

QuikScience Challenge

Writing a Research Proposal ~ Guidelines & Format

Guidelines: The project can be on any ocean science question or topic that interests you. The proposal should describe the issue or question that you are addressing, what you hope to learn, and how you would go about completing it, including the methods and equipment that you would use. Consider the environmental challenge(s) that relates to your topic. Proposals should be a total of 5-7 pages in length (including your Solution to an Environmental Challenge). In your Portfolio, submit a description of your proposal. **Remember, you do NOT actually have to do the project, just propose it as part of the competition requirements.**

Format: The primary purpose of a research proposal is to help you organize your ideas about a potential research project and clearly describe them. A well-written proposal enables reviewers and others to fully understand what you want to do, how you will do it, and why it is important. The structure should be composed of the following components and standard format:

- **Title** – Give your project an innovative working title.
- **Abstract** – Write a short, clear and concise summary of the goals and objectives of the project. Your abstract should be one paragraph, no more than 500 words, and centered at the top of your proposal. Address the intellectual merit of the proposed activity (why it's important) and the broader impacts resulting from the proposed activity.
- **Introduction** – Provide readers without knowledge of the discipline or topic with sufficient background to understand the proposal. Include references to permit additional research and review by interested parties. State what the research topic is and why it is important. Briefly review what has already been done (covering previous research) and summarize the rationale for the intended study.
- **Hypotheses / Objectives** – Include a short but descriptive statement of what the project hopes to accomplish or what hypothesis is to be tested. If you are proposing a hypothesis, you should indicate what variables your hypothesis will address.
- **Methods & Materials** – Be specific and describe how the research will be carried out. In this section, describe the experimental design that will be employed to accomplish each objective/test your hypothesis. Provide sufficient detail for potential project evaluation and possible recommendations for improvement. Describe the methods of collection and list the required materials. Include the location of the proposed research and why this specific location was chosen.
- **Literature Cited or References** – For books, articles, and the like, be sure to include: author, date of publication, title, source, name of journal (if applicable), page number(s). For web resources, double check the scientific validity of your sources – there is a lot of false information posted on the web. References for web sources should include similar information as the before stated, as well as, date of access and web address. Common proper formats for scientific references can be found on the web or at your local library.
- **Supporting Documentation** – If available and appropriate, include tables and figures. If you use tables and/or figures, reference must be made to them in your research proposal. You should not have random figures or tables included without an explanation as to what they are describing, what data they are displaying and any relevant trends they describe.