



TeachEngineering

STEM Curriculum for K-12

AEROGEL COOKIES



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Intro to STEM Education

- STEM is  Solving real world problems
- In STEM, **your teacher is not your main source of information.**
- In STEM, you are:
 - to integrate information you've learned in various classes
 - to research, ask each other questions—recognize all of your resources

Intro cont'd

You are

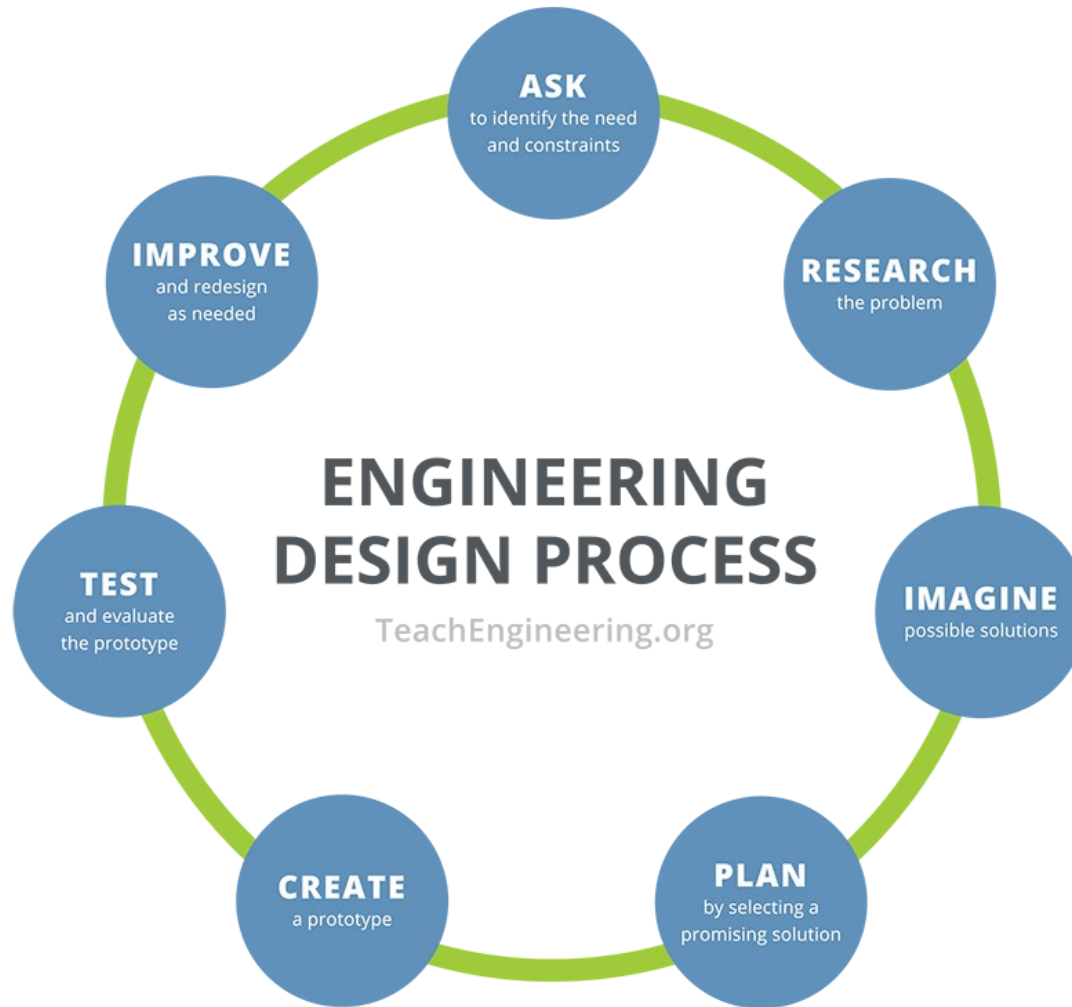
- to read and ask thoughtful questions
- to try various strategies--think creatively & critically
- to discuss, design, explain, try again, present, & ...
- to, most of all, NOT GIVE UP

STEM Habits of Mind (Expectations)

You are to demonstrate growth in the

- Engineering Design Process
- 21st Century Skills (Soft Skills):
 - Collaboration
 - Creativity
 - Critical Thinking (try multiple strategies; be able to explain why you chose them, etc)
 - Perseverance
 - Communication
 - Conflict Resolution

Engineering Design Process



Who Cares about Soft Skills? Employers!

Articles about the importance of soft skills

- <https://www.inc.com/lou-adler/hiring-guide-soft-skills.html>
- <http://workforcesolutions.stlcc.edu/2013/time-soft-skill-deficiencies-college-graduates/>
- <https://www.goskills.com/Soft-Skills/Articles/Skills-gap>
- <https://www.shrm.org/hr-today/news/hr-magazine/0416/Pages/HRs-Hard-Challenge-When-Employees-Lack-Soft-Skills.aspx>
- <https://www.fastcompany.com/3059940/these-are-the-biggest-skills-that-new-graduates-lack>
- <https://www.fastcompany.com/3059940/these-are-the-biggest-skills-that-new-graduates-lack>
- <https://www.dailymail.co.uk/wires/pa/article-2909129/Many-workers-lack-soft-skills.html>
- <https://www.monster.com/career-advice/article/soft-skills-you-need>
- <https://www.monster.com/career-advice/article/soft-skills-you-need>
- <https://www.fool.com/investing/general/2013/12/07/college-graduates-suffer-from-a-lack-of-soft-skill.aspx>
- <https://www.amle.org/BrowsebyTopic/WhatsNew/WNDet/TabId/270/ArtMID/888/ArticleID/585/Soft-Skills-Preparing-Kids-for-Life-After-School.aspx>

The list goes on and on. . .

STEM?

- What is a STEM Career?
 - Click to see a HUGE list:
<https://www.cscce.edu/academics/departments/science/futurescientists/what.shtml>

Why Else Consider a STEM Career?

- http://www.wherestemcantakeyou.co.uk/docs/Why_STEM_Careers.pdf
- <https://www.napequity.org/professional-development/counselor-training/stem-careers-students/>
- https://study.com/articles/Ten_Reasons_to_Consider_a_Career_in_the_STEM_Fields.html
- <https://examinedexistence.com/what-is-stem-and-why-is-it-important/>
- <https://blogs.gcu.edu/college-of-science-engineering-and-technology/pursue-stem-career/>
- <https://www.ctelearning.com/best-stem-careers-2018/>
- <https://www.idtech.com/blog/why-is-stem-important>
- <https://www.precipart.com/blog/5-reasons-stem-career/>
- <http://stem.getintoenergy.com/why-a-stem-career/>
- <http://stemcareer.com/why-stem/>
- <https://www.youtube.com/watch?v=3bnMBhO0LnU>
<https://careerwise.minnstate.edu/careers/stemcareers>

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*Thank you
for listening!*