

Summer Enrichment Camp Courses 2023

High School

An Exploration of Photography

This class will explore a variety of photographic styles that includes alternative process photography, the current use of digital techniques, basic photo editing, and so much more. Students will have an opportunity to develop photographic works in multiple mediums as well as gain an understanding for the photographic process.

Bet On It

Throughout history, cultures have used different types of dice to make decisions and play games. When should you roll again? Should you call the bluff? Cut your losses while you can? We will explore dice games and activities, while we learn the math associated with them.

Engineering and Teamwork

Discover the engineering process and foster your teamwork skills through hands-on activities. Students will work with new partners each day to create cargo containers, a mountainous road, a payload mover, and bore through Mount MSMS.

The Face of STEM

What does a STEM (Science, Technology, Engineering, and Mathematics) professional look like? Not the stereotype! From math to physics and biology to chemistry, we will consider the life and work of famous **women** in STEM as we do what they did: play with rockets, explore DNA, and seek to unravel some of life's amazing mysteries.

Fractal Frenzy

The participants will enjoy exploring and making various fractal structures in nature and how to identify them. They will construct geometrical and random fractal structures via artwork and computer codes. We will explore number patterns that emerge from Sierpinski's triangle, the Jurassic Park fractal, the Koch snowflake and others. We will also explore number chaos theory and how it applies to fractals.

Going Global

Explore the concept of "normal" from a global statistics perspective. We will explore statistics and challenge viewpoints as we grapple with the issues of global poverty and education as we play simulation games, watch video clips, and hold class debates. This is not a math course, but we will use math and simulation to explore the world around us.

I'm With the Band

"A course for absolute beginners who want to rock, roll or hip hop." Ms. Barham
**If you play a traditional band/orchestra instrument but have never played guitar, bass, drums or keyboards in a contemporary setting, you may take this course. You are encouraged to bring any traditional band/orchestra instrument to camp.*

Ever want to play in a modern band? Students will learn the basics of guitar, bass, keyboards, and vocals in this fun and creative setting. Genres include rock, pop, hip hop, rhythm and blues, etc. If you already play a traditional band or orchestra instrument, bring it! Today's artists are incorporating a wide variety of instruments. With the aid of technology, we can do in a few days what once took weeks or months to accomplish. Class activities include learning contemporary songs, writing songs, recording and performing. Have fun forming groups, naming them, and creating music!

Materials provided by MSMS: Instruments, iPad©, song charts

*Students should bring any wind or string instrument they currently play. You will not be made to play it; however, it would be great to have on hand if you choose to play it.

Junkyard Jam

Counting, patterns, rhythms, fractions, volume, mass and numbers are common to science, mathematics and music. In this course, students will find connections between these subjects through fun and interactive activities. They will participate in dynamic projects that illustrate how math, science and music are linked. Using science and math, students will build instruments from junk, recyclable and found objects such as pvc basses, ukuleles, dulcimers, tubulums, drums, etc. Students will learn and perform songs on their instrument creations.

Materials used and provided: iPad©, tools, safety gear, found objects.

Junkyard Wars

Engineering meets the real-world in this class as you work in a team to solve problems using the Engineering Design Process. Materials are simple or recycled items repurposed according to your imagination and the problem at hand.

Krypto Kraze

Have you ever wondered how to create a secret code for a message so it is easy to decode but difficult to crack? This course will familiarize students with commonly used cryptography terms, guide students through encoding and decoding messages as well as introduce various encryption techniques such as Caesar cipher and public key encryption. Students will use mathematics with matrices to decode messages. Students will also be able to develop their own secret codes and have their fellow classmates try to crack the codes using mathematics. This course will also discuss the history of coding in various themes. By the end of this course, students will gain better reasoning and problem-solving abilities. Students will be able to reason and use logic at higher levels and gain a greater conceptual understanding of mathematics.

Mystery of Forensic Science

Have you ever wondered how evidence is collected to help bring criminals to justice? Does learning about different techniques and skills used by forensic scientists and crime scene investigators sound interesting to you? Join us as we perform ink chromatography, gel electrophoresis and forensic entomology to solve a few cases of our own!

No Experience Needed Coding

Looking for all students who are interested in computer programming or playing with Robots but have little to no experience. Learn how to program the Sphero Robot and challenge yourself to guide the Sphero through 5 challenging courses/obstacles.

Robotics

Robotics is the fusion of Computer Science and Engineering, and in our camp, we will give students the opportunity to experience both. The Robotics course will teach students the basics of computer programming logic while letting them build their own interactive fields and games.

Showstoppers: An Introduction to Being (Onstage)

Whether you've never been onstage before or you're totally in touch with your inner Broadway star, Showstoppers will help you acquire and refine your stage presence. The course begins with a quick look at improv and ends with the staging of student-written skits performed during Friday's closing ceremonies.

Stop-Motion Storytelling

Get creative! Stop-motion animation combines creative writing, technology, art, and music to tell stories one frame at a time. In this class, you will learn how to create stop-motion animation with 2D and 3D images. Not of a fan of drawing? Not a problem! From paper cutting to play-dough modeling, you will work in teams to meet the objective of the day.

Trading Places

In this class you will explore the trades common during the Middle Ages. *Full description coming soon.*