

Engineering Design

Overview Sheet

Essential Question

How does one come up with solutions to a problem?

Vocabulary

technology

engineer

invention

innovation

prototype

iteration

Learning Targets

(Objectives)

1. Compare and contrast inventions and innovations
2. List and describe the appropriate steps for creating solutions to a problem - Engineering Design Process
3. Effectively use a variety of resources to gather reliable information/research
4. Effectively develop design solutions while considering costs
5. Define and develop prototypes
6. Explain iteration and incorporate it when improving design solutions
7. Perform and apply the steps of the Engineering Design Process to develop a solution to a problem
8. Collaborate with group members to work toward possible solutions

Helpful Websites

- <http://www.sciencebuddies.org/engineering-design-process/engineering-design-process-steps.shtml?qclid=CNWR5s3m57sCFWRk7AodYi8AUw> (general overview)
- http://www.nasa.gov/audience/foreducators/plantgrowth/reference/Eng_Design_5-12.html#.Usm3U9JDufU (general overview)
- <http://www.eie.org/content/engineering-design-process> (general overview)
- <http://www.teachengineering.org/enrdesignprocess.php> (general overview)
- <http://www.pbslearningmedia.org/resource/phy03.sci.engin.design.desprocess/what-is-the-design-process/> (general overview video)
- http://education.nationalgeographic.com/education/media/nasa-kids-intro-engineering/?ar_a=1 (general overview video)