DRONES IN SCHOOL

2025-2026 Season Guide

MULTIGP® STEM ALLIANCE

dronesinschool.com

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About?

To participate in Drones in School, you and your team will design, construct, and race a first-person-view (FPV) drone.

The Team

Teams involve at least two students. Each student fills one or more of the following roles: Project Manager, Manufacturing Engineer, Design Engineer, Drone Technician, Graphic Designer, and Marketing Coordinator. A team may also have one additional student member who serves as an assistant to one or more of these roles. This gives each team a maximum roster of seven named students. To participate in competitive events, teams must register with Drones in School annually. (dronesinschool.com).

The Process

1. Plan - Develop a Team Identity, Create a Plan, and Find Sponsors

Prepare a plan, develop a budget, and secure the necessary capital through team sponsorship or other funding sources. Teams are encouraged to partner with business and industry for sponsorship funding.

2. Design - Design Your Drone

Using 3D Computer-Aided Design (CAD) software, design your FPV drone according to the specifications in the Guide for the current racing season.

3. Make - Build Your Prototype

Using traditional manufacturing processes, Computer Aided Manufacturing (CAM) software, and/or 3D printing technology, the team will develop the best way to manufacture and assemble their drone.

4. Test - Test and Improve Your Drone Design

Put your drone through its paces and test all aspects. As you work through the engineering process, you will need to make changes to the design. Make sure these are documented for your portfolio and shared through your Team Display.

5. Race - Compete with Your Team at an Event

Prepare your drone, marketing video, portfolio, and team display for the competition. Practice your piloting skills and see how you do in a competitive event.

The Competition

1. Team Display

Each team will produce an informative display that showcases their work throughout all stages of the project. Consider your team's identity, the design process, and each team member's role.

2. Technical Evaluation

Each drone is submitted for judges to evaluate compliance with the Season Guide specifications.

3. Engineering Judging

Judges review the team portfolio and team display to learn how the drones have been manufactured and why particular design features were chosen. Judges may also choose to interview teams to gain additional clarification as needed.

4. Marketing Video

Each team will create a video presentation to be submitted prior to the event. This presentation will cover aspects of the challenge and should highlight the team's brand.

5. Portfolio Judging

Each team will create a portfolio documenting their project from beginning to end. The portfolio will be displayed in the Team Display.

6. Let's Race!

Teams compete with each other to see if they have a winning racing drone. Each sanctioned race will consist of a head-to-head and capture the flag event. Additionally, teams can participate in online virtual racing and simulator racing events.

Rules and Regulations

1. The Challenge

1.1. Your team is tasked with designing, building, and racing the first-person view (FPV) drone of the future.

1.2. In order to enter the championship, you must assign job roles to the members of your group. Ideally, one role should be allocated to each person. However, if you have fewer than six team members, you will have to double up or share some roles and responsibilities. The members of your team should cover the following job roles:

- Project Manager (maximum 1 person)
    - This person oversees the project management of all key deliverables and ensures all equipment is ready for the competition. This includes organizing time, materials, and equipment for completing all aspects of the project. The Project Manager will need to work closely with all team members to ensure tasks are progressing on schedule and provide

assistance as needed. The Project Manager also serves as the main point of contact for the team advisor and Drones in School personnel at all events.

- Manufacturing Engineer
  - This person is responsible for advising team members on the manufacture of the drone and the constraints of the machining/manufacturing process. Manufacturing engineers will need to collaborate with design engineers to identify and resolve any issues with the drone's construction, and work with the drone technician to implement repairs. The Manufacturing Engineer may also oversee the construction of the Team Display.
- Drone Technician
  - This role is responsible for ensuring all components of the drone are installed and working properly. Drone Technicians are responsible for using the configuration software to adjust the flight operation of the drone. Drone Technicians must also ensure that all team members are following the correct operating procedures and protocols for setting, modifying, and operating the camera and/or radio frequencies during an event.
- Design Engineer
  - This role is responsible for the styling and aerodynamic performance of the drone, as well as the design of the Team Display. Design engineers will need to collaborate with the manufacturing engineer and drone technician to ensure these ideas can be realized, repaired, and maintained.
- Graphic Designer
  - This person is responsible for producing the drone color scheme, team logo/identity, any special sponsorship logos, final graphic renderings, and any additional team marketing materials. The graphic designer will need to work with all team members to coordinate the design and production of the team display, portfolio, team uniform, and video presentation.
- Marketing Coordinator
  - The Marketing Coordinator is responsible for developing and managing the team's brand strategy. This includes overseeing fundraising campaigns and managing sponsor-team relationships. The Marketing Coordinator works closely with other team members to ensure materials and presentations align with the team's brand. The Marketing Coordinator also oversees the production of the team’s video presentation.

