



DRONE SPORTS, INC.

MAIN OFFICE

P: (719) 425-9545
info@dronesports.us

PARTNERSHIPS

P : (719) 445-8335
inquiry@dronesports.us

U.S. DRONE SOCCER

ACCESSIBLE AND AFFORDABLE DRONE PROGRAMS

*DRONE SOCCER INSPIRES STUDENTS TOWARDS AEROSPACE
CAREERS WITH THRILLING TEAM COMPETITION*



Our Philosophy and Values



There are many barriers to implementing drone programs, and we are committed to providing schools with an affordable and safe immersion in aerospace technology.

From our background in drone sports worldwide, we know that these foundational experiences can help shape student's aspirations from aviation to space exploration. Our products and training programs were developed to meet the specific needs of today's technical education programs and explosive job growth. Drone Soccer is a thrilling enrichment program that emphasizes teamwork, critical thinking, and expands opportunities in aerospace careers for under-served districts, girls, and populations that have been historically excluded from aviation.

ACCESSIBILITY

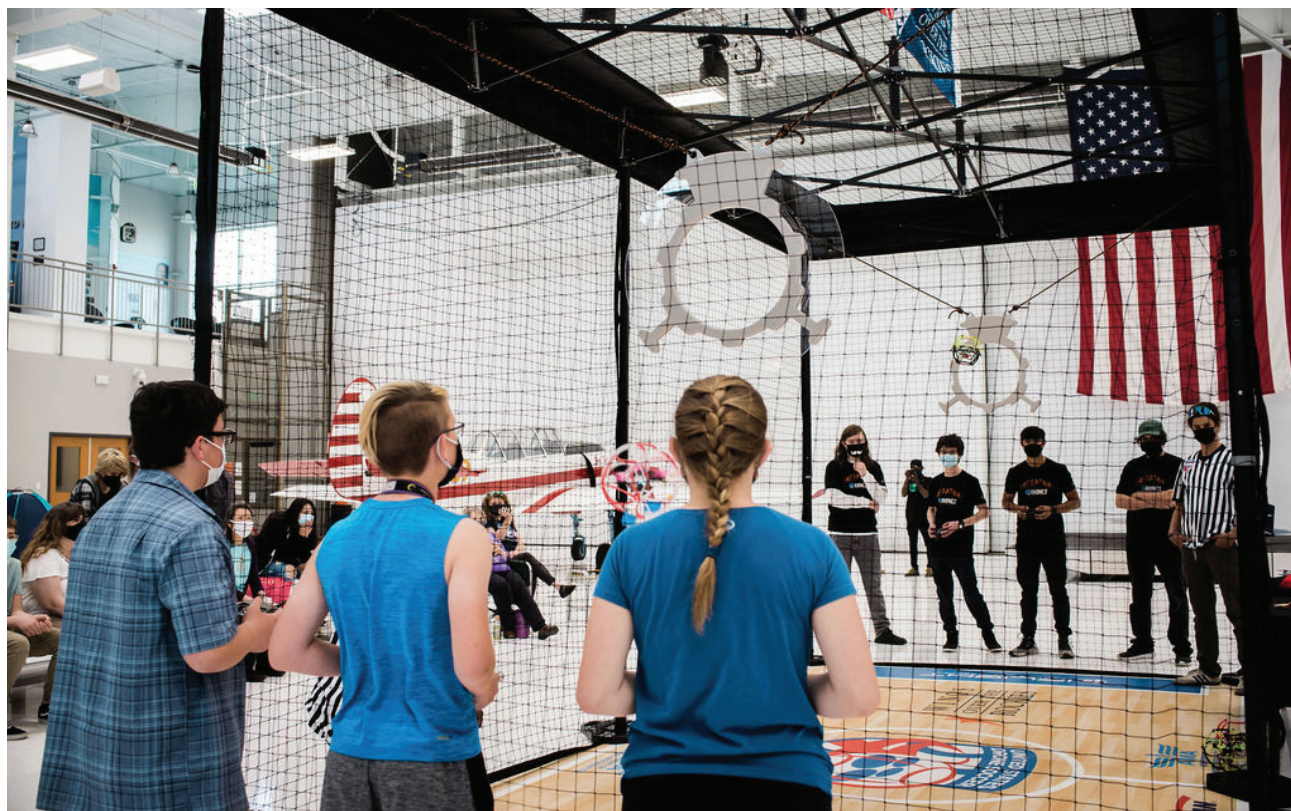
Teachers and students are eager for drone programs, but FAA licenses and airspace restrictions are a major challenge. Teachers may not have the prior career expertise to create new programs from scratch. Drones on the market today also break easily, which can be a disheartening and intimidating for young pilots. That is why our rugged drones are completely open-sourced, cheaply repairable, with training and lesson plans so teachers can be successful right out of the box.

