



Before You Can Start the Experiment, You Must Submit a Research Plan

All scientists must submit a **Research Plan** for approval before they can dive into their investigation. You also have to complete a research plan. Research plans outline what you are planning to do from beginning to end.

Research plans are useful to make sure you have looked at all aspects of the investigation. A research plan is like a mini-report. You will need to type the following information into a Google Document. Follow the formatting listed below exactly. Make sure the research plan and all your science project components have been proofread by an adult. Share your plan with your teacher/parent to approve before you begin. Most of this information should be in your logbook or this booklet.

Here is how to format your Research Plan:

- In the **Header:** (The header is at the top most part of a Google Document and will show on the top of each page.) Type your Title of the Project, Name, Grade, and School on the left. Insert a page number on the top right side.
- Use a 12 font size.
- Set up the plan like an Outline, see picture on next page.
- **A. Rationale:** This is your purpose statement from Step One! You can copy and paste it into your plan from your logbook.
- **B. Hypothesis:** This is from Step Two. Copy and paste your hypothesis from your logbook into your plan.
- **C. Description**
 - **Procedures & Materials:** This is from Step Three. Copy and paste your procedures into your plan.
 - **Risk and Safety:** You identified any potential risks and safety precautions to be taken in Step Two. Copy and paste your safety precautions into your plan.
 - **Data Analysis:** Describe the procedures **you will use** to analyze the data/results that answer research questions or hypotheses. Include a sample of the data table you will create.
 - **Discussion of Results and Conclusions:** Discuss the data/results and the conclusions that can be drawn. (Put what you think will happen. You can go in and add the real data and conclusions after your investigation is complete.)

- **Works Cited: List at least five (5 major references** (e.g., science journal articles, books, internet sites) from your background research. All references must be in the proper format. See [Appendix A](#). Ask your teacher or school librarian to help you format them correctly. If you plan to use vertebrate animals, one of these references must be an animal care reference.

Your Research Plan must be approved by your science teacher before you begin your experiment! The time you spend typing this in a Google Document means less time spent when you do the Research Paper and Google Slide Presentation. The info will be the same. All you will do then is copy and paste.

We have created a template for you to use. Click on the link below, which will have you make a copy of your own. You can paste your information in that document. Remember to change the file name. You will want to include your name in the file name and the words “Research Plan.”

- [Scientific Inquiry Projects Research Plan](#) template

If your experiment required [Ethical Consideration Forms](#), your part “**C: Description**” section will include more information. See [Appendix C](#) for what you will need to add. You will also need to submit your plan to the APS Science Department for approval. Only plans that required Ethical Considerations forms will need to be sent to the department. All other plans should be submitted to your teacher for approval.

If you need to submit plans to the APS Science Department, you can share them in Google Drive with your science teacher who will need to submit it to our department, science@apslearns.org.

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