ENJOY AI 2026: Skyline Adventures

Competition Rules

1. Competition Theme

Space is a vast and mysterious place, filled with endless darkness and shining stars. It sparks our imagination and our desire to explore. In the 2026 season, we will follow our guide JOY on an exciting journey through space. Along the way, we will explore planets, study galaxies, search for signs of life, and discover new scientific wonders.

2 Competition Field and Environment

2.1 Competition field

The competition field is covered by a 300x300 cm map (see Fig. 1). The map is made from PU fabric or printed cloth, with several 20×20 cm AprilTag codes on it. The drone base is in the lower-left corner of the map and measures 30×30 cm.

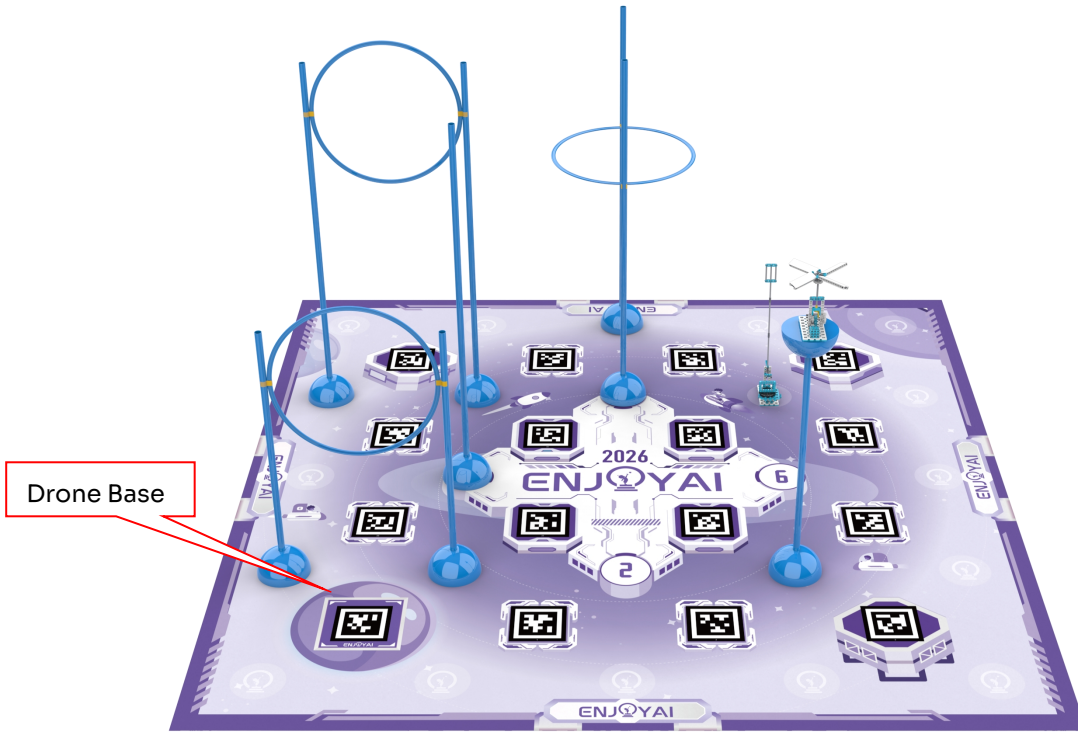

Fig.1 Competition field

2.2 Competition environment

The field should be lighted with cool low-brightness light, and should be free from magnetic interference. The actual competition environment can be affected by factors like field surface textures, uneven ground, and lighting. We suggest you take all these factors into account when designing your drone.

3 Tasks and Scoring

Each task can be scored only once, even if it is completed multiple times.

