

Engineering Notebook Excellence Audit

Difficulty Beginner	Time 30-45 minutes	Type Practice & Review
-------------------------------	------------------------------	----------------------------------

Background

Engineering notebooks are legal and technical records of design work. A clear notebook allows another person to understand what happened, reproduce a test, and trace why decisions were made.

Engineering Problem

Upgrade one incomplete or weak notebook entry into a professional engineering record.

Learning Objectives

- Recognize the features of strong engineering documentation
- Improve clarity and organization
- Add missing technical evidence
- Reflect on design decisions

Materials

- Engineering notebook
- One previous notebook entry
- Ruler
- Pen or pencil
- Colored pencil or highlighter

Procedure

1. Choose a previous entry that is incomplete, difficult to follow, or missing evidence.
2. Use a checklist to identify missing date, title, purpose, sketches, measurements, labels, results, and reflection.
3. Create a revised version on a new page without erasing the original record.
4. Add at least one labeled sketch or diagram.
5. Add a table, measurement, calculation, or test result that supports the work.
6. Write a short reflection describing what happened, what changed, and what should happen next.
7. Ask a classmate to read the revised page for 60 seconds and explain the work back to you.
8. Make one final improvement based on that feedback.

Engineering Requirements

- Keep the original entry unchanged
- Include a date and descriptive title
- Use complete labels and units
- Include at least one visual and one quantitative piece of evidence
- End with a next-step statement

Constraints & Safety

- No copied text from another student
- Revised page must fit on one notebook spread
- Use permanent notebook practices established in class

Deliverables

- Completed notebook audit checklist
- Original page reference
- Revised notebook entry
- Peer feedback note
- Three improvement rules you will use in future entries

Reflection Questions

1. What information was missing from the original entry?
2. Could another student reproduce the work from your revised page?
3. Which change improved clarity the most?
4. How will better documentation help during a design review?

Engineering Tip

Use headings and white space to guide the reader. More writing is not always clearer writing.

Common Mistake

Decorating a page is not the same as documenting evidence. Prioritize technical content over appearance.

Stretch Goal

Create a one-page “excellent notebook entry” guide for a new IED student.

Career Connection

Engineers use notebooks, test logs, and change records to communicate across teams and support patents, safety reviews, and manufacturing decisions.