

TECHNOLOGY & HARDWARE

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http://me.islerya.com/tech_hw.php

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ENGINEER

- Engineers, as practitioners of engineering, are professionals who invent, design, analyze, build, and test machines, systems, structures and materials to fulfill objectives and requirements while considering the limitations imposed by practicality, regulation, safety, and cost.
- The work of engineers forms the link between scientific discoveries and their subsequent applications to human and business needs and quality of life.

BASIS OF ENGINEERING: DESIGN



!!! Slightly similar to the popular plan-do-check-act (pdca) cycle where 3 plan steps, 1 do step, 1 check step, and 1 act step



THE DESIGN PROCESS #1

- 1. Define the Problem
 - You can't find a solution until you have a clear idea of what the problem is.
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THE DESIGN PROCESS #2

- 2. Collect Information
- Collect sketches, take photographs and gather data to start giving you inspiration.





THE DESIGN PROCESS #3

- 3. Brainstorm and Analyze Ideas
 - Begin to sketch, make, and study so you can start to understand how all the data and information you've collected may impact your design.
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THE DESIGN PROCESS #4

- 4. Develop Solutions
- Take your preliminary ideas and form multiple small-scale design solutions.



THE DESIGN PROCESS #5

- 5. Gather Feedback
 - Present your ideas to as many people as possible: friends, teachers, professionals, and any others you trust to give insightful comments.
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THE DESIGN PROCESS #6

- 6. Improve
- Reflect on all of your feedback and decide if or to what extent it should be incorporated. It is often helpful to take solutions back through the Design Process to refine and clarify them.

LTS (LEFT TO STUDENTS)

- In your field, please discover how you can apply these design principles. And is there any necessary improvements for this cycle in your area?

REFERENCES

- <https://en.wikipedia.org/wiki/Engineer>
- <https://discoverdesign.org/handbook>