2. Levels

2.1. Teams are invited to participate in the following divisions based on the current academic level of the most senior team member.

2.1.1. Middle School - Students enrolled in a public, private, or home-school offering instruction including grades six, seven, and/or eight (All students on a middle school team must be 15 years old or younger on May 1st of the current season.) Students below grade six can also compete in the Middle School division.

2.1.2. High School - Students enrolled in a public, private, or home-school offering instruction between and including grades nine, ten, eleven, and/or twelve. (All students on the team must be 19 years old or younger on May 1st of the current season.) Students below grade nine can also compete in the High School division.

3. Project Elements for All Drones in School Sanctioned Events

3.1. **NEW** Eligibility Criteria

3.1.1. **NEW** Each project element entered in the competition must be the original work of the current team. Elements that were designed, built, or developed by any team other than the current team are prohibited. Any team of students competing in the program for multiple years is expected to completely redesign or modify their entry so that judges can clearly recognize the iterative improvements made since the prior year's entries. Violation of this rule may result in disqualification and/or loss of points on judged elements.

3.1.2. **NEW** The Eligibility Criteria above is designed to ensure that all teams have an equal opportunity to succeed based on their own creativity and effort, maintaining the integrity and fairness of the program.

3.2. Drones

3.2.1. Each team must produce two (2) identical racing drones for all events.

3.2.2. **NEW** A third drone may be produced as a "DISPLAY ONLY" drone. This drone must be identical to the other two drones. This drone cannot be used during competition and must be labeled "DISPLAY ONLY".

3.3. Portfolio

3.3.1. Each team must produce one (1) 'hard copy' portfolio (20 page maximum, excluding front and/or back covers) presented on "Letter" (8.5 x 11 inches), "Legal" (8.5 x 14 inches), or "Ledger/Tabloid" (11 x 17 inches) size paper for exhibit in the team display. This portfolio should detail the team's efforts and include the design, engineering, marketing, manufacturing, and project management processes completed to date.

3.3.2. Portfolio and Team Display should showcase the following items:

3.3.2.1. Project management processes

3.3.2.2. Team roles, the division of work, and team member collaborations

3.3.2.3. Team identity

3.3.2.4. Marketing / Team Sponsorship / Promotion efforts

3.3.2.5. Design and Engineering process

3.3.2.6. Manufacturing process

3.3.2.7. Development, Testing, and Evaluation

3.3.3. Refer to the judging scorecard for portfolio specifications and content requirements.

3.4. Team Display

3.4.1. Each team will be provided with a 120cm-wide x 70cm-deep x 150cm-tall dedicated exhibition tabletop-style space for setting up their display.

3.4.2. Each Team Display space will have access to a single 110V outlet. Teams should provide their own surge protector if they require additional outlets.

3.4.3. Each Team Display must contain the following:

3.4.3.1. **NEW** Three pictures of the assembled racing drone, OR a "DISPLAY ONLY" drone that is identical to the assembled racing drone. If a team elects to place a "DISPLAY ONLY" drone in their team display, that aircraft must remain in the team display at all times and may not be used as a spare aircraft during competition.

3.4.3.2. Team logo and an explanation of the process utilized to create the team name and logo.

3.4.3.3. Evidence of utilizing an engineering design process to develop the project.

3.4.3.4. Renderings and/or sketches of the drone and/or payload carrier design.

3.4.3.5. Full plans for the drone frame design with orthographic and isometric views. (HS ONLY)

3.4.3.6. Team members and the role they fulfilled in the project.

3.4.3.7. A printed copy of the Portfolio.

3.4.4. Refer to the judging scorecard for Team Display scoring specifications.

3.4.5. All teams will be able to set up their Team Display upon arrival and prior to judging.

3.4.6. No part of the completed Team Display is allowed to protrude beyond the physical dimensions of the allocated exhibition space. This includes anything that might protrude above the highest point. e.g., Flags.

3.4.7. **ONLY** student team members are permitted to set up their Team Display. There must be no supervising advisor/adult or other outside assistance unless deemed to be a health and safety issue.

