



Summer Programs

MARY AND FRANCES YOUTH CENTER

2017 Discovery Class Descriptions

Week 1: July 24 - 28

Morning Classes: 9:00 a.m. – 12:00 p.m.

- **Bring the Noise!** Music can change the world! This class will focus on the art of writing and performing original music. You will write songs, be in a band, and lay down the musical foundation before setting foot in the studio. Use rock instrumentation (vocals/electric guitar/keyboards/bass/drums) to develop your tracks while learning the history of popular music, including its influences and derivatives. This class culminates with a final concert at the end of the week.
- **Operation Health Care:** Doctors, nurses, pharmacists, physical therapists, clinical laboratory scientists, and nuclear medicine technologists...what do they do? Join us and learn about these exciting fields through team work and hands-on activities that take you across campus. Prepare to scrub in and start your journey towards exciting career opportunities in health care.

Afternoon Classes: 12:30 p.m. – 3:30 p.m.

- **Fit 4 Life:** Are you interested in sports management, physical therapy or athletic training? This exciting, hands on class will cover exercise science, health and wellness and options for future careers. This interactive week of exploration includes best practices of human movement while performing FUNdamental exercises in the Kinesiology and Health Sciences Laboratory. This class also includes tours of VCU's state of the art athletic and recreation facilities! You will create a health and wellness reference guide with nutrition concepts and tips. The week will culminate with partner presentations and families are encouraged to attend. Learn how to be healthy and fit for life!
- **Perfect Percussion:** Want to learn to compose and improvise with other musicians? Join this percussion ensemble to create music in real time, focusing on both the joy of improvisational techniques and the rigor of composition. We will use both traditional percussion instruments (ex: drum set, vibraphone, marimba) and "found sound" instruments (ex: wooden objects, lids, pots and pans, pipes) culminating in a final performance that families are invited to attend. Learn about careers in the percussion arena with the creative process front and center!

Full-Day Classes: 9:00 a.m. – 3:30 p.m.

- **Eco Explorers:** Ready to splash, explore nature and have lots of fun? Sign up for the hands-on, interactive Eco-Explorers class! We will head to the James and other local parks to learn about geology, botany, water ecology, and the eco-system of Richmond's very special urban river system. Take the opportunity to participate in outdoor adventure activities like hiking, climbing, wading in water with dip nets, log rolling, and building survival shelters!
- **3D Engineering:** Let your creativity run wild! Come learn engineering principles and how to create 3D mechanical engineering designs. For all engineering career paths, design, fabrication and testing are essential. As future engineers, you will tackle real-life scenarios in preparation for this field. Engage in activities related to catapults, projectile motion, and endurance of flight connected to rapid prototyping. To culminate the class, you will build your own 3D Avatar.





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Week 2: July 31 – August 4

Morning Classes: 9:00 a.m. – 12:00 p.m.

- **Adventures in Engineering:** This summer, the School of Engineering will host a selection of activities that will lead budding engineers and scientists through the design process and teach them how to meet design challenges over a wide range of engineering themes. Explore computer science, electrical engineering and mechanical engineering to figure out solutions to everyday problems. This is your time to be an engineer!
- **Monkeying Around:** Do you like to MONKEY AROUND? Want a chance to learn about what makes us uniquely human? This class will start with a foundation in natural selection and the process of evolution. We will follow the evolutionary process of primates and the human lineage tree to find out what makes the modern humans different from all other species! This fun, hands-on class will use videos, games, and activities to understand the important processes of evolution.

Afternoon Classes: 12:30 p.m. – 3:30 p.m.

- **H2O Investigators:** Ever wonder how crimes are solved or how to make rock candy? The key to these mysteries are all unlocked in water! Water is a simple compound that is central and essential in our everyday lives, but have you ever really looked at all the things water can do? Come and explore the amazing properties of water through a variety of fun lab experiments and in the process, learn the scientific method for discovery.
- **World Chefs:** Grab your passports and travel around the world in 15 delicious dishes! This culinary adventure will take us all over the world to learn about different cultures through cooking. These recipes have defined cultures for generations, and now you will be part of that tradition. You will prepare entrées that present the culture and traditions specific to the chosen regions. Prepare your taste buds to be mesmerized by exotic cuisines!

Full-Day Classes: 9:00 a.m. – 3:30 p.m.

- **Speak Out!** Develop your voice with creative writing prompts that will challenge your imagination. We will learn the rules of poetry, so we can break them! Let's enjoy the beautiful weather and sit outside and write about our surroundings. Do you think you can write a poem about a person you know by only describing an object they own? Come join us and find out. On the last day of class, we will have an Open Mic performance for parents and friends.
- **Arts: Back to the Future:** Hop on board as we travel around the world and explore indigenous art and artifacts of ancient civilizations and cultures. From clay pots to rice paper and rain sticks, discover cool and unusual mediums that have been used throughout the centuries. Learn about careers as an art historian, archeologist, community artisan and preservationist. Create contemporary versions of these art forms by incorporating objects and materials that you discover!





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Week 3: August 7 - 11

Morning Classes: 9:00 a.m. – 12:00 p.m.

