Research Proposal Submission Template

How to use this template

Fill in every section below and replace the text in *italics* with your own content. Delete the italic guidance before you submit. Keep the section order as it is so reviewers can find each part quickly.

Team Information

Solo submissions are welcome, but we encourage teams. List an advisor or supervisor if your institution requires one. Add or remove rows as needed.

Role	Name	Affiliation	Email	Responsibilities on the project
Team Lead				
Advisor / Supervisor (if needed)				
Team Member				
Team Member				
Team Member				

Experiment Category

Check one main category. If it has subcategories, check the one that fits best.

- ☐ Dust Mitigation
- ☐ Mobility
- ☐ In-Space Manufacturing
- ☐ In Situ Resource Utilization (ISRU)
    - ☐ Construction
    - ☐ Water Extraction
    - ☐ Mineral Extraction
- ☐ Astrobiology
    - ☐ Chemistry
    - ☐ Microbiology
    - ☐ Plant Biology
- ☐ Other
    - ☐ Explain:

Title of the Experiment

Write a short, specific title that names what you are testing. Example format: "Effect of [variable] on [outcome] in [simulant or environment]."

Table of Contents

List each section with its page number. Update it once your submission is final.

1. Abstract
2. Introduction
3. Background Research
4. Experiment Setup / Approach
5. Timeline and Bill of Materials
6. Conclusion and Hypothesis
7. References

List of Figures

List every figure, diagram, and photo in order. Number them as they appear in the text.

List of Abbreviations (if needed)

Define every acronym you use, in alphabetical order. Delete this section if you use none.

Abbreviation	Meaning
ISRU	In Situ Resource Utilization

Abstract

In 150 to 250 words, summarize the whole proposal: the problem, why it matters, what you will test, how you will test it, and what you expect to find. Write this section last.

Introduction

Introduce the problem your experiment addresses and the question you want to answer. State your objective in one or two sentences. Keep it to about half a page.

Background Research

Show what is already known and where your idea fits. Cite every source you use and list full references at the end of this section.

Relevance / Applications

Explain why this experiment matters for lunar or Martian exploration. Who would use the results, and how?

Existing Studies / Technologies

Summarize relevant past experiments, missions, and technologies. Point out the gap or open question your experiment addresses.

References

List sources in a consistent citation style (for example, APA or IEEE).

1.

Experiment Setup / Approach

Describe how you will run the experiment, step by step. Include a diagram or sketch of your setup as Figure 1.

- **Materials and equipment:** *what you will use, including the regolith simulant type and amount*
- **Variables:** *independent, dependent, and controlled variables*
- **Procedure:** *numbered steps someone else could follow*
- **Measurements:** *what you will measure, with what instrument, and how often*
- **Data analysis:** *how you will process and interpret the results*
- **Safety:** *hazards (for example, fine dust inhalation) and how you will handle them*

Timeline & Bill of Materials

Estimates are fine. We want to see that the plan is realistic, not exact figures.

Timeline

Phase	Main tasks	Start date	End date
Research and design			
Procurement and setup			
Testing			
Data analysis			
Final report			

Bill of Materials

Item	Purpose	Quantity	Est. unit cost (USD)	Est. total (USD)	Source / supplier
Total					

Conclusion and Hypothesis

State your hypothesis as a testable prediction. Example format: "If [change], then [expected result], because [reasoning]."

Then close with a short conclusion: what a successful result would show, what you will learn if the hypothesis is wrong, and possible next steps.