

**Science Matters**  
**Summer 2024 Course Descriptions**

**June 3 - 7**

**Journey into the Human Body (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 our brains keeps our bodies movin' and groovin'.

**Our Weird and Wacky Bodies (3<sup>rd</sup>-4<sup>th</sup> graders) – Shannon Brandt, Amy Wall**

Did you know the average person has 67 different species of bacteria in their belly button? Can you believe that human teeth are just as strong as shark teeth? How about the fact that scientists estimate the nose can recognize a trillion different scents? Get ready to experience the weird and wacky wonders of the human body as we investigate some of the strange, but true marvels of our bodies. We'll create models and carry out experiments related to our skin, teeth, senses, brains, lungs, and more as we discover the how and why behind some of the most fascinating facts about our miraculous bodies.

**Medical Microbiology (5<sup>th</sup>-6<sup>th</sup> graders) – Dr. Rebecca Riggs\***

Welcome to Medical Microbiology where we'll explore the fascinating intersection of human anatomy and medicine! Medical microbiology is the study of microorganisms, including bacteria, viruses, fungi, and parasites, all of which can cause diseases in humans. We will work with the SynDaver in the Anatomy and Physiology lab as well as microorganisms in the microbiology lab to foster scientific curiosity, critical thinking skills, and a deeper understanding of how microorganisms play a critical role in human health, initiating disease, and medical breakthroughs. Through hands-on lab activities, you'll work with bacterial specimens and learn the proper handling of specimens, staining of bacteria, viewing the specimens under the microscope as well as testing for antimicrobial susceptibility. You'll expand your understanding with the use of case studies and real-world examples for deep discussions into cutting-edge topics and breakthroughs in microbiology research.

\*This advanced camp will be taught by an Auburn University lecturer. A certified teacher will also be present in the classroom.

**June 10-14**

**Weather Wonders (1<sup>st</sup>- 2<sup>nd</sup> graders) - Heather Cowell, 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.

**Believe it or Not! (3<sup>rd</sup>-4<sup>th</sup> graders) – Ashley Hunter, Amy Wall**

This week is inspired by Robert Ripley and the amazing world he lived in. Your child will test and explore their imaginations, creativity and observational powers to the fullest. Something we do not know today, could be discovered tomorrow. Join us as we embark on a journey of acquiring knowledge about record breaking technological trivia, testing different theories, daring surgeries, body parts made from chocolate, and the highest recorded temperature on Earth. Be prepared to explore and research science facts that are weird, wild, but also true!

**Curious Curators (4<sup>th</sup>-5<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. They 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 different from a traditional Science Matters camp. **This camp is recommended for students that enjoy being in nature and are independent learners.** Students will primarily be outside doing fieldwork side-by-side with museum staff and class time will take place within the AU museum.

**5<sup>th</sup> grade students are only permitted to attend one week of Curious Curators.**

**June 17-21\***

**\*Camp will take place on the Juneteenth holiday**

**Storybook STEM (1<sup>st</sup>-2<sup>nd</sup> graders) – Sarah Barker, Amy Wall**

Your couch potatoes will turn into smart cookies as we read and build with enough fun to turn a bad seed or a sour grape into a good egg! This week is sure enough to make all the cool beans feel like a big cheese.

**Engineering on the Big Screen (3<sup>rd</sup>-4<sup>th</sup> graders) – Kaila Sutterfield, Hunter Herrick**

Grab your popcorn and your ticket! Join us as we take a trip inside the wonderful world of the big screen. We will dive into the different types of engineering as we learn how film creators use engineering to amaze and entertain us for hours on end. We will be using clips from some of your favorite movies and TV shows to help students solve

different engineering challenges as they relate to the movie or TV show. All clips will be age appropriate and screened heavily by the instructor. We look forward to having your student jump on the magic carpet with us as they enjoy the dips, turns, and adventures that await!

### **June 24-28**

#### **Animal Kingdom/Friend or Foe (1<sup>st</sup>-2<sup>nd</sup> graders) – Morgan Darvin, Amy Wall**

What's your favorite type of animal? Fins, feathers, or fur --- you'll learn about "popular" animals as well as many other creatures and critters you may not even know exist! We will also determine what predators and prey are and how they interact in our world. Reptiles, mammals, amphibians, birds, and fish – we'll observe and study what makes each species unique, the habitats they live in and how the animal kingdom works together in the complex circle of life.

#### **Who is Helping Whom? (3<sup>rd</sup> - 4<sup>th</sup> graders) – Hunter Herrick, Kaila Sutterfield**

Join us as we go on a journey into the animal kingdom! We will be exploring how animals help not only our world, but also us. We will dive into how we as humans can return the favor to the animals that help and love us so much. The week will be split into two parts. One part will be about how animals help us, and the other part will be about how we help them. We can't wait for you to join us on this journey. Bring your best stories and all the fun you can pack into your safari bag. See you in the animal kingdom soon!

#### **Curious Curators (5<sup>th</sup>/6<sup>th</sup>/7<sup>th</sup> graders) - AU Museum of Natural History (AUMNH)\***

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### **July 8-12**

#### **Junior Detectives (1<sup>st</sup>-2<sup>nd</sup> graders) –Sarah Barker, Morgan Darvin**

Was it Princess Pickle in the computer lab? Or was it your fingerprints on the cookie jar? Your little detective will use science to complete puzzles and solve some mysteries! This fun and education camp will involve elements of chemistry and forensic sciences.

**Mystery Summer (3<sup>rd</sup>-4<sup>th</sup> graders) – Kaila Sutterfield**

In this course, students will also learn the basics of crime scene forensics and how to employ deductive logic as a way to piece together evidence to identify a culprit. In one week, students will learn about code breaking, fingerprinting, blood examination, ink and handwriting analysis, and more! Armed with a detective's most significant tools- the skillful power to pose leading questions and the ability to magnify deceptively insignificant details, students will break codes, take prints, and analyze the evidence to solve the mysteries.

**Young Chemists (5<sup>th</sup>-6<sup>th</sup> graders) – Pamela Gaylor**

Delve into the fascinating world of chemistry through hands-on experiments, interactive demonstrations, and collaborative activities. From exploring the basic principles of matter to understanding simple chemical reactions, students will have the opportunity to unlock the mysteries of the periodic table and discover a new, fun side of science. Ignite your passion for the wonders of chemistry in a week filled with potions, reactions, and a whole lot of discovery!

**July 17-21**

**STEAM Survival Camp (1<sup>st</sup>-2<sup>nd</sup> graders) – Hannah Holmes, Morgan Darwin**

You are sent off into the wild with limited supplies. You have to stay quite a few days and have different challenges to survive off the land. We will explore different STEAM challenges that will test your creativity and critical thinking during STEAM survival camp.

**STEAM Survival Camp (3<sup>rd</sup>-4<sup>th</sup> graders) – Shannon Brandt, Ashley Hunter**

Young adventurers will embark on an exciting journey to explore the wonders of nature and develop essential survival skills. Need shelter to survive? We'll use our engineering skills to create one. No fresh drinking water? We have a science experiment for that! Lost in the woods? Learn how technology can help you out. Need to know which direction you are headed? Math skills are all you need. Join us for a week of problem solving, teamwork, curiosity, and fun as we not only survive, but also thrive in the great outdoors with our new STEM skills.