3.5. Marketing Video

3.5.1. Teams will be required to submit a marketing video related to their project to Drones in School.

3.5.2. The video must not last longer than 4 minutes.

3.5.3. There's no specific formula for the marketing video. We want you to develop a unique creation. Here are a few things you should include:

- Eye-Catching Images/Video: Your marketing video's visuals should be captivating. Quality visuals can attract and engage viewers. This could include colorful backgrounds, animation, and graphics. Text overlays on visuals help clarify the message. Music and sound effects can reflect your team's brand and style.
- Compelling Storytelling: The video's story is as important as its visuals. It is beneficial to create an engaging story for your audience. The story should have an introduction, main body, and conclusion while providing necessary information.

- Clear Call To Action: Your marketing video should engage and inspire brand awareness for viewers. Your call to action should be clear so viewers know what to do. Some examples of a call to action would be sponsoring your team, visiting your website, or attending a planned event. Ensure it's clear and at the end of your brand video so viewers can act quickly.
- Review the judges' sheets in the appendix for additional guidance.

3.5.4. **NEW** All marketing videos must be submitted to the Drones in School website prior to the specified deadline set by the event organizer.

3.5.5. Event coordinators will review videos prior to their event and award points based on the judging scorecard.

4. The Registration Process

4.1. Registration is completed online at www.dronesinschool.com. Each school wanting to compete in the season must register before the last qualifying race in their region. Registration fees are per team.

Registration includes:

- Access to support from Drones in School and access to register for qualifying races during the season
- Drones in School Payload samples
- Access to special pricing on parts and accessories from authorized Drones in School partners

Each team will also need:

- 2 - Drones in School authorized motor sets
- 2 - Drones in School authorized flight controllers
- 2 - Radio Transmitters (one for each drone flight controller)
- 2 - FPV Transmitter Cameras
- 2 - FPV Goggles
- Batteries
- Battery Charger
- additional supplies deemed necessary by the team
- Velocidrone Software plus Micro Class Quads Premium Content add-on used for online Simulator Race events.

4.2. Registration fees are non-refundable after 21 Days. All fees must be received before the date of your team's first competitive event.

5. Judging

5.1. Judging categories

5.1.1. There are six (6) main judging categories, each with specific judging activities.

- Specification Judging
- Design and Engineering Judging
- Portfolio and Team Display
- Marketing Video Judging
- Racing - Capture the Flag and Head-to-Head (Head-to-Head may include virtual races and/or face-to-face, live racing)

6. Drone Design Regulations

6.1. Each Drone may have a maximum of 4 motors. Motors must be official Drones in Schools authorized motors. (see www.dronesinschool.com for the complete list)

6.2. The Transmitter and Receiver for all flight controllers must operate on the 2.4GHz frequency.

6.3. All flight controllers must be authorized Drones in School flight controllers. (see www.dronesinschool.com for the complete list)

6.4. Each Drone must be fitted with an FPV transmitter camera operating on the 5.8GHz frequency.

6.4.1. The FPV transmitter camera should be capable of 40 channels with a frequency range of approximately 5.658GHz to 5.917GHz (known as Race Band) or use HDZero channels.

6.4.2. The FPV transmitter camera should not be operated at greater than 25mW

6.5. Each drone must be powered by a maximum of two LiPo batteries with a maximum combined nominal voltage of 7.6V.

6.5.1. Only one battery may be used to power the flight controller and motors

6.5.2. Only one battery may be used to power the FPV transmitter camera

6.5.3. Drones can be designed to use a single 2S battery to power the flight controller, motors, and FPV transmitter camera

6.6. The maximum dimensions shown below are to the furthest extremes in each direction and include propellers, antennas, and any other part of the drone required for it to operate:

6.6.1. Length: 120mm

6.6.2. Width: 120mm

6.6.3. Height: 120mm

6.6.4. Propellers: 45mm Maximum (Must be completely surrounded by guards or ducts that prevent each propeller from making contact with a vertical surface when hovering level)

6.6.5. Motors: must be Drones in School authorized motors (see www.dronesinschool.com)

6.6.6. Weight: 80g Maximum (not including payload or batteries)

6.7.Payload

6.7.1.Each drone must carry the official Drones in School payload during the Head-to-Head and Capture the Flag portions of the event.

6.7.2. **NEW** The official Drones in School payload may not be modified or damaged in any way, and must maintain its original form as initially manufactured.

6.7.3.The payload may not be glued or permanently fastened to the drone. It must be removed and presented to the Drones in School official at the end of each flight.

6.7.4.On the signal of the Drones in School official, each team will have 30 seconds to provide their payload to the official by placing it in the official's hand or a spot designated by the official.