LOCAL SUPPORT

Many similar robotics competitions occur rarely and require travel funds that are too expensive for many schools. Drone Soccer functions more like a traditional sport with regular matches against nearby teams. Our professional development helps to establish new programs by providing approved CTE pathways and subject matter endorsements for educators. Museums and educational organizations support local arenas where schools can gather for events.

TEAMWORK

Drone racing has become a popular activity, but is a difficult to master solo activity where students are left to practice and compete on their own. In Drone Soccer, each participant contributes to the success of their team regardless of their skill level. Students will rotate through positions and responsibilities ensuring that drones are prepared, batteries charged, and battle damage is repaired. They will learn to problem solve together on the fly!



Team Robotics Take Flight

Drone Soccer is a fast-growing robotics sport around the world, but most importantly, it can provide schools with an exciting practicum for Career and Technical Education skills as well as real-world lessons in Science, Technology, Engineering, and Mathematics (STEM).

Following the explosion in popularity of e-sports and robotics competitions worldwide, a new sport called Drone Soccer was introduced by South Korea and is currently sweeping across Asian and European markets. Drone Soccer represents an exciting evolution of drone racing that is team-based, full contact, and spectator friendly. We believe that this novel drone sport is a unique

opportunity to inspire thousands of young students.

U.S. Drone Soccer is driving the adoption of youth drone programs by providing educational leadership, innovative technology, and facilitating competitive academic leagues. Together with manufacturing partner iFlight RC, we have developed market-leading products and training as a total classroom solution for educators.

Our ultimate goal is to illustrate career pathways in partnership with school districts, universities, and industry. A strong foundation of youth participation will ultimately allow students to progress and learn through Drone Soccer from middle school to high school, collegiate, and international competitions as we represent our country to the World Air Sports Federation.

Training & Lesson Plans

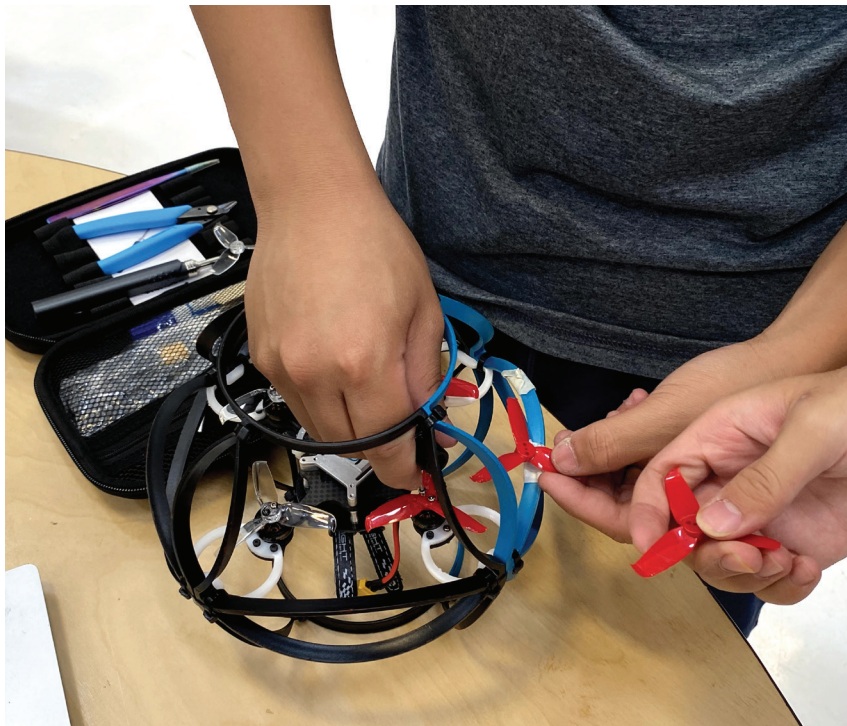
Tested with educators across the state of Colorado, our Professional Development training workshop comes with a robust set of lesson plans and ongoing support to assist classrooms through building, programming, and flying their first drones.



STANDARDS ALIGNMENT

Our lesson plans walk through the basics of drones for new students and teachers. Activities align with Next Generation Science Standards, International Society for Technology in Education standards, and Career and Technical Education concentrations in STEM, IT, and Aviation.