3.1 Takeoff

3.1.1 If the drone successfully takes off from the drone base, the team scores 40 points (see Fig. 2).

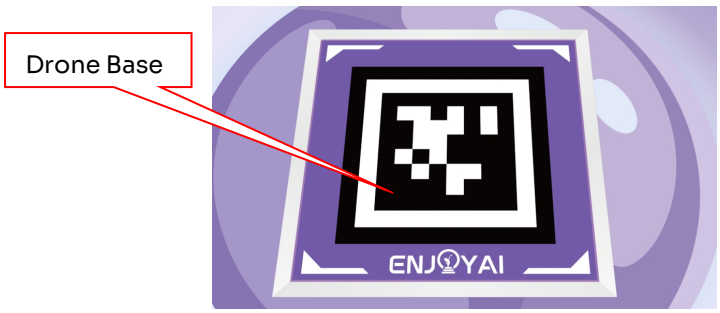

Fig.2 Drone base

3.2 Twin Rings

3.2.1 There are two rings on the field at different heights. Each ring has an outer diameter of 60 cm, as shown in Fig. 3.

3.2.2 The drone scores 50 points for each ring it passes through.

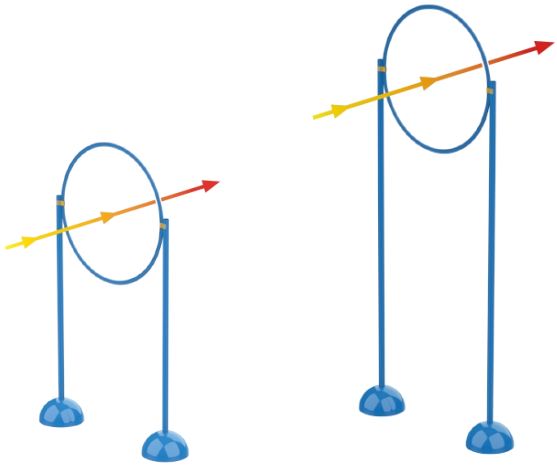

Fig.3 Flight path diagram

3.3 Infinity Gate

3.3.1 There is a figure-eight-shaped gate on the field, as shown in Fig. 4.

3.3.2 The drone scores 40 points for passing between the two horizontal bars, 60 points for circling around either horizontal bar once, and 80 points for completing a full figure-eight loop around the bars. The flight path is shown in Fig. 4.

3.3.3 Each extra loop counts as one loop. If the drone performs multiple scoring actions, only the highest score is counted..

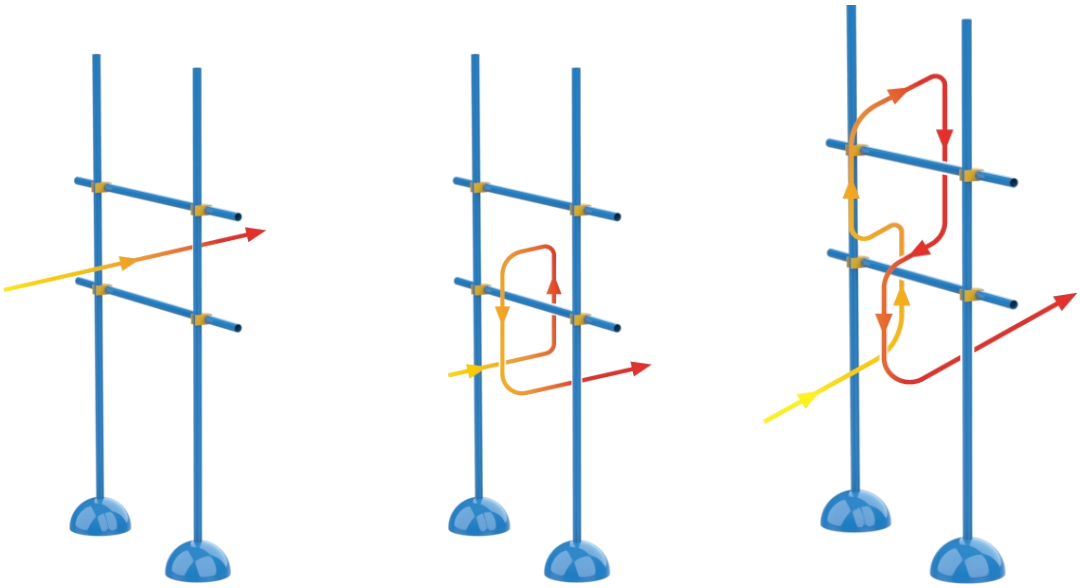

Fig.4 Flight path diagram

3.4 Circular Route

3.4.1 There is one marker pole on the field, as shown in Fig. 5.

3.4.2 The drone earns 60 points for completing one full circle around the marker pole, either clockwise or counterclockwise.

