



“Engineering is the closest thing to magic that exists in this world.” - Elon Musk

STEM in the News

The engineering design process is a step by step sequence used by engineers to make products that we use to this day. They used the engineering and design process to make computers, I-phones, tablets, televisions, etc. The engineering and design process has multiple different variations , but they all follow the same idea. All of the designs have at least 4 parts. Define the problem, prepare what your ideas are, try out your ideas, and reflect what did and what didn't go right. This process has helped many workers solve problems that they encounter everyday.

STEM Career Spotlight

Engineers apply mathematics and science to make economical solutions to technical problems. In South Carolina an engineer's average salary is \$69,408. To become an engineer you need a Bachelor's Degree in Engineering Discipline. Some of the areas may include Biomedical Engineering, Computer Engineering, Mechanical Engineering and others. For some of the more advanced fields a Master's Degree is needed.

Resource-<https://www.allengineeringschools.com/engineering-careers/article/become-engineer/>

STEM History

Throughout history, engineering has evolved to suit the needs of human beings. Engineering is the application of science to the optimum conversion of the resources of nature to the uses of humankind. The profession we know as engineering today emerged during the 1500's when specialists began using mathematics to design military fortifications, these special military architects would generally let craftsmen do the actual construction. The function of the scientist is to know, while that of the engineer is to do. Engineering is based principally on physics, chemistry, and mathematics. The engineering world has many sub-categories, but the major branches of engineering are mechanical, chemical, civil, electrical, management, and geotechnical.

STEM Across the Curriculum

Make a house

Disciplines- Science , Math, ELA

Activity- Make a popsicle stick house using the engineering design process. This will help you understand the problem solving process as well as the process of production of common items. Document your steps and create instructions for someone else to follow. Have a friend or a relative test your instructions and see how clearly you were able to describe the steps.

STEM Movies

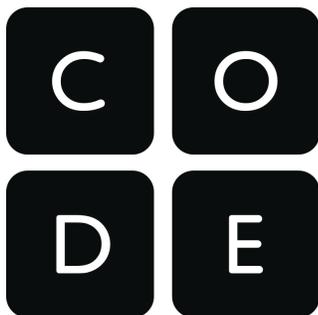
Objectified is a movie about the industry of engineering and how it impacted our lives back then and is still impacting us today. Engineering plays a big role in our society today. Engineers build several different objects and creations to help us live a better life. Engineering today would not be the same, if we haven't come together in the past and contributed to various modern creations. Engineering is in our everyday lives, and without engineering we wouldn't be able to efficiently complete tasks.

Resources: <https://www.britannica.com/technology/engineering>

“Scientists investigate that which already is; Engineering create that which has never been.”
- - Albert Einstein

#STEM@ADM Spotlight

Alice Drive Middle School offers several coding classes, one of which is taught by Dr. Lambert.



She encourages her students to use the engineering design process to solve problems and find practical solutions.

This process requires them to follow a set of steps, which makes them work faster and more efficiently. Coding is an exciting skill to have that is becoming more popular in many modern jobs.

Famous STEM Person

Alexander Graham Bell was a Scottish-born engineer. He was credited for inventing and patenting the first practical telephone. He also was the co-founder of the electric telegraph company in 1885. Thanks to his invention, we are now able to enjoy many modern life conveniences at our fingertips.

Resources: [https://en.wikipedia.org/wiki/Alexander_Graham_Bell#:~:text=Alexander%20Graham%20Bell%20\(%2F%CB%88%C9%A1,Company%20\(AT%26T\)%20in%201885.](https://en.wikipedia.org/wiki/Alexander_Graham_Bell#:~:text=Alexander%20Graham%20Bell%20(%2F%CB%88%C9%A1,Company%20(AT%26T)%20in%201885.)

STEM Challenge

Do you want to know how to make a homemade paper rocket? Well let's make one!

Materials: Pencil, straw, Paper, Tape, Glue.

Step 1: Grab the pencil and the paper and wrap it around the pencil. Cut a tube that fits the pencil and apply tape to keep the tube together. Then twist the top of the paper where the tip of the pencil is and put tape on it.

Step 2: Grab the excess paper and cut half triangles, then glue the triangle to the bottom of the tube.

Step 3: Grab the straw and stick it into the hole at the bottom of the rocket. Blow gently, slowly increasing the force. Enjoy your homemade rocket!

STEM Puzzle

Challenge yourself with the following question.

What do you give an electrical engineer for his birthday?

Answer: Shorts