6.7.5.Loss of the payload during a Head-to-Head or Capture the Flag match or failure to produce the entire payload for the race official within 30 seconds from the end of a flight will result in the team losing that match.

6.7.6. **NEW** 2025-26 Payload description

6.7.6.1. Each drone must carry **TWO** official Drones in School plastic ball markers. Each marker has a diameter of 17mm. (see image to the right)

6.7.6.2. Each registered team will receive six payload samples.

6.8.Only one drone design may be used by a team at any given event and must be used for any and all event activities.

6.8.1.It is expected that damage will be sustained throughout the course of an event, so any parts including frames, propellers, motors, flight controllers, FPV transmitter camera, etc. may be changed or replaced. However, these must be identical to those with which the drone passed inspection during the Technical Evaluation.

6.8.2.Adding or removing of any subsystems or attachments for different types of activities is not permitted.

6.9.Drone Construction

6.9.1. High School Division: The flight controller, motor, and payload must be the ones authorized by Drones in School. The flight controller, propellers, battery, FPV transmitter, and camera may be purchased from any vendor/source. All other components of the drone must be designed and manufactured by the students on the respective team.

6.9.2. Middle School Division: The flight controller, motor, and payload must be the ones authorized by Drones in School. The flight controller, propellers, battery, FPV transmitter, camera, ***and frame*** may be purchased from any vendor/source. All other components of the drone must be designed and manufactured by the students on the respective team, ***including the attachment for carrying the payload.***

6.10. All drones must be fitted with a single failsafe (arm/disarm) switch that cuts power to all motors in the event of a malfunction of the drone. This switch must be clearly identified with red heat-shrink tubing, red PVC tape tightly wrapped to the switch actuator, or labeled on the transmitter.

7. General Rules

7.1. Each team must have two people present in the Pilots Box during their match or race.

7.1.1. One team member will be the Remote Pilot in Command (RPIC) and must sit in the Pilot's Seat while the match or race is in progress.

7.1.2. **NEW** The other team member will be the Visual Observer (VO) and will stand in the VO's Station by the Pilot for whom they are spotting.

7.2. The pilot may only control their drone from an FPV perspective using appropriate FPV Goggles during all head-to-head races.

7.2.1. Pilots are not permitted to control their Drone from a line of sight (LOS) perspective during head-to-head racing.

7.2.2. Pilots must not remove their FPV Goggles during a head-to-head race. Removal of FPV Goggles may result in a Warning or Disqualification.

7.3. During capture the flag matches, Pilots must use line of sight perspective (LOS) to control their drone.

7.4. After the race or match begins, the transmitter may only be touched by the Pilot.

7.5. Prior to the match starting, each drone must be placed on the designated starting pad by either team member (Pilot or Visual Observer).

7.5.1. Drones must be disarmed when they are being placed and must remain disarmed until an event official states that it is safe to arm.

7.5.2. Any drones that are armed prior to an event official stating that it is safe to arm may be disqualified from the match.

7.6. Drones in Schools officials can request any or all drones be disarmed at any point during the match or race.

7.6.1. Drones in Schools event organizers and officials reserve the right to intervene and disarm any drone(s) at any time and for any reason.

7.7. No additional team members are permitted to enter the Flight Zone at any point during a match.

7.8. **NEW** While it is expected that there may be contact between drones during a match or race, intentionally crashing into opponents will result in a warning, disqualification, or restart for that race.

7.9. During all races, the Visual Observer and Remote Pilot in Command should follow the Flight Procedures provided on www.dronesinschool.com.

7.10. For live race events, each team must name their drone to match their team name. (Example: Team High Five-1, Team High Five-2) Drone name must be configured to display on the on-screen display when the drone is disarmed.

8. Competing Teams

8.1. Each team must consist of a minimum of 2 students to a maximum of 7.

8.2. Only members of the official competing team (maximum 7) are permitted to wear the team's uniform.

8.3. During the competition, only the official team members (maximum of 7) can represent the team at registration, Team Display set up, Technical Evaluation, Marketing Video Presentation, Design & Engineering judging, racing, and any direct communication with Drones in Schools event organizers and officials.

9. Team Responsibilities

9.1. Teams must read the Drones in Schools Season Guide (this document) carefully to ensure their drones and all project elements satisfy these regulations and they understand the requirements/ procedures for all aspects of the competition and judging.

9.2. During the competition, it is the team's responsibility to ensure that team members are present at the correct time and location for all scheduled activities.

