Engineering Notebook
Engineering Notebook

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What Is an Engineering Notebook?

An engineering notebook is a book in which an engineer will formally document, in chronological order, all of his/her work that is associated with a specific design project.

- Clear and detailed description of your design process
Why Keep an Engineering Notebook?

An engineer’s notebook is recognized as a *legal document* that is used in patent activities to...

- Prove the origin of an idea that led to a solution
- Prove diligence in turning the idea into a solution
- Prove when an idea became a working solution (“reduced to practice”).
Who Keeps an Engineering Notebook?

All Types of Engineers that work on R & D

- Legal documentation of work
- Continuity in projects

College engineering students

- Develop time management skills
- Improve research, documentation and communication skills
- Basis for professional presentation of work
Contents

• Discovering the problem
• Research
• Sketches with labels and descriptions
• Brainstorming
• Calculations
• Your daily thoughts and ideas
• Pictures
• Expert input (names, positions, contact info, details of conversations)
• Work session and meeting summaries
• Test procedures, results, and conclusions
• Digital technical drawings
• Design modifications

Everything you do/think related to a specific design project
Engineering Notebook Sections

- Title Page
- Table of Contents
- General Chronological Entries
- References
- Business/Expert Contacts
Best Practices

• Quad ruled paper
• Bound
• All work is in pen
• All pages are
  – Numbered
  – Dated
  – Signed by the designer
  – Signed by a witness
  – Include a statement of the proprietary nature of notebook
Best Practices

• Do not leave blank space. If there is extra space, draw an X or a line across it and sign.
**Best Practices**

- If you make a mistake, draw a line through it, enter the correct information, and initial the change.
Best Practices

• Date each entry

5/15 It’s Sunday, and I came in at 10:00 AM to work on the project. I spent the morning modifying the wheel and axle design, because I think it is going to cause too much friction between the sides and the bracket that will hold it in place. I also went to the Technology Lab and found some aluminum bar stock to make the wheel and axle.

Too much friction

5/15 It’s Sunday, and I came in at 10:00 AM to work on the project. I spent the morning modifying the wheel and axle design, because I think it is going to cause too much friction between the sides and the bracket that will hold it in place. I also went to the Technology Lab and found some aluminum bar stock to make the wheel and axle.
Best Practices

• Cut and paste print-outs of digital files that you create or use as reference.

• Sign your name so that it extends across both the notebook page and the inserted document.
Best Practices

• Sign and date each page before the next page is begun.
Best Practices

- Sketches
  - Label all parts of the sketch
  - Describe each sketch

5/15. I came up with a way to use the wheel and axle with a design. A weight falls into the bucket and causes the axle to spin. The wheel (that looks like a hand crank in this case) is attached to the axle and builds up spin. I can move something and transferring its energy to the next part of the system. Now I have to figure out how to use it in my system.

My instructor let me borrow a book to help me get some ideas for my system. I found a great idea for a screw and wedge mechanism on page 194.


5/15. It’s Sunday, and I came in at 10:00 AM to work on the project. I spent the morning modifying the wheel and axle design, because I think it is going to cause too much friction between the side walls and the bracket that will hold it in place. I also went to the other Technology Lab and found a 1/4 inch diameter aluminum bar stock to make my wheel and axle.

2nd Idea
- Modified wheel and axle
- Address potential friction issue

- Smaller Ø keys: string less suicide contact
- Change for greater
- For binding

PROPRIETARY INFORMATION
Best Practices

• Progress Entries
  – Reflect on tasks accomplished, successes, and failures
  – Reflect on future needs and tasks to be completed
Best Practices

Be **NEAT**, 
be **ACCURATE**, 
be **LEGIBLE**, 
and be **THOROUGH**.
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