AEROSPACE CAREER PREPAREDNESS



ENGINEERING DESIGN

Building and repairing a Drone Soccer Ball is just the beginning. Students can upgrade and optimize their drone using 3D printed, DIY, or off-the-shelf drone racing components.



LEADERSHIP AND TEAM-BUILDING

Drone Soccer teams must collaborate to prepare for competitions, and we encourage skills specializations and responsibilities that model real aerospace careers.



The Operations Team specializes in Operations Management with preparation and strategy. Industry equivalents are air traffic, logistics, and mission control.



The Engineering Team specializes in 3D modeling, fabrication, and soldering to repair or upgrade hardware like airframe engineers and technicians.



The Avionics Team specializes in flight software including coding, aerodynamics, and radio telemetry like a programmer or satellite operator.



ACTIVITIES AND IN-DEPTH TOPICS



INCLUDES TWO LESSONS ON EACH:



Flight and battery safety, sportsmanship, and FAA TRUST certificate test provided by the AMA.



General drone technology, components, terminology, aerodynamics, and operation.



Assembling, testing, and repairing the Drone Soccer Ball hardware, frame, and motors.



Programming the flight computer, radio binding, modes, and arming in Betaflight software.



Advanced software functions such as motor PID tuning, stability, turtle mode, and flight testing.

Scalable Participation

U.S. Drone Soccer provides opportunities for a student to grow through classroom enrichment and/or competitive leagues.

Our comprehensive program is designed by educators and fits inside a school classroom or gymnasium. Starter kits include everything needed to establish a new drone program and engage one or several groups in hands-on learning. Students who are eager to compete can join an extracurricular team and compete in a local academic league and regional tournaments. Students will not age out of Drone Soccer, but be able to progress to a larger drone class at the collegiate level. We offer many ways that schools and community organizations can participate.



STEM/IT CLASSROOM HANDS-ON LEARNING

We offer complete standards-aligned lesson plans and professional development training for educators with ongoing support from local certified drone instructors. No prior drone experience required!



FLYING TRAINING & INTRAMURAL PLAY

An affordable practice arena allows several classrooms or groups to learn flying fundamentals and play against each other within the school. This is a fantastic introduction to drone skills and repair in a safe netted enclosure.



AFTER SCHOOL COMPETITIVE LEAGUES

The best part about Drone Soccer is head-to-head in full-contact matches against nearby schools. With low-cost registration, students gain a pilot profile, patches, and complimentary membership with the Academy of Model Aeronautics.



REGIONAL & NATIONAL TOURNAMENTS

Participation in local leagues automatically tracks standings and eligibility for regional and national tournaments. These events feature matches by professional drone pilots and international matches as the U.S. Team prepares for the World Cup.

Thrilling Full-Contact Gameplay

Learning to build and fly drones is where the challenge of teamwork and strategy begins. Drone Soccer is a fast-paced indoor team sport played with remote controlled quadcopter drones in protective plastic spheres (“soccer balls”). A Drone Soccer match is composed of three, three-minute periods where two opposing teams face off against each other. Vertical hoops serve as goals at either end of the arena, with each team defending one side.

One designated ‘Striker’ drone on each team can score by flying through the opposing goal, and the other players block and defends by intentionally colliding with the opposing team. A timer will countdown game play and also specified time between periods, during which players can swap batteries and make any necessary repairs or substitutions. Total elapsed time for a complete match is about thirty minutes.

GOAL SCORING

Only the designated Striker of each team can score by flying at least halfway through the opposing goal in the forward direction.

OFF-SIDES

After each goal, the scoring team must return beyond the center line to their defending zone before resuming the attack again.

ARENA SIZE

All play is conducted in a netted arena of 10x10x20ft (3x3x6m). Pilots stand at either end zone, with a total floor space of 30x40ft (9x12m).



Affordable, Durable, Reparable

The core of our Team Starter Kit is the 20cm Drone Soccer Ball, a top-tier racing drone in an injection-molded shell that sets the performance standard for World Cup play.



OPEN-SOURCED TECHNOLOGY

The 20cm Drone Soccer Ball is a crash-resistant design with components that can all be easily replaced with a single tool. No soldering required! Our kits includes all of the spare parts and equipment a new pilot needs to begin building, flying, and upgrading their design. Unlike commercial drones, students can directly reprogram the flight controller using free Betaflight software. Our radio controllers use the popular FrSky protocol, and are fully compatible with drone racing competitions, and also have a USB connection for use with all virtual flight simulators.



