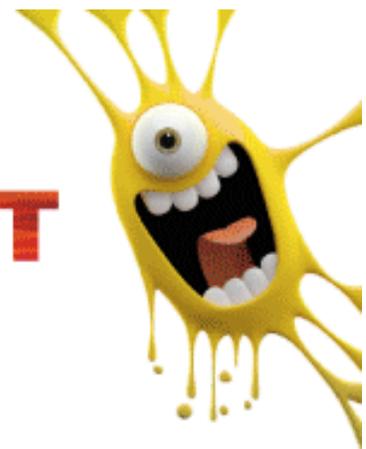


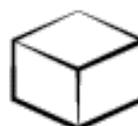


BLACKROCKET

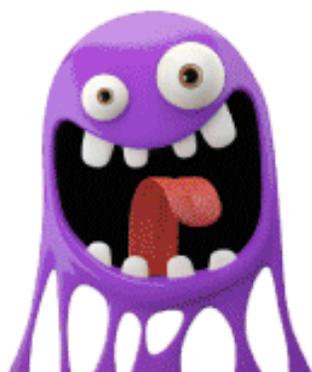
Launch Your Creativity



2022 COURSE DESCRIPTIONS



TECH PROGRAMS THAT TAKE OFF!



Summer 2022 Courses

NOTE: These course descriptions may be used **for both** online and in room programs. **Please do not use any previous course descriptions.** For online programs only, we strongly recommend including the tech specs found here <https://blackrocket.com/online-tech-specs>.

Also, please note the following changes to the course descriptions for 2022:

- The phrase “Students will work in pairs and teams” has been removed from the individual descriptions and are only included in the company description. You may add it back if you wish.
- Virtual Reality is the only course that has two different course descriptions one for in room and one for online. Please be sure to use the correct one.

Company Information

Please include this company overview on your website or brochure. If you do not use this description **you should add the sentence about working in teams to every course description.**

“The magic in every student comes to life as never before when they are empowered to be as creative as they were all born to be! Black Rocket has twenty years of experience designing courses in the S.T.E.A.M fields. Every program is powered by the child’s innate imagination and designed to bring their ideas to life in a fun, hands-on learning environment. All Black Rocket programs mirror real-life experiences and the collaborative nature of the design process. Students will work in pairs or teams for in-room programs in a COVID safe way. Online classes provide a more independent experience, but with an emphasis on peer to peer feedback to enhance the creative process.”

3D Game Design with Unity

Are you ready to take your game design skills to another level? With Unity, an industry-grade design software, aspiring game designers will learn level editing, 3D modeling, impactful gameplay creation, as well as how to utilize scripts and variables. Student-created games will be available on a password protected Black Rocket website to share with friends and family. Returning students can create more advanced projects that build on previous years.

Ages: 8-11 and 11-14 ***Compatible with MAC and Windows OS only and requires a 64-bit operating system.**

Advanced Robotics

In this class, create a basic AI to program a robot using visual and text-based code. Utilize a variety of sensors that help your robot navigate and overcome daily class challenges. With your teammates, you will apply different coding concepts while using the scientific method to formulate, observe, experiment, test, and modify your robot. No prior experience is required.

Ages 8-11 and 11-14

**Limited supplies for 2022. Kits may not be available for all locations.*

Adventures in Augmented Reality!

Watch as holograms come to life in the first-ever augmented reality for kids! Students will work in cutting-edge software to create holographic scenes that are viewable with a smartphone and a magic futuristic cube. Get hands-on with your own digital creations in this one of a kind experience! Student-created projects will be available on a password protected Black Rocket website to share with friends and family.

Ages: 8-11 and 11-14

**Compatible with MAC, Windows and Chrome OS.*

***Turnkey locations must provide phones (2 min) or students can BYOD.**



App.IO: Make Your First Multiplayer App!

The hottest new Apps are IO apps! If your child likes to play Agar.io or Slither.io they will love this class! Become the creator of the next viral web app! In this class, explore the most popular .IO apps, design your own multiplayer experience and learn how to code your own app. Student-created apps will be accessible on a private site and can be played on any mobile device or computer. Publishing to App Stores not included. Students do not need to own a smartphone to take this class. Returning students can create more advanced projects that build on previous years.

Ages 8-11 and 11-14

**Compatible with Windows OS only.*

App Attack!

