

How Do Students Compete In Drone Racing?

Drone racers have the option to conduct races between teammates, other schools, virtual races, qualifying races, and championship races. In-school races are designed to be creative, allowing teams to choose the number of laps and the course layout. Virtual races allow for player-vs-player or school-vs-school in our computer-based simulator with fast and accurate result tracking. Qualifying races allow students to place in regional and national level races with other schools. Races at the regional and national level is where the real competition begins, where the winners are awarded with a trophy and a year's worth of bragging rights. The majority of races are trackable via various leaderboards within the player portal. Family and friends will never have to miss a second of the action with built-in camera systems capturing race footage that may be uploaded and easily shared. Students can also sport their accolades digitally, including badges and trophies for best course times, FAA commercial drone certifications, course designer achievements, and more!

How Did Rocket Drones Simplify Drone Racing?

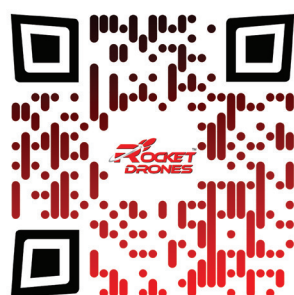
In order to simplify a complex sport such as drone racing, we started with the drone itself. Each student's debut flight experience had to be impactful and easy to increase the likelihood of repeat engagement from students. This realization is what led to the creation of our stage one drone. With optical and lidar sensors built in, first-time flyers experience the aid of altitude hold and smooth, slower beginner speeds to get acclimated at a comfortable pace. As soon as a student feels confident enabling faster speeds and mastering altitude control without the sensor, students can move into piloting while wearing the FPV goggles. This key milestone is the moment students are officially drone racers. Once students qualify for the stage two drone, they may race at higher speeds and unlock an entire new level of competition between advanced students. Additionally, all of our equipment use the same USB C connector, every drone (no matter the stage level) shares the same batteries, controllers, and goggles to keep the entire system simple. Our proprietary race gate timing system makes coaching easy and stress-free with simple-to-use race tracking that allows coaches to upload race results with ease using our app and website portal.



GRADES 6TH-12TH PROGRAM OVERVIEW



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What Is Drone Racing?

Drone racing kicks regular drone operating into high gear as a fast-paced, competitive sport. Drone operators wear specialty FPV goggles that connect directly to an on-board camera system that simulates a first-person view from the drone, hence the name 'FPV.' This means that the operator only sees what the drone sees, letting pilots uniquely become one with their drone and fly as if they are directly on board. Competitive drone racing involves racers navigating their drones through a series of obstacles complete with high-speed twists and turns, a game in which the fastest person is declared the winner. Big events and races are streamed live from the on-board camera system so that spectators experience the thrill of the race.

How Does Drone Racing Benefit Schools?

Rocket Drones' dedication to schools was founded on the idea of providing flexibility and longevity, allowing the schools to choose what is best for their students. Set your 16+ students up for the business world with our bolt-on commercial drone FAA certification or supplement their academic career with challenging classroom STEM kits. In addition, you can enter each school year with confidence knowing that Rocket Drones refreshes batteries and drone parts annually to keep your students in the race and learning. Advanced performers may benefit from our second stage drone. It allows for higher speeds and more capability, all while remaining compatible with our baseline controller, batteries, and goggles. Lastly, inclusivity and portability is a central theme of our program. Rocket Drones provides easy-to-use inflatable courses that can be set up in only ten minutes, as well as goggles that accommodate eyeglass wearers.

How Does Drone Racing Benefit Students?

Rocket Drones allows students to immerse themselves in emerging drone technologies. Students will engage within a wide scope of scientific concepts, including learning how signal transmissions work from control to drone, the engineering components and how to properly tune a motor, the physics of flight and how it applies to drones, how to calculate drone performance data, and the history and future of drone technology. With Rocket Drones students can reach out and touch these concepts, take them out of the classroom and place learning into their hands, adding a layer of excitement to the learning experience. For example, we can take a lesson plan involving the on-board video transmission system and signal technology and parlay that into hands-on practice featuring various video signal exercises.

Rocket Drones emphatically believes in the power of allowing students to engage directly with these concepts in a personal way. This highly-engaging approach to learning then enables students to take their drone knowledge to the next level, weaving design and content creation into the technical side of the operation by creating their own virtual race courses, recording, editing, and sharing of drone videos.

How Can Drone Racing Benefit Students' Futures?

Rocket Drones aims to enable students to grow and excel within a rapidly expanding career field in unmanned systems that maintains a strong demand for qualified individuals. These career paths are plentiful and no longer tethered solely to the classical role of the drone operator. Demand has emerged for everything from unmanned floor cleaners and construction equipment to unmanned farming equipment and lifeguard drones, covering a wide scope of necessary fields of work that need qualified operators, programmers, and maintenance technicians. Currently, the traditional curriculum in the school systems lacks the necessary programs and resources to effectively expose students to these exciting career opportunities, which is precisely why Rocket Drones was founded. Education is at the core of what we do. Drone Racing is an exciting way to open the door for many future career pathways. Recent studies report that 83% of Generation Z self-identifies as gamers. This means that the vast majority of young people today are using gaming to socialize, relax, and enjoy competition. Rocket Drones caters to an ecosystem of young gamers and prepares them for the cutting-edge STEAM careers of tomorrow.

How Does Drone Racing Benefit Teachers?

Teachers may use our drone curriculums to segue seamlessly into real-world educational applications. Drone racing engages the students, allowing teachers to blur the lines between fun and education. The system is packaged to offer total flexibility and includes both a full-size gym race course and a classroom race course so that students may practice anywhere on campus. Instruction and coaching is simple and easy with our proprietary web and app-based configurator, as well as sensors to time each exercise.

How Does Drone Racing Benefit Parents?

When it comes to finding a competitive sport, it's not always easy to find the perfect fit. Many traditional sports, no matter how appealing, do not provide an ease of participation for all students. The need for prescription lenses and a disability are just a few examples that may stop kids from competing in traditional sports. Rocket Drones attempts to fill this gap for students. Parents need not worry about missing a race with their own Rocket Drones web portal access and ability to watch their player's race footage. They are also encouraged to add photos and videos of both team and player moments to the portal for memories that will never fade. Lastly, parents benefit from a perpetual stream of data and are able to track progress levels of the optional curriculum, certification programs, race leaderboards, team chat, scheduler, and team announcements.

Do Any Drone Career Opportunities Exist?

The career opportunities that may be unlocked through drone racing are as vast as they are rewarding. Students who engage with drone technologies and certifications early may explore several professional opportunities such as drone piloting, remote operated construction equipment, programmer, electrical engineer, drone delivery, autonomous vehicle technician, aircraft mechanic, autonomous farming operations, autonomous crop spraying, unmanned maritime operations, remote operated submersibles, software engineer, unmanned maintenance technician, entrepreneur, data analysts, military drone operator, autonomous lawn equipment tech, commercial pilot, unmanned search and rescue operations, security drone operator, drone technician, aerospace engineer, and many more.

Which Drone Certifications Are Available Through The Program?

Rocket Drones' goal is encouraging your students to leave school with real, tangible certifications that translate into meaningful careers. Part 107, the new FAA commercial drone certification, allows drone pilots to fly UAS or UAVs for business purposes. To fly under FAA Part 107, individuals must pass the FAA drone pilot test and receive their commercial drone license. The FAA test is a two-hour, 60-question test that requires extensive studying. Rocket Drones' optional courses are intended to teach students what is needed to obtain a commercial drone license. Students must be 16 years or older to begin the certification process.

**DRONE RACING
SIMPLIFIED**