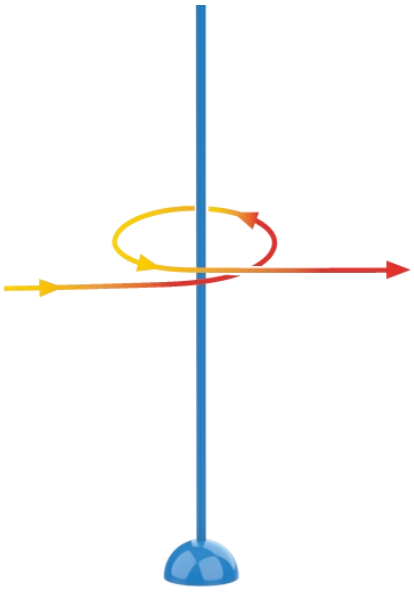

Fig.5 Flight path diagram

3.5 Heart Cross

3.5.1 There is one horizontally placed ring on the field with an outer diameter of 60 cm, as shown in Fig. 6.

3.5.2 The drone scores 70 points for flying upward through the ring from below, as shown in Fig. 6.

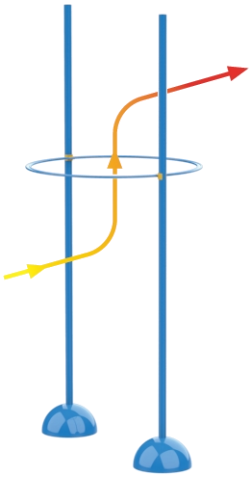

Fig.6 Flight path diagram

3.6 Meteor Knockdown

3.6.1 There is one marker pole on the field with a meteor zone mounted on it. The edge of the base plate is tangent to the base of the marker pole, as shown in Fig. 7.

3.6.2 The drone scores 60 points for knocking the meteor down onto the ground (touching the field surface), as shown in Fig. 7.

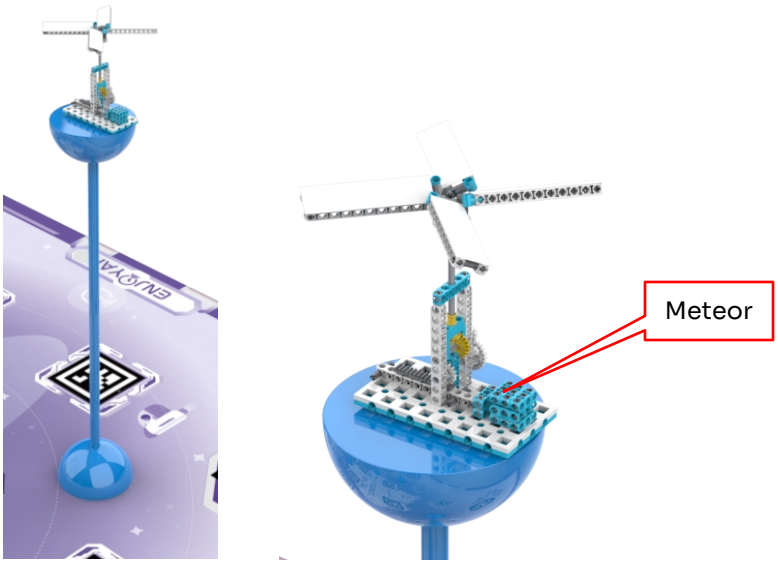

Fig.7 Initial state

3.7 Return to Base

3.7.1 The drone lands autonomously at the base when there are no remaining tasks. After landing, if the top-down projection of any part of the drone is within the base are, 40 points will be awarded.

3.7.2 The base landing task must be the final task completed in the match.

3.8 Spaceship Rescue (bonus task)

3.8.1 During the match, a misaligned spaceship may be placed on the field. It is fixed within a ring, with a lever facing forward, as shown in Fig. 8.

