SPARK Research Proposal

Abstract (3-6 sentences)

An abstract is a short summary of your entire project. It should briefly explain what you are studying, what you observed or learned (including information you found online), and why your question is interesting or important.

A strong abstract:

- Introduces the topic of your project
- Clearly states your research question
- Mentions key ideas or information you learned from online sources
- Explains the goal or importance of the project

Your abstract should be written in full sentences and be easy to understand. Do not include long details or step-by-step instructions.

Research Question (1 sentence)

The research question is the main question your project is trying to answer. It should be clear, specific, and testable. Your question should focus on one main factor and explain what you are studying and what you are measuring or observing.

A strong research question:

- Is written as one complete sentence
- Can be answered using observations, data, or an experiment
- Is not too broad or too vague

Example sentence starters:

- How does ___ affect ___?
- What happens to ___ when ___?

Background (4-7 sentences)

The background section explains what you already know about your topic and what you learned from observing or researching it online. This is where you show that you tried to understand your topic before designing your project.

A strong background:

- Describes what you observed in real life or learned in class
- Explains key ideas you learned from websites, videos, or books
- Uses your own words to summarize information
- Helps explain background information to your Research Question

DO NOT copy and paste information from the internet. Focus on the most important ideas that helped you understand your topic.

Hypothesis (1-3 sentences)

A hypothesis is your prediction about what you think will happen in your project. It should be based on what you observed and what you learned from online research.

A strong hypothesis:

- Clearly states what you think will happen
- Explains why you think it will happen
- Apply information you learned in the background section to make an educated guess

Sentence starter you can use:

- If ___, then ___, because ___.

Proposed Method (3-6 Sentences)

The proposed method explains how you would test your idea. It should describe what you plan to change, what you plan to keep the same, and how you will measure or observe results. Your method should be fair, safe, and realistic.

A strong proposed method:

- Explains the steps of the experiment in order
- Shows how online research helped you design a fair test
- Identifies variables you will change and control
- Describes how results will be measured or observed

Write in full sentences and focus on your plan, not the final results.

Data Collection & Analysis (2-5 Sentences)

This section explains how you would record your results and how you would make sense of them. It should show that you understand how data helps answer your research question.

A strong data collection and analysis section:

- Describes what data you will collect (numbers, measurements, or observations)
- Explains how the data will be organized, such as in a table or chart
    - Describe columns/rows, axis titles (if applicable)
- Shows how online learning helped you understand fair testing or data reliability
- Explains how you would compare or analyze results

Use clear sentences and focus on how the data helps answer your question.

Challenges or Limitations (Optional)

This section asks you to think about problems you might face if you were to carry out your project. Scientists do this to plan better experiments.

A strong response:

- Identifies at least one possible issue or limitation
- Explains briefly why it could be a problem
- Shows that you are thinking ahead

Examples of issues: Difficulty controlling variables / Limited tools or materials / Measurement errors
You do not need to solve the problem. Just explain what it might be.

Potential Applications (Optional)

This section explains how what you learned could be useful in real life or connected to other ideas. It is optional and meant to show extra thinking and curiosity.

A strong potential applications section:

- Connects your topic to everyday life, technology, or science
- Explains how the idea could be used or explored further

Is realistic and based on what you learned. You may use words like could, might, or may. This section does not need to be long.

References (MLA Format)