Take the first steps into the world of mobile app design and customize your own game app! Using a specialized app & game development tool, students will explore the world of web-based (HTML5) mobile apps. In addition to learning the basics of mobile app design and game development, you will also see firsthand how the world of App publishing functions. Student-created apps will be accessible on a private site and can be played on any mobile device or computer. Publishing to App Stores not included. Students do not need to own a smartphone or tablet to take this class. Returning students can create more advanced projects that build on previous years.

Ages 8-11 and 11-14

**Compatible with Windows OS only.*

Battle Royale: Make Your First Fortnite® Style Video Game

Fans of Fortnite we need you! Instead of playing the game, design your own. Using a professional 3D game development software, build levels and assets inspired by popular battle royale games like Fortnite. Students can participate in eSports League matches against other schools across the country with a chance to have their levels featured in the Black Rocket master build of the game! This course includes cartoonish action and battle sequences. Student-created games will be available on a password protected Black Rocket website to share with friends and family.

Ages: 8-11 and 11-14 **Compatible with MAC and Windows OS only and requires a 64-bit operating system.*



Bricks and Sticks Stop Animation

Take your stop motion movies to the next level. First, create a story with Stikbots, Legos, action figures or all three! Then watch your story come to life using special stop motion software that allows you to add special effects and go beyond the typical software on a mobile device. Students will need to bring in figures, Stikbots, or Legos from home, but all other equipment will be provided. Student-created films will be available on a password protected website to share with friends and family.

Ages: 6-8, 8-11, and 11-14

**Compatible with MAC and Windows OS only.*

**An external webcam or camera is required for this course.*



NEW! Coding Academy

Calling all future coders, programmers, & designers! Explore a series of coding languages like HTML, CSS, JavaScript, and Python through introductory projects and design challenges. Learn the basics to get started on your coding journey and become the next coding prodigy! Projects will be available on a Black Rocket website to share with friends and family.

Ages 8-11 and 11-14

**This class is only offered in the Fall, Winter and Spring.*

Code Breakers

Calling all future coders, programmers, & designers! Learn the basics of coding languages like HTML, JavaScript, and CSS through a series of web projects and design challenges each day and be on your way to becoming the next tech star! Whether you want to be a silicon valley CEO or the high school student who just made \$1 million dollars for programming in her bedroom, this course has the essentials you need to begin your journey. Projects will be available on a Black Rocket website to share with friends and family. Returning students can create more advanced projects that build on previous years.

Ages 8-11 and 11-14

**Compatible with MAC, Windows and Chrome OS.*

Code Explorers

For curious young minds who want to take the first steps into the world of programming. Student explorers will use their creativity to solve a series of web-based coding challenges. Each lesson builds fluency in essential digital skills needed for the future. At the end of the class, students will receive access to the interactive learning platform to continue their coding journey at home.

Ages 6-8

**Compatible with MAC, Windows and Chrome OS.*

Code Your Own Adventure! Interactive Storytelling

Watch as the characters in your imagination come to life in this unique course that blends classic storytelling with animation techniques and coding. Start with a concept, design the characters, and choose not just one ending, but many! Learn how to create your own text-based adventure games with variables, conditional logic, images, HTML, CSS, and Twine scripting syntax. Student projects will be available on a password protected Black Rocket website to share with friends and family.

Ages: 8-11 and 11-14

**Compatible with MAC and Windows OS only.*

Creative Design and Robotics

The world of the future belongs to...robots! In this cutting-edge class, students will learn the fundamentals of motorized mechanisms, design principles, sensors, and sound activation. Separate fact from fantasy by designing and building prototypes of task-oriented robots. Learn problem-solving to improve how their robots function in a series of design challenges! Students will work in pairs or teams for most of the program.

Ages: 8-11 and 11-14

**Limited supplies for 2022. Kits may not be available for all locations.*

NEW! Cyber Spies

With the world's increased reliance on digital data, cyber security is more important than ever! In this class you are all that stands between a group of international hackers launching cyber attacks and world peace. Through a series of challenges students will learn to apply tools used by professional digital forensics teams to crack codes and use encryption. Working in teams you will have to collect clues, recover lost data, and explore the tools of the trade and become the next great cyber spy!