3.8.2 The drone scores 80 points for pushing the spaceship back to the upright position, where the black gear is touching and parallel to the plate, as shown in Fig. 9.

3.8.3 For this task, teams can bring one identification marker (such as AprilTag) and place it on the field to assist the drone with positioning. The marker must not leave any residue or marks on the field surface.

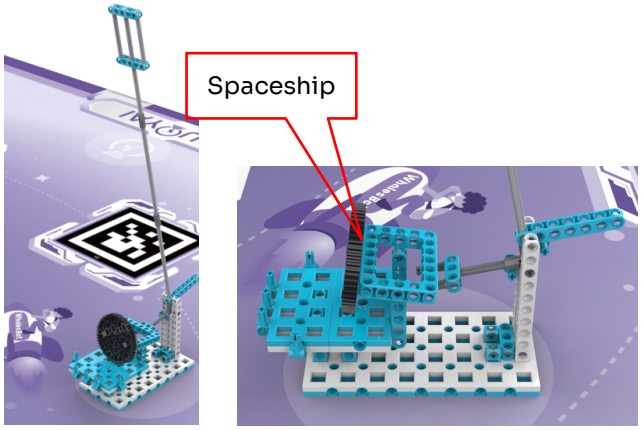

Fig.8 Initial state

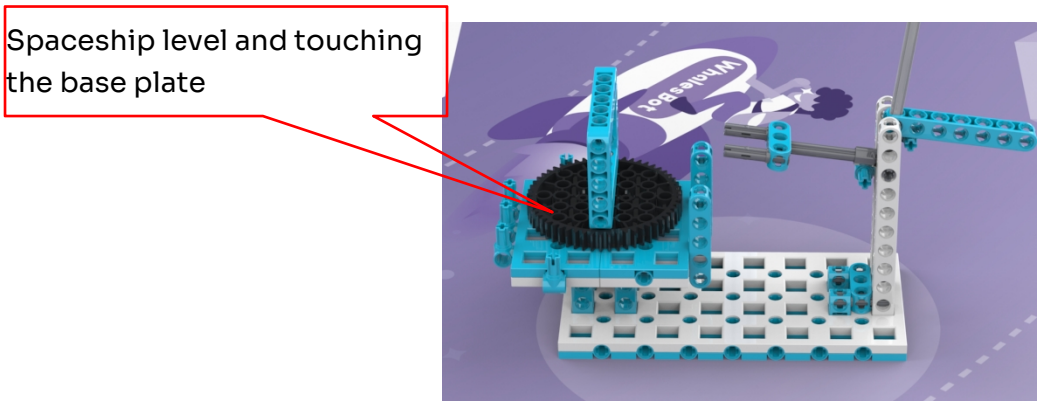

Fig.9 Final state

3.9 Task Model Position

There are nine fixed task model positions on the field, numbered 1–9. Before debugging, the task model at each position, as well as its height and orientation, will be announced by the referee.

4 Drone

4.1 Drone type: quadcopter

4.2 Motors: The drone uses coreless motors, with a rotor axis distance of 125–130 mm.

4.3 Propeller length: 72 to 78 mm

4.4 Drone weight: 80 to 120 g (including battery)

4.5 Sensors: The number and types of sensors used for your drone are not limited.

4.6 Battery: The voltage for your drone battery cannot exceed 5V, and its capacity cannot exceed 1150 mAh.

4.7 Each teams can prepare two drones for the competition, but can use only one drone in each round. You cannot share your drone with other team.

4.8 Unless otherwise required, the drones , remote control, spare parts, repair tools, and goggles must be prepared by participants themselves. The number of spare parts is not limited.

5 Competition

5.1 Participating Team

5.1.1 Each team must have one student and one coach. The student must still be enrolled in school as of June, 2026.

5.1.2 Participants should proactively deal with problems they may meet during the competition. They must respect and politely communicate with their teammates, opponents, volunteers, referees, and all those who contribute to the competition.

5.2 Competition Format

5.2.1 The competition has two divisions: elementary and middle school.

5.2.2 All rounds are treated the same, with no preliminary or finals. Each team will have the same number of chances to compete, and all rounds will be scored.