9.3. Security of the Team Display and its elements is the team's responsibility during competition.

10. Role and Responsibility of the Team Advisor

10.1. All team advisors should carefully read and understand the conditions for entry to a Drones in School event and must have explained all relevant information to their team members.

10.2. It is the primary responsibility of any team advisor to ensure the duty of care/well-being for all their student team members. Any concerns arising during the event in relation to this should be brought to the attention of Drones in Schools event organizers and/or officials immediately.

10.3. The team advisor is permitted to be present during any judging activity with their team but must not interact in any way with the student team, judges, or judging process. Any incident considered inappropriate should be brought to the attention of Drones in School event organizers and/or officials, and penalty points may be applied.

11. Regulations Documents

11.1. Drones in School issues the regulations, revisions, and any amendments through the Drones in School Season Guide.

11.2. Drones in Schools Season Guide (this document).

11.2.1. Text clarification - any frequently asked questions that are deemed by Drones in School to be related to text needing clarification will be answered. The question and the clarification will be published to all teams at the same time through the Drones in Schools website (www.dronesinschool.com)

11.2.2. Other supplementary competition regulations or documents may be issued by Drones in School that provide groups with further logistic and additional important event information. Any supplementary regulations will be issued to each team advisor and the Team Project Manager, where the Team Project Manager has supplied Drones in School with a contact email address.

12. Safety Rules

12.1. If at any time a drone or the actions of the team responsible for that drone are deemed to be unsafe or behaving in an unsafe manner, the offending team's drone may be disarmed by the event officials, and the team may be disqualified from the match or race. Serious breaches of safety may result in disqualification from the event,

12.2. Any team member entering the Flight Zone at any time must wear suitable eye protection.

12.3. Lithium Polymer batteries may only be charged when all the following criteria are satisfied:

12.3.1. Charging takes place in the designated Charging Zone(s), which will be defined by the Drones in Schools event organizers at check-in.

12.3.2. Failure to comply with this rule may result in disqualification from the event.

12.4. Drones may only be connected to a battery when in a designated Flight Zone.

12.5. The FPV transmitter camera may only be powered up when your team is about to participate in a match or race – powering an FPV transmitter camera at any other time may result in interference for another team currently competing in a match or race and may result in disqualification from the event.

13. Capture the Flag Rules

13.1. Capture the Flag is played by two teams consisting of two drones each. One team is designated the Red Team, and the other is the Blue Team. Drones must work together to capture more flags than the opposition.

13.2. The game is played on a field no larger than 12 meters by 6 meters. The field is divided into two halves, one Red and one Blue. Each half contains five flags which start the match set to the opposite color as the half they are in.

13.3. Teams must "capture" the flags owned by the opposing team by changing their color. When a drone hovers over a flag, it will change color, alternating between red and blue. Teams can receive bonus points by landing on one of their starting pads before the match ends.

13.4. **NEW** A team may elect to participate in Capture the Flag with one drone if only one drone or one pilot is available.

13.5. **NEW** The Visual Observer (VO) will stand in the VO's Station by the Pilot for whom they are spotting for the entire race. The VO may only leave the VO's Station during the race to right a crashed drone. Once the drone is flipped over, it is to be placed in its current location, and the VO should return to their station, being careful to avoid contact with any aircraft.

13.6. **NEW** Any team member intentionally interfering with an opponent's aircraft or flight will result in forfeiture of that match and may lead to disqualification from the event.

13.7.The winner is the team with the most points at the end of the match.

13.8.The Capture the Flag competition may be a round-robin or double-elimination tournament.

13.9.At the beginning of the match, each drone must be placed so that it is only contacting a starting pad and so that no part of the drone is touching the surrounding floor.

13.9.1.Only one drone may occupy each starting pad.

13.9.2.Drones can begin and end on either starting pad.

13.10.Pilots must not take off until the Drones in School official directs them to do so. False starts may result in disqualification from the match.

13.11. Scores are calculated as soon as the timer signals the end of the one-minute match. Any flags captured or landings completed after the match has ended will not be scored.

13.12.Pilots are not permitted to land on the opposing team's starting pad. Minor violations will result in a warning, but match-affecting violations may result in disqualification from the match.

13.13. Any flags that are damaged during a match so they do not display a color will not be counted towards the score of either team.

13.14.A drone is considered landed if:

13.14.1.It is contacting a Landing Pad of the same color as its team

13.14.2.No part of the Drone is touching the surrounding floor

13.14.3. **NEW** During the match, the drone has lifted off from the Landing Pad and flown beyond the outside edge of the Landing Pad.