Ages: 8-11 and 11-14

**Limited to Comprehensive only for 2022.*



Drone Adventures

The Drones are here! Let the battles begin. In this hands-on, interactive class you will learn how to safely fly drone robots. Working in teams, you will be able to code your drone to compete in missions that will prepare you for the ultimate team challenge at the end of the week. Students will work in pairs or teams for most of the program.

Ages: 8-11 and 11-14

**Limited supplies for 2022. Kits may not be available for all locations.*

eSports Apprentice - Streamers and Gamers

Whether you want to be the next pro gamer, streamer, or gamecaster this course will teach you the basics to get started! No longer just a hobby, eSports is the fastest-growing career for the next generation. Over 400 million people watched YouTube videos and Twitch streams of video game competitions this year alone! In this course, students will develop game-play skills and compete using Black Rocket's eSports games and apps, learn how to produce commentary for live tournaments, use professional streaming software, and most importantly practice online safety. Student recordings will be available on a password protected website to share with friends and family. Videos will not be broadcast publicly but will be shared with all students in the class.

Ages: 8-11 and 11-14

**A webcam is required for this course. Software is compatible with MAC and Windows OS only.*



Inventor's League - Prototyping for the Future!

Become an inventor of the future! Learn 'rapid prototyping' and problem solving as you conceptualize and design a product to solve a critical global issue. Each day begins with inspirational profiles of young inventors, such as the eleven-year-old who coded a robot to find victims of natural disasters. Next, research a problem to tackle in medicine, architecture, the environment, or a topic of your choosing. Once your vision is complete, learn how to draft 2D designs, create 3D models, and develop a website to pitch your ideas to the class. Student projects will be available on a password protected Black Rocket website to share with friends and family.

Ages: 8-11 and 11-14

**Compatible with MAC and Windows OS only.*

JavaScript Developer Jam

Learn programming tools so powerful they seem like magic! Start off by learning an array of core programming concepts with JavaScript by experimenting in a series of digital challenges. Start with programming your first animated memes, then tackle more advanced skills such as interactive 3D experiences and game creation. Projects will be available on a password protected Black Rocket website to share with friends and family.

Ages: 8-11 and 11-14

**Compatible with MAC, Windows and Chrome OS.*



LEGO® Films and Stop Action!

Make your LEGOs come to life! Bring in your favorite action figures or LEGOs and create a short film with your friends. Whether you want to recreate a scene from Star Wars or design a world of your own, this class brings your dreams to the screen. Students will need to bring in LEGOs and/or action figures from home, but all other equipment is provided. Student-created films will be available on a password protected website to share with friends and family. Returning students can create more advanced projects that build on previous years.

Ages: 6-8, 8-11, and 11-14

**Compatible with MAC and Windows OS only.*

**An external webcam or camera is required for this course.*

Make Your First Video Game!

If you love playing video games, this is the camp for you! Make your first video game in this one-of-a-kind class that shows you the keys to designing your first **2D** platformer game. Conceptualization, play experience, level design, graphics, sounds, and simple coding are just some of the concepts that we'll explore. No prior experience necessary, just a desire to have fun. Student projects will be available on a password protected Black Rocket website to share with friends and family. Games are only compatible on PC computers. Returning students can create more advanced projects that build on previous years.

Ages: 8-11 and 11-14

**Compatible with Windows OS only.*

Make Your First 3D Video Game!

In this Black Rocket classic, you will go well beyond the limitations of the traditional 2D game design classes and create an immersive 3D world. Students will learn the physics behind 3D games, explore beginner event scripting, level design, controlling the flow of gameplay, and storytelling. Student projects will be available on a password protected Black Rocket website to share with friends and family projects are only compatible with Windows devices.

Ages: 8-11 and 11-14

**Compatible with Windows OS only.*

Minecraft® Animators

Create the next popular animated Minecraft video on YouTube! Practice the same skills professionals at Pixar and Disney Animation Studios use. Discover the process of keyframing and tweening, how to use it to bring your own animated stories to life, and how to publish your content on YouTube. Student projects will be available on a password protected Black Rocket website to share with friends and family. Mac users can play their project at home, but will not be able to edit the project without a PC. Returning students can create more advanced projects that build on previous years.

