Think and Design Like an Engineer

The Engineering Design Process (EDP) is a way to think like an engineer. The EDP term is used to describe the process used by scientists in many different fields. Although terminology may vary, basically EDP is a step by step process for solving a problem by creating something tangible with a specific function.

The Engineering Design Process offers a set of steps that students can follow to remind them of key actions that engineers take when solving problems or improving products or processes.

In the real world, engineers may not rigorously follow a specific set of steps, however, student engineering design process models are available and used for different grade levels. The NGSS describes the core ideas of NGSS as including three component ideas:

A. Defining and delimiting engineering problems in terms of criteria for success, and constraints or limits.

B. Designing solutions by identifying different possible solutions, then evaluating potential solutions to see which ones best meet the criteria and constraints of the problem.

C. Optimizing the design solution by systematically testing and refining the final design.
Activity Links:

You can find the engineering design process used by a NASA resources called Beginning Engineering, Science, and Technology (BEST) at: [https://www.nasa.gov/audience/foreducators/best/about.html](https://www.nasa.gov/audience/foreducators/best/about.html)

Learn more about the EDP: [https://www.nasa.gov/audience/foreducators/best/edp.html](https://www.nasa.gov/audience/foreducators/best/edp.html)

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**NASA has activities & learning resources to support you!**

**NASA STEM @ Home for Students:**
- K to 4th: [https://www.nasa.gov/stem-at-home-for-students-k-4.html](https://www.nasa.gov/stem-at-home-for-students-k-4.html)
- 5th to 8th: [https://www.nasa.gov/stem-at-home-for-students-5-8.html](https://www.nasa.gov/stem-at-home-for-students-5-8.html)
- 9th to 12th: [https://www.nasa.gov/stem-at-home-for-students-9-12.html](https://www.nasa.gov/stem-at-home-for-students-9-12.html)

**Story Time From Space:**
[http://www.spacestationexplorers.org/educational_programs/storytimefromspace/](http://www.spacestationexplorers.org/educational_programs/storytimefromspace/)

**NASA Express:**
[https://www.nasa.gov/stem/express](https://www.nasa.gov/stem/express)

**NASA STEM EPDC Webinars:**
[https://www.txstate-epdc.net/event-post/](https://www.txstate-epdc.net/event-post/)

**NASA STEM EPDC Digital Badges:**
[https://www.txstate-epdc.net/digital-badging/](https://www.txstate-epdc.net/digital-badging/)

**NASA STEM Quick Bits:**
[https://www.txstate-epdc.net/quick-bits/](https://www.txstate-epdc.net/quick-bits/)