



## Weekly Course Descriptions

### Summer 2021

#### June 7-11

- **Space Exploration (1<sup>st</sup>-2<sup>nd</sup> graders)- Heather Cowell**

Join us as we sore through the final frontier zooming around nebulas and escaping black holes. Take a tour of the universe where we'll learn the difference between asteroids and meteors and roam the deepest caters and tallest volcanoes of our solar space. Blast off into science!

- **Chemistry Magic! (3<sup>rd</sup>-4<sup>th</sup> graders)-Tina Williams**

Chemistry is like magic! Learn the secrets behind popular chemical reactions but stand back as acids and bases amaze your mind. Nothing's up our sleeves when we do chromatography and turn 1 into 2 by separating mixtures in a flash. Everyone can be a chemistry magician with these experiments and much, much more.

- **Natural disasters (5<sup>th</sup>/6<sup>th</sup> graders) – Cassie Carpenter**

In a flash, a sunny day can take a turn for the worse. Join us as we get swept up in tornadoes, surf tsunamis, and brave hurricane force winds. We will learn the interworking's of the atmosphere to become a team of storm chasers tracking weather patterns and discovering how natural disasters are predicted. Plates will collide to bring our scientists to new heights as our excitement reaches to a magnitude 10 in this explosive camp!

- **Innovative S-TEAM Challenges (7<sup>th</sup>/8<sup>th</sup> graders) – Nicole Engleman**

Working in a STEM career requires a lot of cooperation and team building...you don't work alone! This camp session will focus on innovative challenges that participants will tackle in teams. So, let's solve the problems, learn to work together, and also learn new STEM concepts along the way.

#### June 14 – 18

- **Body Systems (1<sup>st</sup>-2<sup>nd</sup> graders) - Heather Cowell**

Our junior scientists will dissect the marvels of the human body as we surf alongside blood cells and help the immune system battle invaders. We will have a lot to digest as we investigate how nutrients are taken in and used to power our muscles. Get a jolt of excitement as we zoom in on the nervous system to discover how it is our brains keeps our bodies movin' and groovin'.

## **June 14 – 18 continued...**

- **Natural Disasters (3<sup>rd</sup>-4<sup>th</sup> graders)- *Danielle Hawkins***

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- **Engineering Through the Ages (5<sup>th</sup> – 6<sup>th</sup> graders)-*Cassie Carpenter***

From the pyramids of Giza, to Thomas Edison and the lightbulb, to coding in Silicon Valley, engineers have been solving problems since the beginning of time. Join us as we explore 5 different time periods while also exploring the engineering design process throughout the ages!

- **Curious Curators (7<sup>th</sup> – 8<sup>th</sup> graders)- *AU Museum of Natural History (AUMNH) \****

Why do we have natural history museums? Why are they important? How do they grow? From field to museum, you will explore our local biodiversity, make collections, and learn how to curate them. You will explore swamps, streams, forests, and grasslands for all plants and animals and even some fossils. Each student will keep a field journal where they will write the stories of their field experience. You will have a new appreciation for the diversity of the region and the scientists that study it.

*\*This camp takes place in conjunction with the AU Museum of Natural History and is quite different from a traditional Science Matters class. Students will primarily be outside doing fieldwork side-by-side with museum staff and class time will take place within the AU museum.*

## **June 21 – 25**

- **Coding for Kids (1<sup>st</sup>-2<sup>nd</sup> graders) –*Sarah Hillyer***

Do you like problem solving? Do you love a good challenge? If yes, this is the week for you! Students will use Dash and Dot robots to learn how to code as well as solve everyday problems. Students will learn how to program robots, add sensors, and use remote controls to control their robots.

- **Coding for Kids (3<sup>rd</sup>-4<sup>th</sup> graders) – *Valerie Bennett***

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## June 21 – 25 continued...

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## June 28 – July 2

- **Under the Sea (1<sup>st</sup>-2<sup>nd</sup> graders) – Danielle Hawkins**

Whales, sharks, penguins and crabs! This is just the beginning of what the ocean has to offer. Dive in as we explore animal adaptations, the ocean's layers, and tidal currents. Grab your goggles as we begin our descent into the deep blue sea!