5.2.3 The tasks to complete will be set before the competition starts.

5.2.4 At the end of the whole competition, the teams are ranked by their total points of all rounds.

5.2.5 The organizing committee may change the format based on the number of signed-up teams and the actual venue setup.

5.3 Procedure

5.3.1 Drone programming and preparation.

5.3.1.1 You can code and debug your drone only in the allowed area of the competition field.

5.3.1.2 Teams must sign in before entering the preparation area. Referees will inspect all tools and equipment to make sure they meet the competition rules. Students can bring pre-built drones into the preparation area.

5.3.1.3 If a team goes online, downloads files, takes photos of the competition field, or contracts your coach or parents, their score for that round will be canceled.

5.3.1.4 Teams will have some time to test and adjust their drones before the match, and goggles must be worn. After that, drones must be placed in the set area. Once placed, teams cannot change or download programs until the match is over.

5.3.1.5 After each round, teams may repair their drones and modify their programs in the preparation area, but they must not change the competition order for the next round.

5.3.2 Pre-match preparation

5.3.2.1 Before entering the match area, team members must wear goggles and collect their drone. Teams will then enter the match area under the guidance of the staff. If you and your teammates are late, your team will lose the match.

5.3.2.2 Team members on the field must stand near the robot base.

5.3.2.3 Put your drone into the drone base. The top down projection of the robot (including task models) cannot extend beyond the robot base.

5.3.2.4 Attending team members must finish all preparations within one minute, during which the drone must remain within the drone base. After completing all preparations, team members must stand outside the field and signal the referee.

5.3.3 Start of a match

5.3.3.1 After the match starts, your drone starts taking off.

5.3.3.2 When referees confirm that a team is ready, they will count down “3, 2, 1, start”. After hearing “start”, you can start your drone through the one-press takeoff button on the remote control.

5.3.3.3 If the drone moves before the “start” command, it will be a false start, and your team will get a warning or penalty.

5.3.3.4 During the match, the drone must not be controlled using devices such as a computer, laptop, smartphone, or tablet. The drone’s takeoff, landing, and emergency stop may be operated only through the remote control. Once the drone has started, it may be controlled only by its onboard program.

5.3.3.5 After the drone starts, it must not intentionally detach or drop any parts onto the field. If any parts fall off accidentally, they will not be removed during the match and may be collected by the team after the round ends. Intentionally detaching parts to gain points is considered a foul, and the score for that task will be invalid.

5.3.3.6 Once the match starts, if a task model leaves the field, it must not be returned to the field during the current round, except when it is carried back to the base by the drone autonomously.

5.3.4 Retry

5.3.4.1 A retry will be triggered if your drone lands outside the base area.

5.3.4.2 During the retry, you cannot change the layout of the field, and you must put the drone back to the drone base.

5.3.4.3 Tasks that are completed before the retry will still count. However, during a retry to return to the base, any task models carried by the drone are invalid and will be kept by the referee until the end of the current round.

5.3.4.4 The number of retries for each round is not limited. The timer won't stop or restart during retries.

5.3.5 Return to drone base

5.3.5.1 The drone can be programmed to return to the drone base as many times as needed without being considered as retries.

5.3.5.2 The return is considered successful only if the top down projection of any part of the drone is within the base area after landing.

5.3.5.3 After the drone returns, you can touch the drone to make changes or repairs.

5.3.6 End of match

5.3.6.1 Each round lasts for 180 seconds.

5.3.6.2 If a team decides not to continue the match after completing certain tasks, a team member must raise a hand to signal the referee and clearly announce "Stop the match". The referee will then stop the timer and end the match. Otherwise, the team must wait for the referee to announce the end of the match.

5.3.6.3 After the referee announces that the round is over, land your drone and power off immediately. If any task model is altered during the match, no points will be awarded for the related task.

5.3.6.4 The referee will announce your score. If the score is miscalculated, you can ask the referee to correct it. If there are no objections, the team must sign to confirm the score. In the event of a dispute, you may appeal to the chief referee for a final decision. The organizing committee will not accept any appeals made outside the field.

5.3.6.5 After the round ends, you must restore the layout of the competition field to the initial state and take your drone to the prep area.