13.14.4.Rules 12.12.1 and 12.12.2 remain satisfied when the drone is disarmed

14. Capture the Flag Match Scoring

14.1. Each flag is worth 5 points

14.2. A landed drone is worth 10 points

15. NEW Capture the Flag Final Scoring

15.1. Capture the Flag Winner (1st) = 40 points

15.2. Eliminated in Final (2nd) = 35 points

15.3. Eliminated in Semi Final (3rd & 4th) = 30 points

15.4. Eliminated in Quarter Final (5th & 6th)= 25 points

15.5. Eliminated before Quarter Final (≥7th place) = 20 points

15.6. Unable to fly, forfeit, or disqualification = 0 points

16. Head-to-Head Rules

16.1. Head-to-Head is a double elimination race around a race course which is marked out by a series of gates. Two pilots, one from each team, will race together on a single course. The winner is the pilot who completes the most laps in the allotted time or the first to a number of laps. (three to five laps, designated by host location)

16.2. Race courses may vary in size and layout depending on the venue and the amount of space available.

16.3. Gates used may vary based on the venue but will have a minimum opening of 3600 $cm^{2.}$

16.4. At the beginning of each match, each drone must be placed so that it is only contacting a starting pad and no part of the drone is touching the surrounding floor.

16.5. Pilots must not take off until directed to do so by the Drones in School official. False starts may result in disqualification from the race.

16.6. Pilots must navigate through the gates in the correct order and direction. If the Race Official is not satisfied that the course has been successfully completed, the lap may be voided.

16.7. If a pilot misses a gate or obstacle, they must turn the aircraft around to correctly navigate the course.

16.8. **NEW** If an aircraft crashes during a head-to-head race, the pilot can resume flight if the aircraft is situated to do so or is capable of being righted remotely. (e.g., turtle mode) If the aircraft is unable to resume flight, it must stay on the ground with motors disarmed until the end of the race, and the pilot must verbally notify the race official that they have stopped flying.

16.9. **NEW** The Visual Observer (VO) will stand in the VO's Station by the Pilot for whom they are spotting for the entire race. The VO may not leave the VO's Station during the race unless directed to do so by the Race Official.

16.10. If a pilot encounters a video problem that prevents them from continuing the flight, they may request a race restart. A restart will only be considered if the problem is confirmed by the Race Official and the pilot can demonstrate a clear video signal prior to the restart.

16.11. **NEW** Only one race restart per team, per event will be permitted. If the event features both qualifying and elimination rounds, each team will be permitted one race restart in both rounds.

16.12. The Event Official may elect to run the head-to-head race in a round-robin or double-elimination tournament.

17. NEW Head-to-Head Scoring

17.1. Eliminated before Quarter Final = 20 points

17.2. Eliminated in Quarter Final (5th & 6th)= 25 points

17.3. Eliminated in Semi Final (3rd & 4th) = 30 points

17.4. Eliminated in Final (2nd) = 35 points

17.5. Head-to-Head Winner (1st) = 40 points

17.6. Unable to fly, forfeit, or disqualification = 0 points

18. Awards

18.1. Each Drones in School event will include the following awards

18.1.1. Overall Event Champion

18.1.2. Overall Event Runner-Up

18.1.3. Design and Engineering Champion

18.1.4. Portfolio and Team Display Champion

18.1.5. Marketing Video Champion

18.1.6. Capture the Flag Champion

18.1.7. Head-to-Head Champion

18.2. **NEW** Optional Awards

18.2.1. Energy Award

- The team stays enthusiastic and excited throughout the event, demonstrating a passion for the competition that enriches the experience for everyone involved. Additionally, all members are courteous, helpful, and respectful to everyone at the event,

18.2.2. Innovation Award

- The team demonstrates a unique or unusual trait in at least one aspect of the submitted project elements. Additionally, the team portfolio and display include documentation covering the process from initial concept to final implementation.

18.2.3. Wow Factor Award

- The team demonstrates mastery of all aspects of the Drones in School program. The team exemplifies the high standards expected through outstanding project elements, high-quality aircraft design, fully embedded team identity and branding, plus above-average race performance.

18.2.4. Excellence Award

- Aircraft design is durable and elegant, withstanding the harshness of competition. The fabrication and assembly exhibit an attention to detail and quality.

18.2.5. Diamond Award

- Meticulous video editing, outstanding use of color/branding through all aspects, and overall refinement that creates a professional and polished look.

18.2.6. Judges Choice Award

- The team demonstrates exceptional qualities, outstanding effort, or perseverance during the event, distinguishing themselves to judges and event staff as deserving of special recognition.

