READ BEFORE USING

SCVSEFA Student Leadership Board

How to Use the Research Inquiry Notebook Template

The research inquiry notebook is a permanent record of your scientific work. It should show, in chronological order, how your investigation develops from beginning to end.

1. Make Entries Consistently

- Create an entry every time you work on your project.
- Record the date and time for each session.
- Write entries in the order they occur.

2. Write in Real Time or Soon After

- Record notes while working or immediately after.
- Avoid relying on memory to reconstruct past work.
- Entries should reflect what actually happened, not what you intended to do.

3. Keep All Work Visible

- Do not delete past entries.
- Do not erase mistakes.
- If something is incorrect, cross it out or note a correction in a later entry.
- Preserve earlier ideas and results, even if they are later changed.

4. Use Clear, Complete Language

- Write in full sentences when possible.
- Avoid vague statements such as “worked on project” or “did experiment.”
- Be specific about actions, observations, and results.

5. Organize Supporting Materials

- Label and reference any graphs, tables, photos, or files.
- Indicate where digital files are stored.
- Make sure each item can be traced to a dated entry.

6. Record Changes and Updates

- When plans, methods, or questions change, document when and why.
- Do not replace earlier entries.
- Add new entries explaining revisions.

7. Maintain Academic Integrity

- Record your own work in your own words.
- Clearly note when ideas come from external sources.
- Do not copy text directly into the notebook.

8. Keep the Notebook Professional

- Use consistent formatting.
- Keep handwriting or typing legible.
- Avoid unrelated or personal content.
- Treat the notebook as a formal academic document.

How to Use the Engineering Design Notebook Template

The engineering design notebook is a continuous record of how a solution is planned, developed, tested, and refined. It documents the full design process over time.

1. Record Work Sequentially

- Make an entry for each work session.
- Keep entries in chronological order.
- Do not rearrange or rewrite earlier work.
- Each entry should reflect one continuous period of activity.

2. Document Work Promptly

- Write entries during or shortly after work sessions.
- Avoid reconstructing events later.
- Record decisions and actions as they occur.

3. Preserve All Versions

- Do not remove early designs, sketches, or ideas.
- Keep records of all major changes.
- Use version labels consistently.
- Earlier work should remain accessible.

4. Be Clear and Specific

- Describe what was built, modified, or tested.
- Avoid general statements such as "improved design."
- Include relevant measurements, settings, and conditions.

5. Link Records to Physical or Digital Work

- Reference photos, files, code, or CAD models.
- Note where materials or data are stored.
- Ensure that each artifact can be connected to a notebook entry.

6. Track Revisions Over Time

- When changes are made, document when they occurred.
- Record what was changed and what remained the same.
- Use new entries rather than editing old ones.

7. Maintain Accuracy and Honesty

- Record both successful and unsuccessful attempts.
- Do not omit failed tests or incomplete builds.
- Represent results and progress truthfully.

8. Keep the Notebook Organized and Professional

- Use consistent section headings.
- Maintain readable formatting.
- Avoid unrelated content.
- Treat the notebook as an official technical record.

Science Inquiry Template

SCVSEFA Student Leadership Board

Research Inquiry Notebook Template

Cover Information

- Student Name:
- Project Title:
- Category: Research Inquiry
- School / Program:
- Grade:
- Mentor / Teacher (if any):
- Notebook Start Date:
- Notebook End Date (if known):

Project Snapshot (update as it evolves)

- Working Research Question:
- Why this matters (1–3 sentences):
- What you think may be true right now (initial hypothesis or expectation):
- What you will measure or observe (primary outcomes):
- Constraints (time, materials, access, safety, etc.):

Session Log Entry (repeat for each work session)

Entry #
Date:
Start–End Time:
Location (optional):

Objective for this session

What I did (chronological notes)

Data collected (raw; tables/values; attach if separate)

Observations (what I noticed, not interpretations)

Interpretation (what the results might mean so far)

Issues / anomalies / sources of error

Decision(s) made today

Next steps (specific, testable actions)

Experiment Record (use when you run a defined test)

Experiment ID / Name:
Date:

Purpose:

Method summary (what you actually did):

Variables and conditions (as used in practice):

- Independent variable(s):
- Dependent variable(s):
- Controlled factors (most important):

Materials / setup notes (only what matters):

Results (raw data + units):

Notes (unexpected events, deviations from plan):

Immediate takeaway (1–3 sentences):

Reference Notes (use when reading or watching sources):

Source (title/author/publisher/date):
Where accessed (book/site/video/journal):

Key points (in my words):

How it changed my project (question, method, interpretation):

Data Index (optional but useful)

- Dataset / File Name:
- Date created:
- What it contains:
- Where it's stored (folder name or link location):

Engineering Design Template

SCVSEFA Student Leadership Board

Engineering Design Notebook Template

Cover Information (fill once)

- Student Name:
- Project Title:
- Category: Engineering Design
- School / Program:
- Grade:
- Mentor / Teacher (if any):
- Notebook Start Date:
- Notebook End Date (if known):

Project Snapshot (update as it evolves)

- Problem Statement (what needs to be solved):
- Design Goal (what success looks like):
- Requirements (must-haves):
- Constraints (limits: time, cost, materials, safety, size, etc.):
- Evaluation criteria (how you'll judge success):

Session Log Entry (repeat for each work session)

Entry #
Date:
Start–End Time:
Location (optional):

Objective for this session

What I built / changed (chronological notes)

Design rationale (why I made these choices)

Tests run today (what I tested and how)

Test results (measurements, outputs, failures; attach if separate)

Problems discovered

Decisions made today (and why)

Next steps (specific actions)

Design Version Record (use when you create a new iteration)

Version ID (e.g., V1, V2, Prototype A):
Date started:
Date updated (if applicable):

Design description (what it is and what it does):

Sketches / photos / CAD references (where stored):

Bill of materials (only items used in this version):

Build notes (what mattered during assembly/fabrication):

Changes from previous version:

Why this version should improve performance:

Test Plan + Test Record (use for formal evaluation)

Test name / ID:
Date:

What is being tested (performance metric):

Setup (tools, environment, conditions):

Procedure (brief but repeatable):

Results (raw + units):

Pass/fail criteria (if defined):

What this tells me (1–3 sentences):

Planned design change based on this test:

Tradeoffs and Decisions (use when choosing between options)

Decision topic:
Options considered:

- Option A:
- Option B:
- Option C (if any):

Criteria used (cost, reliability, accuracy, safety, etc.):

	Criterion I	Criterion II	Criterion III
Option A			
Option B			
Option C			

Choice made:

Reasoning (brief, evidence-based):

Materials, Tools, and Safety Notes (update as needed)

- Tools used:
- Materials used:
- Safety considerations and mitigations:
- Any training/approvals required (if relevant):