Ages: 8-11 and 11-14

**Compatible with Windows OS only.*

UPDATED! Minecraft® Designers

If you love the game Minecraft and always wanted to design your own world, this class is for you! Learn how to create a custom map, design structures to share between worlds, build with Redstone and Command blocks, and create custom textures for you to import at home or share with friends. **Students must own a Java version of Minecraft to take this class.** Tablet, phone, and game console versions of Minecraft are not compatible. Returning students can create more advanced projects that build on previous years.

Ages: 8-11 and 11-14

**Compatible with MAC and Windows OS only. [Purchase Minecraft Java Edition](#)*



Minecraft® Modders

Customize your own Minecraft world and mod the classic game in this one of a kind class. Learn scripting and logic statements as you create your first mods. Students will create a wide variety of new elements, gameplay mechanics, and world generating mods to change the way you play Minecraft. Projects will be available on a password protected Black Rocket website to share with friends and family. **Students must own a Java version of Minecraft to take this class.** Tablet, phone, and game console versions of Minecraft are not compatible. Returning students can create more advanced projects that build on previous years.

Ages: 8-11 and 11-14

*Compatible with MAC and Windows OS only. [Purchase Minecraft Java Edition](#)



UPDATED! Minecraft® Redstone Engineers

Take the next step beyond simply “playing” Minecraft and become a true Redstone engineer. Expand your Redstone knowledge by constructing your own carnival with a variety of mini-games, roller coasters, and attractions powered by Redstone. Learn how to use Command and Structure blocks to incorporate them into your builds. Activate your skills and take your Minecraft structures to the next level! **Students must own a Java version of Minecraft to take this class.** Tablet, phone, and game console versions of Minecraft are not compatible.

Ages 8-11 and 11-14

*Compatible with MAC and Windows OS only. [Purchase Minecraft Java Edition](#)

NEW! Pokémon® Masters: Designers & 3D Makers Unite!

Calling all PokeMasters who want to be the designers of the future! Use your Pokemon imagination and bring your ideas to life. Begin by creating your own digital Pokemon-style custom playing card game. Progress onto designing action figures, jewelry, and toys in professional-level modeling software. Learn how to prepare a model for 3D printing and create a design portfolio to showcase your work! No prior experience is necessary and 3D designs will be available on a password protected Black Rocket website to share with friends and family.

Ages 8-11 and 11-14

*Compatible with MAC and Windows OS only.

Python Programmers

Want to learn the world's fastest-growing programming language favored by Google, NASA, Youtube, and the CIA? Learn how to code with Python to create engaging apps and games. Each lesson takes you step-by-step on a programming path that will let you challenge friends with fun content you create from start to finish! Returning students can create more advanced projects that build on previous years.

Ages: 8-11 and 11-14

*Compatible with MAC, Windows and Chrome OS.



ROBLOX® Coders & Entrepreneurs!

Discover the Lua language through a visual block coding system while designing worlds in ROBLOX®, an online universe where you can create anything you dream of. This new class combines game design concepts, coding, and fun! Young entrepreneurs will also learn how to navigate ROBLOX's fast-growing marketplace to publish their games. Student-created games will be available on a password protected Black Rocket website to share with friends and family.

Ages: 8-11 and 11-14

**Compatible with MAC and Windows OS only.*

ROBLOX® Makers

Unlock the power of ROBLOX® Studio, the world creation tool used by real-world ROBLOX® developers! Learn how to build 3D models and create an adventure in your ROBLOX® world. Bring characters to life with unique animations you design. Student-created projects will be available on a password protected Black Rocket website to share with friends and family.

Ages: 8-11 and 11-14

**Compatible with MAC and Windows OS only.*



Rocket Kart Racers: Design A Mario Kart® Style Game

On your marks, get set, create! Blast off in making your first 3D Mario Kart® and Crash Team Racing® style game! Design your own tracks and customize your karts and characters. Using a professional 3D game development software, students will combine their creations into their own kart racing game that they can play with friends and family at home. Students can participate in eSports League races against other schools across the country with a chance to have their tracks featured in the Black Rocket master build of the game! Student projects will be available on a password protected Black Rocket website to share with friends and family.

Ages 8-11 and 11-14

**Compatible with MAC and Windows OS only and requires a 64-bit operating system.*

Video Game Animation

Take your game design skills to the next level by creating and animating your own character sprites, objects, and backgrounds. Start with a name, develop the character's personality, signature moves, special powers, and a storyline. Finish with a fully animated character to be used in your very own game. Students do not need any prior experience in game design, animation, or sketching. Student-created games will be available on a password protected Black Rocket website to share with friends and family.

