

TLOTLEGO SMILES FOUNDATION SCIENCE & INNOVATION FAIR

RESEARCH PLAN TEMPLATE PACK

TEMPLATE 1: SCIENTIFIC INVESTIGATION / EXPERIMENT

Learner Information

Learner Name: _____

Grade: _____

School: _____

Mentor/Teacher: _____

Project Title: _____

Project Category: _____

1. Introduction

Background Information / Literature Review

What have you learned about your topic from books, articles, websites, or other sources?

2. Problem Statement

What problem are you trying to solve or investigate?

3. Research Question

What question will your project answer?

4. Aim / Objective

What is the purpose of your project?

5. Hypothesis

What do you predict will happen?

If _____, then _____

6. Variables

Independent Variable (What you will change)

Dependent Variable (What you will measure)

Controlled Variables (What will stay the same)

7. Materials Needed

List all tools, equipment, and supplies.

1. _____
2. _____
3. _____
4. _____
5. _____

8. Procedure / Method

Write the steps you will follow.

Step 1: _____

Step 2: _____

Step 3: _____

Step 4: _____

Step 5: _____

9. Data Collection Plan

How will you record your results?

- Table
- Graph
- Photos
- Observation Notes
- Other: _____

10. Data Analysis Plan

How will you analyse your results?

11. Safety Considerations

Are there any risks? How will you stay safe?

12. Ethical Considerations

Will your project involve people, surveys, or personal information?

- Yes
- No

If yes, explain how you will protect privacy and gain permission:

13. Timeline

Task	Date
Topic Selection	_____
Research	_____
Experiment	_____
Data Analysis	_____
Final Report	_____
Poster Completion	_____

14. References

List books, websites, or articles used.

1. _____

2. _____

3. _____

TEMPLATE 2: ENGINEERING / INVENTION / COMPUTER SCIENCE

Learner Information

Learner Name: _____

Project Title: _____

Project Category: _____

1. Need or Problem Identified

What problem does your invention solve?

2. Research Question

3. Aim

4. Design Goals

What must your solution achieve?

Low cost

Durable

Easy to use

Energy efficient

Safe

Sustainable

Other:

5. Background Research

What existing solutions already exist?

6. Materials / Software Needed

7. Design Sketches

(Attach drawings or diagrams here)

8. Build Procedure

Step-by-step design process:

9. Testing Plan

How will you test whether your design works?

10. Improvements / Redesign Ideas

11. Safety & Ethics

12. References

TEMPLATE 3: SOCIAL SCIENCE / SURVEY RESEARCH

Learner Information

Learner Name: _____

Project Title: _____

1. Topic Background

2. Problem Statement

3. Research Questions

4. Aim

5. Hypothesis (Optional)

6. Participants

Who will you study?

Age group: _____

Number of participants: _____

Location: _____

7. Data Collection Method

- Survey
- Interview
- Observation
- Focus Group

8. Sample Questions

1. _____
2. _____
3. _____

9. Data Analysis

How will you analyse responses?

- Percentages
- Graphs
- Themes
- Written summaries

10. Consent & Confidentiality

How will you protect participant privacy?

11. Timeline

12. References

TEMPLATE 4: MATHEMATICS / THEORETICAL PROJECT

Learner Information

Learner Name: _____

Project Title: _____

1. Problem or Mathematical Question

2. Background Research

3. Aim

4. Hypothesis / Conjecture

5. Definitions & Concepts

6. Method / Proof Strategy

What formulas, models, or reasoning will you use?

7. Testing Your Solution

How will you check your work?

8. Findings

9. Conclusion

10. References
