

SESSION I AM CLASSES

Chain Reaction Contraptions

Session I AM

Explore the engineering process by asking questions, planning, building, creating, and analyzing. Learn to generate multiple creative solutions to a problem as you build a wacky chain reaction machine. Create a slow-moving marble run. Build a machine that will make something happen. Connect the marble run to the contraption. Connect the contraption to another one for a multiple chain reaction. Make your machine do work in the most simple-complicated way possible. Use the principles learned to create other machines or mechanical games. Be prepared to plan, build and tinker as you create chain-reaction contraptions.

Lab Fee-\$5.00

Instructor: Melissa Milius, Elementary, Fulton Public Schools

Dream Zoo

Session I AM

Lions and Tigers and Dinosaurs?!? Oh My!! Join teammates to design a zoo that holds the animals YOU would want to see in your ideal zoo. A generous budget of 60 million dollars you have to buy all of the animals, construction materials, and other necessities for your zoo. Teams decide on every aspect of the zoo including cage and shelter placement - (careful not to put the lions too close to the zebras,) what animals will be there, admission prices, etc. Include animals that are fairly normal to zoos and also animals that are long gone and extinct. This is a DREAM Zoo after all! The goal is to design a zoo that YOU would love - obviously- but one that everyone else would love as well all while staying inside your budget. This week-long project will be quite an adventure and a fantastic challenge as you plan your dream zoo.

Instructor: Angela Russell Middle/High School History Teacher, Fulton, MO

Engineering Challenges

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Engineers discover how and why things work, and how they can make them better. A useful engineering concept is the process of creating and building structures or products to solve problems, by using math, science, and design principles. Make cool stuff with this process as you solve a new engineering challenge each day. Build the tallest solid castle or the most comfortable chair or other creative endeavors out of cardboard. Design, construct, test, and refine as you find your own solutions to problems. Put your skills to the test in Engineering Challenges.

Instructor: Tanner Hakert, HS Biology Teacher, Columbia Public Schools

Island Curse

Session I AM

Will you conquer the Island or the Island conquer you??? On an island in the Pacific a group of billionaires were genetically engineering cryptids and other prehistoric animals, but something has gone wrong!! The scientists are gone, workers disappeared, and the animals now overrun the island filled with so many unanswered questions! The billionaires are offering a large sum of money for someone to capture the escaped beasts and find out the mystery on the island. This challenge will be different for each one of you as you use your creativity, imagination, and engineering skills to conquer the cursed project and return the animals. You choose the adventure as the curse unfolds!! Research various cryptids, decide and design the best trap and cage, map out the island, and create a choose-your -own adventure story, all while trying to survive the island and its curse!!

Instructor: Cami Webb, Teacher of Gifted, Fulton Public Schools

Storytelling Through Art

Session I AM

People have been using art to communicate and tell stories for thousands of years. Cave drawings, hieroglyphics, oil paintings, and even Instagram all have one thing in common - they are all opportunities to tell visual tales. Explore how people from ancient and present cultures use art to tell stories about family, history; both fiction and nonfiction. Investigate different formats and styles as you draw, paint and use 3-D techniques to create comics, masks, quilts and other works of art. Tell your own stories through your art.

Lab fee: \$5.00

Instructor: Traci Bolda, HS Art Teacher, Columbia Public Schools

What Chemistry Is

Session I AM

Chemistry is a branch of science that studies what everything is made of and how it works! Explore five important concepts in chemistry - (1) solids, liquids, and gases, (2) physical and chemical changes, (3) thermodynamics/heat energy, (4) density, and (5) acids and bases. Conduct chemistry experiments each day. Burn metals, heat ice melting blocks. Learn how oxidation can make colorful, smelly or hot explosive chemical results. Relate these experiments to our everyday lives. Become a chemistry expert as you learn what Chemistry is.

Lab Fee \$10.00

Instructor: Sarah Laster, AP/Honors Chemistry, Columbia Public Schools

Wonka for Hire

Session I AM

Ever since giving Charlie the Chocolate Factory, Willy Wonka has run out of ideas for new candy to make! Help him out of his funk by creating our own candy factory. Sample candy from around the world. Learn to make candy and the science behind candy making. Study the history and health benefits of chocolate. (Yes, chocolate can be healthy.) Rank your favorite candy bars. Create

and make a new candy bar. Design a logo and market your candy bar. (Yes, there will be taste tests every day.) We will eat, read, and learn about all things candy. Become the next Willy Wonka for hire.

Instructor: Melanie Studer, ELA, North Callaway Schools