AUTOMATED SCORE KEEPING

(Coming Summer 2022) Our proprietary goals are the most advanced on the market, with the ability to detect when drones pass through but also to reject false-positives. Goals are only counted when the designated 'Striker' passes through the correct goal. Bright LED's illuminate the glass backboard and flash to signal a successful goal, and the current score is brightly displayed on each side. Optional data cables can connect these goals to a laptop for completely automated game management and to display match statistics on big screens or televisions throughout a venue.



Equipment Bundles

Every order is custom tailored for teams, schools, districts, museums, and other venues. The drone itself costs about \$315, or \$549 including all support equipment and spare parts.

1

“LEARN” Bundle - Classroom Enrichment

Sized for the classroom, this includes lesson plans and everything necessary for 6-18 students. This comprehensive bundle means that you won't have to waste time searching for compatible equipment, replacement parts, or tools. Our equipment is future-proof and compatible with leading drone racing programs, providing the perfect foundation for youth drone sports.

Included:	✓	6x Drone Soccer Ball Kits	✓	6x Toolkits, Parts, and Chargers
	✓	6x iFlight IF8 Radio Controllers	✓	Professional Development
	✓	24x LiPo Batteries (4S 450mAh)		

2

“PRACTICE” Bundle - Intramural Play

This bundle is most popular with high school programs who want to engage several classrooms in learning and host in-house scrimmages. Our affordable practice flying area is constructed with theater-grade pipe and sports netting, and requires a minimum floor space of 20'x40' with a 10' ceiling height. This arena takes two people to assemble and is not easily repositioned once in place.

Included:	✓	12x Drone Soccer Ball Kits	✓	Practice Netted Arena
	✓	12x iFlight IF8 Radio Controllers	✓	Professional Development
	✓	Batteries, Toolkits, Parts, & Gear		

3

“COMPETE” Bundle - Host a Competitive League

Host local and regional competitive events with a portable arena that can be set up in minutes. This is an ideal solution for school districts, museums, and other public venues. The heavy duty drone enclosure is utilized by leading companies at trade shows and has a lifetime warranty. Automated goals flash and keep score, which can be connected to a laptop for hands-free game management.

Included:	✓	12x Drones, Radios, and Gear	✓	League Management Software
	✓	Official 10'x20' Collapsible Arena	✓	Professional Development
	✓	Official Custom Printed Floor		

Low Investment Costs



FUTURE PROOFED PURCHASE

All equipment is future proofed for reuse in following years, dropping costs significantly by the second year. Every drone can be fully repaired with inexpensive replacement parts. Each Starter Kit is less than \$550 with all equipment included, and most schools have students work in teams of two or three students per kit. The minimum recommended purchase is six drone starter kits, which allows students to conduct friendly practice matches.

LEARN

\$5,700

Drone enrichment for a single classroom. Taxes and delivery fees vary.

PRACTICE

\$12,800

Includes equipment and installation costs. Scoring is not automated.

COMPETE

\$20,300

Perfect for school districts or public venues to establish revenue-generating leagues.

MEMBERSHIP & INSURANCE

For students participating in official leagues or tournaments, a \$75 seasonal registration helps cover league administrative costs and individual pilot insurance. Students will receive flight patches, access to track team standings and pilot statistics, and each receives a member number with the Academy of Model Aeronautics. The AMA is the national body for model aviation in the United States that sanctions more than 2,000 model competitions throughout the country each year. Event insurance is also available for venues hosting leagues or tournaments.



Other Educator Services



STANDALONE WORKSHOP

\$1,500

Drone Soccer is an exciting way to gamify STEM & CTE curriculum through teamwork and hands-on learning. This training is a immersion in drone technology and follow on support by expert instructors.



INSTRUCTOR CERTIFICATION

\$3,200

An advanced two-day training program leading to instructor certificate. Three drone kits included; familiarization with technology and program management, instructors can then conduct professional development training courses.



TURNKEY EVENT MANAGEMENT

\$10,000

Our team has conducted world-class and large-scale STEM and drone events. We will help you partner with local organizations and attract sponsorships to provide a life changing experience for your students and community.

Our goal is to provide opportunities and expand the technical career pipeline to all students, especially underserved communities. We are proud to work with the needs of your organization and offer solutions custom tailored for your goal and budget. Let's work together to inspire the next generation of makers, technicians, and engineers.



POWERED BY



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