

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

Drawing the Endangered Session I AM



It has been estimated that a fifth of the world's mammals, birds, reptiles, and fish are in imminent danger of becoming extinct. There are more than 1,300 species listed as threatened or endangered in the United States. Drawing and painting are art forms that use line, color, and shading. Learn how to draw and paint animals while exploring acrylics, charcoal, watercolor, and ink. Practice techniques in drawing animals, form, anatomical structure, and biological detail. Then research an endangered animal of your choice. Create a painting or drawing in a composition combining at least three views. Collect your work in an original book featuring your endangered species.

Lab fee: \$5.00

Instructor: Traci Bolda, HS Art Teacher, Columbia 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 must buy all 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 ... Include animals that are normal to zoos and 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 create your dream zoo.

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

Engineering Challenges Session I AM

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.

Lab Fee: \$5.00

Instructor: Tanner Hakert, AP Science 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



Mission to Mars Session I AM

Join the CK crew to experience the challenges of becoming the first generation of astronauts to navigate the complexities of human life on Mars. Use every ounce of your scientific wit and creativity to build a (simulated) habitat. Dig into what the Mars Rover has discovered and explore Olympus Mons (virtually). Be prepared for epic natural disasters as we colonize the Red Planet. Analyze the potential benefits for life back on planet earth. Explore the near-term likelihoods and long-term possibilities of real-life missions to Mars.

Lab Fee: \$5.00

Instructor: Greg Irwin, AP History, Columbia Public Schools



Optical Illusions Session I AM

"Perhaps, optical illusions occur because we don't always know what we see, but what we tend to see what we know." —AU College of Medicine.

Study famous optical illusions and learn how to create your own. Analyze why do we see color when there is only black and white. Learn about the Zollner Effect. Use lines and color to create movement on the page. Optical Illusions are visually perceived objects and images that differ from objective reality. These visual phenomena both fascinate and perplex us. Interpret mind bending images to determine the reality of your perceptions. Explore theories behind a variety of illusion types. Make organized chaos as you create your own optical illusions.

Lab Fee: \$5.00

Instructor: Melanie Studer, retired teacher, Author/Educational Blogger