each. Type the page number at the bottom of each page after you have finished the final copy of your report.

★ **PROBLEM**

State the problem in the form of a question. The problem is one sentence long and specific. Your page numbering begins here.

★ **PRELIMINARY RESEARCH**

This part of your report has information that was found by other scientists and relates to your topic.

★ **HYPOTHESIS**

State your best guess for answering the question before you have performed an experiment. The hypothesis is one sentence long.

★ **EXPERIMENT**

The experiment is used to test your hypothesis.

MATERIALS

List the materials you used.

PROCEDURE

List the steps of your experiment. Diagrams are helpful in this section. Do not use the words “I” or “you”.

DATA

Show what you observed during the experiment. Include measurements you made. You may also use drawings to help show what you observed.

RESULTS

The results are a summary of your data. The results section of your paper is organized into graphs and charts. This is where you tell about your data and what you observed. *Remember, even if your data shows that your hypothesis was incorrect, your project is still good.*

★ **CONCLUSION**

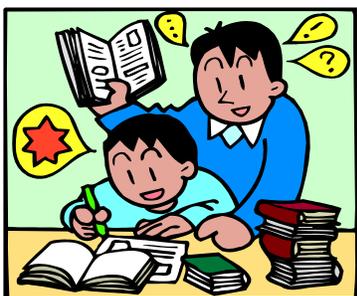
Look over your report, graphs, charts and tables. Use two or three sentences to tell what you learned from your experiment. Was your hypothesis valid? Why or why not?

★ **APPLICATION**

Now that you have finished your project, use this section to share with others your thoughts about this experience. Did you have any problems? What would you do differently next time? Explain how what you learned from your project applies to the real world.

★ **SOURCES / BIBLIOGRAPHY**

List all books, articles, pamphlets and other communications or sources that you used for researching your topic and writing your paper. You must have at least two sources, and only one may be an encyclopedia. Interviews with experts in your field of study are encouraged.



BOXED topics are part of the rubric criteria for judging. The other parts are used only for grading the written report by the teacher.