- **Nutrition Ninjas:** Love to eat? Who doesn't? Sharpen your knives and your brains as we peel away the layers of culinary arts and nutrition science. Learn the roles of different foods and nutrients and how they help specific body systems reach optimum performance. By the end, you will know what foods help the hospital dietitian protect the immune system, which afterschool snacks the public health nutritionist recommends for healthy growth, and what meals the sports nutritionist prepares for a quick boost or endurance training. Above all, each class includes hands-on preparation of a snack or meal item that proves you do not need to sacrifice taste for health!
- **Sports Stats:** Ever wonder if you could be as fast as your favorite athlete? Huddle up and prepare for a fun week of soccer, basketball, running and all kinds of physical activities while learning how to assess your skills through statistics. Test your physical and mental stamina, crunch the numbers and learn how statistical technology play an important role in sports. Join your teammates in exploring how math and science help us understand athletic performance, team ranking techniques and the entire sports industry.

Afternoon Classes: 12:30 p.m. – 3:30 p.m.

- **Exhibit Your World:** From hairstyles and fashion, to movies and music, what does the world look like today? This class will help you capture a snapshot of 2017 so someone 100 years from now can see what the world looked like from your perspective. Did you know that Smithsonian Museums now feature the first iPod as a piece of history? Historians and museum curators are already starting to document the modern world. What technology, art, objects, music or activities, would you include in your museum? Join this class to re-imagine what a museum can be and exhibit your world!
- **Science Busters:** If you swallow gum will it really stay in your stomach for seven years? Is it possible to make an egg bounce without breaking? Chemistry and science are all around us, but how does this effect your everyday life? Join this class to discover the secrets and surprises of our universe. Through myth busting experiments, you will learn what holds everything in the world together. Whether you are a future scientist or the next star of your own myth busting TV show, this class is for you!

Full-Day Classes: 9:00 a.m. – 3:30 p.m.

- **Gaming Out of the Box:** Have you ever played games like Pokémon Go and suddenly realized you knew how to make it better? Have you ever wanted to peel back the curtain of Madden or FIFA to see how it ticks? If you answered yes to either of these questions, this class is for you. Learn how to design and build games ranging from Mario to Monopoly. When it's over, you will have something you made that you can play - and your friends can ask you what makes it tick!
- **Future Journalists:** Do you have the next trending story #breakingnews? Join Discovery's team of journalists as you learn the ins and outs of modern news publishing. In the Discovery newsroom, you will learn to interview, report and write news stories about issues that matter to you while drawing from local professionals. Get the scoop on how the already fast-paced world of journalism is getting faster by the minute! By the end of the class, you will have created a small online portfolio to share with the world.





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Week 4: August 14 - 18

Morning Classes: 9:00 a.m. – 12:00 p.m.

- **Pharmacy: Curating Cures:** If you could create a cure for anything, what would it be? How would you market your new medicine and explain the science behind it? This interactive pharmacy class will walk you through the steps of medicine discovery and design, through clinical testing, advertising and sales. You will learn about future careers in pharmacy and pharmaceutical development and the class will culminate in a final presentation, outlining the timeline from creation to pharmacy counter.
- **Project Write Now!** Have you ever had anything important to say, but you were not quite sure how to say it? Podium's "Project Write Now!" wants to help! We will be looking at and exploring all the different ways to speak your mind and express yourself. From music to movies, from poetry to short stories, and from debate to spitting bars, we will be looking at all forms of self-expression. Join us and develop your voice so that you never feel like you don't have the tools to stand up and speak out.

Afternoon Classes: 12:30 p.m. – 3:30 p.m.

- **Water Works!** Think about all the ways you use water – showering, brushing your teeth, cooking, drinking and so much more. Have you ever considered everything it takes to keep your water clean and accessible? From environmental engineering to the bottled water industry, there are a variety of careers that revolve around water. Join this class and learn about chemistry, materials science, public works and technology to discover how water works!
- **Yoga with the Oomies:** Turn your homies into Oomies through Yoga! Join this class and experience how to keep your body active and relax your mind. Learn how to manage peer pressure, survive without technology, get energized and have fun while reaching inner harmony. Increase your ability to concentrate and focus through the practice and tradition of Yoga and learn the career paths associated with these concepts. "The mind is everything. What you think, you become."

Full-Day Classes: 9:00 a.m. – 3:30 p.m.

- **Global Connectors:** Want a career in the international community working for the World Bank, United Nations or even as a US Diplomat? Want to travel the world and make a difference in the lives of others? This is the class for you! Community is beyond Richmond, and it is even beyond the USA. You will learn about countries around the globe from Africa to Europe and discover how we are all connected. Join this class and become a global citizen! Families are encouraged to attend the presentation of the projects on the final day.
- **Lights, Camera, Action!** Do you have a movie idea knocking around in your head? Does it play on repeat on the silver screen in your mind? Lights, Camera, Actions a class where we make those cinematic dreams a reality. You will gain a basic knowledge of a wide variety of filmmaking skills, such as screenwriting, storyboarding, camera operating, sound mixing, lighting, production scheduling, and editing. You will work as a team to produce a short film that tells a unique story. The class culminates with a film screening for friends and family.