19. Season Guide Updates

19.1. Although great care and effort have gone into the preparation of this document, Drones in School reserves the right to update the document as needed throughout the competition season.

19.2. Any update will be posted to the Drones in School website with a “last updated” date included on the cover for each version of the document.

Appendix: Judges' Sheets

Team Number: _____ Team Name: _____

School: _____

Marketing Video

CRITERIA	Video is less than four minutes long No (0 points) Yes (10 points)	Video contains team logo No (0 points) Yes (10 points)	Video contains a call to action No (0 points) Yes (10 points)	
	Video lists each team member and their role No (0 points) Yes (10 points)	Video includes team sponsor graphics No (0 points) Yes (10 points)	Video mentions Drones in School No (0 points) Yes (10 points)	

Criteria Total /60

TECHNIQUE	**Creativity**	The video is not creative. More like a school presentation than a marketing video. 0 .5 1 1.5	Some creativity evident, but the video is not original. 2 2.5 3 3.5	The video is creative, original, and memorable. 4 4.5 5	
	Storytelling	Does not follow a logical sequence. Little to no planning involved. 0 .5 1 1.5	Shows some evidence of planning and storyboarding. Sequence somewhat logical. 2 2.5 3 3.5	The video tells a compelling story that engages the viewer. 4 4.5 5	
	Production	Video is not well planned and has poor edits. Sound is of poor quality. Many sound & visual elements distract from message. 0 .5 1 1.5	Video was somewhat planned. Transitions and edits are rudimentary. Some sound and visual elements are distracting. 2 2.5 3 3.5	Video is well planned with smooth transitions and edits. Sound is expertly balanced and easy to hear. Visual elements included. 4 4.5 5	

Technique Total /15

COMPOSITION	**Purpose**	The video does not include a purpose for the marketing campaign. 0 .5 1 1.5	The video suggests a purpose for the marketing campaign, but is not clearly communicated. 2 2.5 3 3.5	The video clearly and concisely communicates the purpose of the marketing campaign. 4 4.5 5	
	Use of Time	Little balance of time for the topics covered. 0 .5 1 1.5	Good timing. Balanced depth and pace. 2 2.5 3 3.5	Excellent balance of depth for each topic with appropriate timing. 4 4.5 5	
	Call to Action	The video does not include much reference to a call to action. 0 .5 1 1.5	The video alludes a clear call to action, but is unclear about what to do next. 2 2.5 3 3.5	The video includes a clear call to action that tells the viewer what to do next. 4 4.5 5	

Composition Total /15

OVERALL IMPACT	**Collaboration**	Video does not explain why team members are important. 0 .5 1 1.5	Explains the teams importance but details are not complete. 2 2.5 3 3.5	The video expertly makes the case for the entire team and the role each person played in the teams' development. 4 4.5 5	
	Branding	The video does not include clear connections to the team's identity and values. 0 .5 1 1.5	The video somewhat reflects the team's identity and values. 2 2.5 3 3.5	The video accurately reflects the team's identity and values. 4 4.5 5	
	Engagement	Presentation is unclear and the video is unmemorable. 0 .5 1 1.5	Viewer mostly understands and might remember the video. Some introduced themes/topics may distract from message. 2 2.5 3 3.5	The video keeps the viewer engaged and interested from beginning to end. 4 4.5 5	

Overall Impact Total /15

DRONES IN SCHOOL

Criteria Total + Technique Total + Composition Total + Overall Impact Total = Marketing Video Total = /105

Judge's Notes / Comments:

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Team Number: _____ Team Name: _____

School: _____

Portfolio & Display

CRITERIA

Portfolio includes Plan, Design, Make, Test, Race Process Steps	Portfolio contains team logo	Portfolio is 20 pages or less.	
No (0 points) / Yes (10 points)	No (0 points) / Yes (10 points)	No (0 points) / Yes (10 points)	
Display includes Plan, Design, Make, Test, Race Process Steps	**Display contains team logo**	**Display includes renderings and/or sketches of the design**	
No (0 points) / Yes (10 points)	No (0 points) / Yes (10 points)	No (0 points) / Yes (10 points)	