Ages: 8-11 and 11-14

**Compatible with Windows OS only.*



IN ROOM VERSION OF VIRTUAL REALITY

Virtual Reality: The Future is Now

Embark on an EPIC adventure in virtual reality! In this cutting-edge class, learn the foundations of VR design by creating your own *virtual* worlds, exploring simulated environments, crafting 3D experiences, and learning basic programming concepts. At the end of the week, take home your first cardboard VR headset to show friends and family the new worlds you created. VR projects can be viewed on a website or mobile device. Students do not need a mobile device to take the class, but will need access to a mobile device at home. VR projects will be available on a password protected Black Rocket website to share with friends and family.

Ages 8-11 and 11-14

**Compatible with MAC, Windows and Chrome OS.*

*****For in room programs headsets are shipped to the school and the price should be built in.***

ONLINE VERSION OF VIRTUAL REALITY

Virtual Reality: The Future is Now

Embark on an EPIC adventure in virtual reality! In this cutting-edge class, learn the foundations of VR design by creating your own *virtual* worlds, exploring simulated environments, crafting 3D experiences, and learning basic programming concepts. **A cardboard VR headset is optional for this course. Students may order one from blackrocket.com/store, take the class without a headset, or use any headset that works with a mobile phone.** VR projects will be available on a password protected Black Rocket website to share with friends and family.

**Compatible with MAC, Windows and Chrome OS.*



YouTube® Content Creators

Find your voice and leave your mark on the world! Whether you are six or sixteen, it's time to start a career as the next YouTube star. Explore the variety of content and personalities that exist on YouTube and how to find your own niche. Learn the Dos and Don'ts of the platform and how to practice good digital citizenship. Develop your on-camera presence, your own channel branding, and professional editing skills. Take home a plan for launching your own channel with the content created in class! Student projects will be available on a password protected Black Rocket website to share with friends and family.

Ages 8-11 and 11-14

**A webcam is required for this course and it is compatible with MAC and Windows OS only.*



NEW! YouTube® FX Masters

Do you love movies with exciting special effects, like *The Avengers*, *Star Wars*, or *Harry Potter*? Amaze your friends by swinging a lightsaber or blasting fire from your hands and becoming a master of the illusions used by Hollywood artists to create visual effects magic. Whether you want to enhance your YouTube videos or create a cool scene to amaze your friends; this class teaches the tools you need. Experiment with visual effects as you learn the dynamics of camera angles, editing, graphic layering, and sound effects. Then watch as your new creations take your channel content to the next level! Student projects are available on a password protected Black Rocket website to share with friends and family.

Ages 8-11 and 11-14

*A webcam is required, compatible with MAC and Windows OS only, and **requires a 64-bit operating system.**

Leadership Series ***Only available at certain locations.*****NEW! Model United Nations**

Become one of the 400,000 students around the world in Model United Nations! Assume the role of an ambassador and represent your country to solve current world issues. Throughout the week students will research a world problem, develop solutions, and negotiate consensus with their peers. This program prepares teenagers in core skills such as research, writing, public speaking, problem solving, and conflict resolution. Model UN alumni have gone on to become supreme court justices, world leaders, lawyers, and business professionals. No prior experience is needed.

Ages 11 -14

NEW! Day in Court - Mock Trial

Play the roles of judge, defendant, plaintiff, witness, lawyer, bailiff or juror in several mock trials. Learn how to make opening and closing statements, how to phrase objections, and how to question witnesses. Pull all your skills together at the end of the week as you participate in a final mock trial based on actual events.

Ages 8-11 and 11 -14

Friday Night Clubs ***Friday night clubs are online in the Winter/Spring/Fall of 2022*****NEW! Minecraft Club**

Join kids around the country in our Creator Corps Community of Minecraft maniacs who play and create together. Each week have fun playing Minecraft and learning new tricks from our Minecraft Masters. Each Friday one of our Coaches will teach a new technique and challenge to the club and let you show off your skills. Clubs meet every Friday at 7pm EST for 6 weeks.

NEW! Roblox Club

Are you an avid Roblox player and creator? Join us on Friday nights to collaborate and play mini games with one of our Roblox Coaches and make new friends in a safe and fun environment. Clubs meet every Friday at 7pm EST for 6 weeks.

