Prezi Link: https://prezi.com/view/eF6jLO1LdMkNXTdOUpsV/

STEM Girls Workshop
Welcome!

What is STEM?

Simply put, STEM is…
Science
Technology
Engineering
Math

What does this mean?

Now that you know what STEM stands for, let's dig a little deeper!

Science - the knowledge we get from studies, experimentation, and observations (remember the Scientific Method?)
Technology - the use of knowledge to invent new devices or tools to help the world and others
Engineering - solving problems by creating and building structures, products, and systems using math and science
Math -
>	"Math" doesn't actually have a generally accepted definition!
>	The abstract science of numbers, quantity, and space
>	The study of numbers, shapes, and space using reason and usually a special system of symbols and rules for organizing them

Where can STEM take you?

In short, having a job in the STEM field can take you anywhere!

Science - Food Science Technician, Zoologist, and more
- *Food Science Technician* - help develop a delicious new candy bar, test cereals to make sure the nutrition labels are filled out correctly, check for bacterial contamination in meat to prevent food poisoning, mix ingredients to make a tempting salad dressing
- *Zoologist* - design physically and mentally stimulating habitats for zoo animals, educate park visitors about local wildlife, track whales during their migrations to monitor population sizes, take blood samples from different species of animals to monitor levels of rabies and other diseases

Technology - Multimedia Artist or Animator, Photonics Technician, and more

- *Multimedia Artist or Animator* - help develop full animated movies (like Frozen 2), animate avatars (like those in video games), create the characters for a new Saturday morning cartoon, design an animated Super Bowl commercial
- *Photonics Technician* - help research new fiber-optic fabrication methods so information can travel faster and more efficiently, adjust and maintain sophisticated optical light microscopes for best image quality, work on the manufacturing and maintenance of optical fingerprint scanners for a security company; plan, obtain, and integrate the lasers needed to create top-quality laser shows
    - Work with fiber optics and lasers for research and manufacturing purposes
    - Fiber optics is the technology by which light and images are transmitted through hair-thin strands of plastic-coated glass fiber.

Engineering - Computer Software Engineer, Aerospace Engineer, and more
- *Computer Software Engineer* - write the software that controls the movement of assembly-line robots, develop software for a portable global positioning system (GPS) so drivers don't get lost, create the artificial intelligence that controls characters in video games, write software that allows people to communicate over great distances
- *Aerospace Engineer* - help invent and build a spacecraft for the first manned mission to Mars, design satellite phone technology so that data can be sent and received from remote areas, design airplane wings that change shape to enhance maneuverability, build satellites that help us monitor global climate changes from space, create and test aircraft prototypes

Math - Actuary, Security Incident Responder, and more
- *Actuary* - determine the monetary value of unusual items (such as a concert pianists' hands), analyze statistical information about people to predict health trends, price property insurance for homes given their location and the likelihood of a natural disaster, advise movie studio owners about how much liability insurance they should purchase to cover dangerous sets, estimate the cost and risk of events
- *Security Incident Responder* - monitor computer systems for suspicious activity, develop an emergency plan for a company to follow during a cyber attack, be the first one to respond in the event of a cyber attack, report to management and law enforcement about the consequences of a cyber attack

To build a bright future, we need you guys! Today, we are going to experience what it's like to be part of the STEM mission.

STEM Activity Time!

- https://www.sciencebuddies.org/teacher-resources/lesson-plans/water-strider-survival-adaptations#summary
- Go through the steps, prepare little baggies of materials ahead of time
- Can keep their water strider

Video: https://www.youtube.com/watch?v=tCSnKOhzjcc

Empowerment Activity: https://www.careergirls.org/giving-back-poster/

Good job guys! Thank you for being a part of this workshop. Good luck future scientists, technicians, engineers, and mathematicians. Go save the world!