Criteria Total /60

PORTFOLIO

Project Management	Little evidence of project management presented. 0 .5 1 1.5	Simple management and planning used to guide progress. A range of resources considered 2 2.5 3 3.5	Comprehensive project management. A wide range of factors considered; e.g.. scope, time, resources and project risks 4 4.5 5	
Team Work	Limited team work evident. 0 .5 1 1.5	Evidence of effective team work and roles defined 2 2.5 3 3.5	Highly structured team with clear roles. All team members had effective and critical contributions. Role collaboration recognized 4 4.5 5	
Portfolio Clarity & Quality	Difficult to follow with basic presentation. 0 .5 1 1.5	Clear structure, well organized. Good use of graphics, charts and tables to enhance presentation and impact 2 2.5 3 3.5	High impact and professional throughout. Consistent and clear. Excellent use of graphics, charts and tables to enhance portfolio 4 4.5 5	

Technique Total /15

DISPLAY & MARKETING

Team Identity	Inconsistent, limited or obscure identity 0 .5 1 1.5	Effective team identity consistent through various project components 2 2.5 3 3.5	Excellent and highly effective team identity. Consistently applied through all project elements 4 4.5 5	
Marketing	Limited or irrelevant 0 .5 1 1.5	Some marketing activity / sponsorship explained 2 2.5 3 3.5	Creative and effective activities linked to sponsorship & ROI 4 4.5 5	
Display Booth	Repetition of portfolio elements 0 .5 1 1.5	Clear and effective presentation and messaging. Some project development displayed 2 2.5 3 3.5	Clean, well organized and has high impact. Highly professional with attention to detail. Well presented project development 4 4.5 5	

Composition Total /15

DESIGN PROCESS

Ideas	Single or basic concepts 0 .5 1 1.5	Multiple concepts with links to research 2 2.5 3 3.5	Several technically inspired ideas. Clearly considered many options 4 4.5 5	
Development and Testing	Limited development shown 0 .5 1 1.5	Logical design developments based on testing 2 2.5 3 3.5	Clear and justified developments linked to tests and research 4 4.5 5	
Manufacture	Little manufacturing detail 0 .5 1 1.5	Manufacturing processes and issues presented 2 2.5 3 3.5	Detailed assessment of manufacture, stages, materials & issues 4 4.5 5	

Overall Impact Total /15

DRONES IN SCHOOL

Criteria Total + Portfolio Total + Display & Marketing Total + Design Process Total = Portfolio & Display Total = /105

Judge's Notes / Comments:

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Team Number: _____ Team Name: _____

School: _____

Design & Engineering

CRITERIA	The portfolio includes at least one 2D CAD drawing. No (0 points) / Yes (10 points)	Team has two identical drones No (0 points) / Yes (10 points)	Propellers are completely surrounded by guards or ducts No (0 points) / Yes (10 points)	
	All drones 80g maximum (not including payload or batteries) No (0 points) / Yes (10 points)	All drones are 120mm x 120mm x 120mm or smaller No (0 points) / Yes (10 points)	All drones each have a maximum of 4 motors. No (0 points) / Yes (10 points)	
			Criteria Total	/60

CAD / ANALYSIS	**Application of CAD-CAM**	Basic application. Final design in CAD only 0 .5 1 1.5	Appropriate use of CAD in product development stages. Good understanding of CAM evident 2 2.5 3 3.5	Advanced use of CAD and CAM technologies throughout. Final CAD identical to the physical model produced 4 4.5 5	
	Analysis	Minimal analysis shown 0 .5 1 1.5	Good analysis. Results applied to development 2 2.5 3 3.5	Variety of advanced and relevant analysis techniques conducted 4 4.5 5	
	Organization	Generally unorganised 0 .5 1 1.5	Satisfactory organization of data and models 2 2.5 3 3.5	Data & parts highly ordered & labeled. Full CAD product assembly 4 4.5 5	
	Orthographic & Rendering	Basic drawing & rendering 0 .5 1 1.5	Good technical drawing and realistic rendering 2 2.5 3 3.5	High detail & includes spec dimensions. Photorealistic rendering 4 4.5 5	
				Technique Total	/20

MANUFACTURING	**Quality**	Reasonable quality with inconsistencies 0 .5 1 1.5	Good overall quality with attention to detail 2 2.5 3 3.5	Showcase' finish quality on all components. Exceptional attention to detail. Drones are identical. 4 4.5 5	
	Assembly	Poorly assembled 0 .5 1 1.5	Generally well assembled and engineered 2 2.5 3 3.5	Professional assembly, highly engineered. Sound techniques 4 4.5 5	
				Composition Total	/10

DRONES IN SCHOOL

Criteria Total + CAD / Analysis Total + Manufacturing Total = Design & EngineeringTotal = /90

Judge's Notes / Comments:

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