- **Colors of Light (3<sup>rd</sup>-4<sup>th</sup> graders) – Samantha Shipman**

R-O-Y-G-B-I-V! Chase the rainbow as you separate light into the visible color spectrum and make connections between energy, wavelengths and colors. Once you have experimented with reflection and absorption you will see the world in a whole new light!

- **Curves Ahead (5<sup>th</sup>-6<sup>th</sup> graders) – Nicole Engleman**

Constant acceleration? Velocity? If these terms make your head spin, join us as we study the properties of math, physics and chemistry and how they work together and keep us straight! Buckle up and hold on as we study slopes, variables, and chart our course to a better understanding of the relationship between science and math.

## **July 5-July 9: NO CAMPS!**

## July 12– July 16

- **Weather Wonders (1<sup>st</sup>-2<sup>nd</sup> graders)- Sarah Barker**

We predict this camp will brighten your day. From the sunniest day to great big thunderclouds rolling in discover the true nature behind these “mist”-ifying phenomena. Grab your umbrella

and rain boots and learn what it takes to be a meteorologist as we soar through clouds and over the rainbows to see what makes the weather so marvelous.

## **July 12– July 16 continued...**

- **Bug Buddies (3<sup>rd</sup>- 4<sup>th</sup> graders) – *Samantha Shipman***

Get down to “bee”siness and join millions of ants as they work to build colonies and defend their nests. Flap your wings alongside the Monarch butterflies on their 3,000-mile migration. Get small and think big as we discover the wonders in our own backyard. Learn how bugs help feed the soil and pollinate plants in this creepy crawly camp.

- **Pollution Solutions (5<sup>th</sup>-8<sup>th</sup> graders) – *Pepper Dellinger***

Students will collaborate to tackle and solve real world pollution problems. Based on their pollution research, students will use the engineering design process to create pollution solutions for water, land, and air. They will test their creativity, problem solving, and teamwork abilities while building air and water filters. Students will help save a town from leachates, by working together to build a sustainable landfill.

## **July 19 – July 24**

- **Sense and Sensibility (1<sup>st</sup>-2<sup>nd</sup> graders)- *Aleesa Zutter***

Can you name all 5 senses? What makes our senses work - both by themselves and all together? Using our 5 senses, we will explore and investigate mystery substances and concoctions. Be prepared to work like a real scientist to make observations, predictions and examine the evidence to present our findings. Get ready to see, hear, taste, touch, and smell your way to fun!

- **Energy Transfer (3<sup>rd</sup>- 4<sup>th</sup> graders) – *Nicole Engleman***

Ready your electrons for an exciting experience where you’ll learn why ice melts and condensation forms. You’ll be ready to shout when the tea pots get all steamed up as molecules expand and matter changes states. Convert summer fun to energizing thought when experiments heat up in this dynamic camp.

- **Amazing Anatomy (5<sup>th</sup> – 6<sup>th</sup> graders) – *Danielle Hawkins***

Get under surface and up close and personal to dissect how the body works from battling infection to building muscle it takes a team of cells working together to keeping our body functioning correctly. Get down to the bone, as we look close at the skeleton to see what gives bodies their structure. Breathe deep and get energized to find out how our brain keeps our heart pumping and lungs breathing.

## **July 26 – July 30**

- **Storybook STEM (1<sup>st</sup>-2<sup>nd</sup> graders)- *Kasey Shepherd***

Once upon a time, in a laboratory far, far away... join us on a STEM adventure as we create solutions to problems in our favorite fairytales. Build the tallest beanstalk, design a house for the 3 Little Pigs, and rescue Rapunzel with physics. Learn how science can save the day!

- **Reduce, Reuse, Recycle (3<sup>rd</sup>- 4<sup>th</sup> graders) – *Samantha Shipman***

Team up to defend the planet against the forces of evil and battle pollution in your own neighborhood. Make brand new fun as we transform trash into marvelous treasures. Be quick and don't waste time- Jump into this not so new world and learn how soda cans are turned into bicycles.

- **NASA: The ISS and MARS exploration (5<sup>th</sup> – 6<sup>th</sup> graders) – *Pepper Dellinger***

Join the crew and take a journey to space! On this expedition, you will learn about the research and technology used by NASA to explore our solar system. With dozens of missions to Mars and 20 years of life on the International Space Station to train us, this camp will be a blast!