6 Scoring

6.1 After each match, points are rewarded based on the tasks completed on the field. If a completed task is accidentally changed before the match ends, it will not score points. The scoring criteria for each task are described in Section 3.

6.2 The order in which tasks are completed does not affect the score for each task.

6.3 If there is no retry in a match, and your drone operates in a smooth and continuous motion, you will get an extra reward of 40 points. A bonus of 30 points will be awarded for completing the match with one retry; 20 points for two retries; 10 points for three retries; and no bonus points will be awarded for four or more retries.

7 Safety Rules

7.1 All drones must have an unlocking method to prevent accidental startup.

7.2 The electronic parts of the drone, including the controller, must be protected with a covering. You cannot disassemble or modify the drone by yourself.

7.3 Unless otherwise required, your drone must have propeller guard. During the competition, propellers must remain enclosed within the undamaged guard. If the guard is broken, the chief referee has the right to stop the flight.

7.4 Your drone cannot use metal propellers. If a drone carries any device that is unsafe or interferes with the competition, the chief referee has the right to stop the flight.

7.5 Team leaders and coaches must ensure safety when training team members. The teams are responsible for the consequences incurred by any behaviors against the safety rules.

8 Fouls and Disqualification

8.1 If you fail to arrive 15 minutes after debugging starts, your team will be disqualified from that round.

8.2 If there is a false start for the first time, your team will get a warning. The robot must return to the base to restart, and the timer will be reset. If a second false start occurs, your team's score for that round will be canceled.

8.3 During a match, only the competing participant may fly a drone. Any other participant who flies a drone will bear the consequences and be disqualified from that round.

8.4 If you or your drone damages a task model, your team will receive one warning and no points are awarded for that task.

8.5 When your drone is flying during the competition, you should not enter the competition field. If you do so, you will be disqualified from that round.

8.6 If a task model is touched outside the drone base, the round will end immediately and the score will be recorded as is.

8.7 After the drone lands during the match, team members may enter the field only with the referee's permission. Otherwise, the round ends and the score is recorded as is.

8.8 Failure to follow the referee's instructions will result in the round being canceled.

8.9 If you access the internet, download materials, take photos or videos of the competition field, your team will be disqualified from that round.

8.10 If you contact your coach or parents without the chief referee's permission, your team will be disqualified from that round.

8.11 Any matters not specified in these rules will be decided and interpreted by the chief referee.

8.12 These rules are the only basis for judging. Referees have full authority during the competition, and their decisions are final. Referees are not required to review match recordings.Any questions must be raised by one student representative to the chief referee between matches. The chief referee's decision is final.

9 Ranking

9.1 Teams in each division will be ranked by total scores. If two teams are tied, the following rules will be followed in sequence:

(1) The team that spends less time across all rounds ranks higher.

(2) The team that retries fewer times across all rounds ranks higher.

(3) The team with the higher score from any single round ranks higher.

9.2 Your rankings will decide the award you may get: champion, runner-up, and second runner-up. You will not be ranked if you get zero points or give up the competition.

Appendix:

Scoring Sheet of Skyline Adventures					Round___
No.		**Team**		**Division**	

Task	Description	Full points	Score
Takeoff	The drone takes off from the drone base.	40	
Twin Rings	The drone passes through the ring.	50/each	
Infinity Gate	The drone passes between two horizontal bars.	40	
	The drone circles around either horizontal bar once.	60	
	The drone completes a full figure-eight-shaped loop around the bars.	80	
Circular Route	The drone completes one full circle around the marker pole.	60	
Heart Cross	The drone passes through the ring from below.	70	
Meteor Knockdown	The meteor touches the field surface.	60	
Return to Base	The top down projection of the drone is within the base area.	40	
Spaceship Rescue (bonus task)	The black gear is in contact with and parallel to the plate.	80	
Extra reward	40-10 x Number of retries (> 0)		
Total score			
Time spent			

Score Confirmation			
I hereby confirm that the scores recorded above are accurate and valid, and I have no objections.			
Team members:		Referee:	
Remarks			
Chief referee:		Scorekeeper:	