Fly with Hioe: Inter-Primary School STEAM Air Race 2025 (Kowloon City District)

Competition Details & Rules and Regulations

Important Dates:

Online Briefing Session Date: 5 Nov 2025 (Wed) Time: 16:30 - 17:00 Venue: Zoom
Briefing Session & Training Workshop Date: 29 Nov 2025 (Sat) Time: 9:30 - 12:30 Venue: School Hall, The Y.W.C.A. Hioe Tjo Yoeng College
Competition Date: 13 Dec 2025 (Sat) Time: 12:00 - 16:30 Venue: School Hall, The Y.W.C.A. Hioe Tjo Yoeng College

Target: Primary 6 students from Kowloon City District

Quota: Team: 35 teams; Individual: 20 participants

Application Period: 20 October 2025 (Mon) - 14 November 2025 (Fri)

Competition Background

Fly with Hioe: Inter-Primary School STEAM Air Race 2025 (Kowloon City District) is an exciting and unique event.

This competition aims to spark students' interests in STEAM (Science, Technology, Engineering, Arts, and Mathematics) while aligning with key learning elements of the primary school Science curriculum, such as scientific inquiry, engineering design and innovation. It also connects with Strand 4: Science, Technology, Engineering, and Society, which includes scientific investigation, scientific spirit, aerospace and innovative technology, and engineering design.

The competition is designed to promote the widespread development of STEAM education in the Kowloon City District and to connect with the historical aviation heritage of Kai Tak Airport, embodying the spirit of innovation and exploration.

The competition will guide students to:

- Explore scientific principles such as aerodynamics through scientific inquiry.
- Engage in programming and engineering challenges to demonstrate engineering design and innovation.
- Foster creative thinking and problem-solving skills.
- Showcase artistic creativity by designing unique gliders.
- Develop mathematical thinking through data analysis.

HTYC is also one of the eight secondary schools selected as partner schools of The Office of the Government Chief Information Officer (OGCIO) to provide the Enriched IT Programme from 2015 to 2024. OGCIO has stated that HTYC is outstanding in IT education to cultivate young IT professionals and even entrepreneurs. This professional background provides high-quality educational resources and expert guidance for this competition, ensuring a platform for students to showcase their talents, overcome challenges, pursue their dreams, and design and launch their gliders—symbolizing their limitless potential to soar.

Competition Introduction

Participants are required to design and assemble gliders and catapults according to the competition rules. Teams or individuals must pre-design their gliders and program their catapults to propel the glider the furthest distance from a designated height on the competition field to compete for the Championship. The competition emphasizes the ability to design gliders that adhere to aerodynamic principles and program catapults to provide propulsion through a catapult mechanism.

This year's theme is "Flying in Kowloon City". Students are required to design and decorate their glider bodies to reflect this theme, incorporating landmarks or characteristics related to Kowloon City District to compete for the Creative Award.
Participants must also use their micro:bit programming skills to create suitable programs for their catapults to assist in launching the gliders. Judges will evaluate the teams' micro:bit programming skills to compete for the Technology Award.

Additionally, to allow students to further showcase their glider designs and features, the competition includes an oral presentation session. Each team must prepare a 3-minute presentation to introduce their glider design, launcher programming features, production process, challenges faced, and solutions to compete for the Best Presentation Award.

Competition Registration

2.1 Competition Categories

- The competition is divided into **two** categories:
    - **Team**
        - Each team consists of 3 to 4 Primary 6 students from the same school in the Kowloon City District and must be led by a teacher.
        - There is no limit to the number of teams each school can send.
    - **Individual**
        - Each team consists of 1 Primary 6 student and must be led by a parent/guardian.
- **Quota**
    - Team: 35 teams
    - Individual: 20 participants
- Each participant can only participate in one team in the team category or as an individual, but not both. Students cannot participate in more than one team.

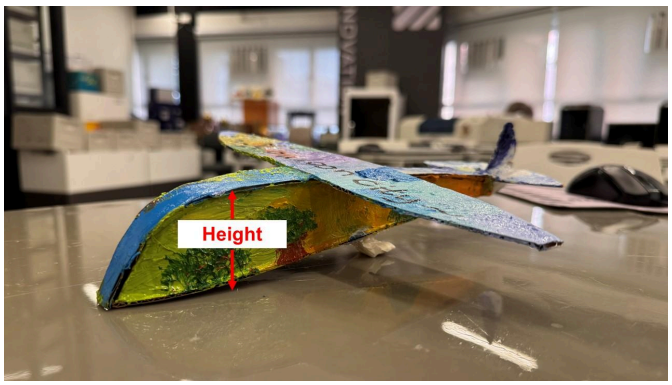
2.2 Application Method

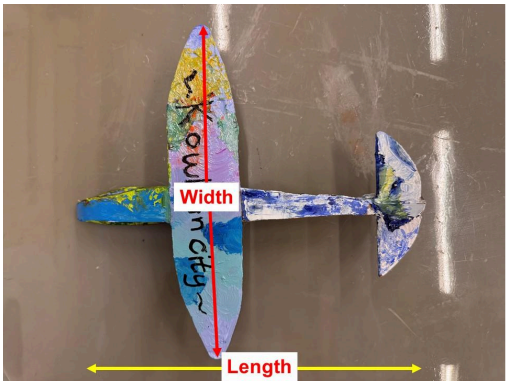
- Application Period: 20 October 2025 (Mon) to 14 November 2025 (Fri)
- Application is conducted online. Participants can refer to the application instructions on the official competition website:
    - Team Application: Download the team application form, complete and submit via email to steam_info@sch.htyc.edu.hk
    - Individual Application: Register online.
- Team rosters must be submitted to the organizer by the registration deadline (14 November 2025).
- Team rosters cannot be changed without the approval of the organizer.
- Successful applicants will receive a confirmation email **by 17 November 2025**.

Competition Rules

3.1 Glider Specifications

- The size of gliders must not exceed 30cm in length (from nose to tail), 40cm in width (wingspan), and 24cm in height (from ground to the highest point) (A3 paper box) when assembled, as measured by the organizer.
- There is no minimum weight limit, and the shape is unrestricted.
- No powered propulsion devices or batteries are allowed.
- Gliders must be decorated based on the theme “Flying in Kowloon City”, incorporating Kowloon City District landmarks or characteristics, but decorations must not affect performance or violate size restrictions.
- Commercially available model gliders are prohibited; gliders must be self-made.





3.2 Catapult Specifications

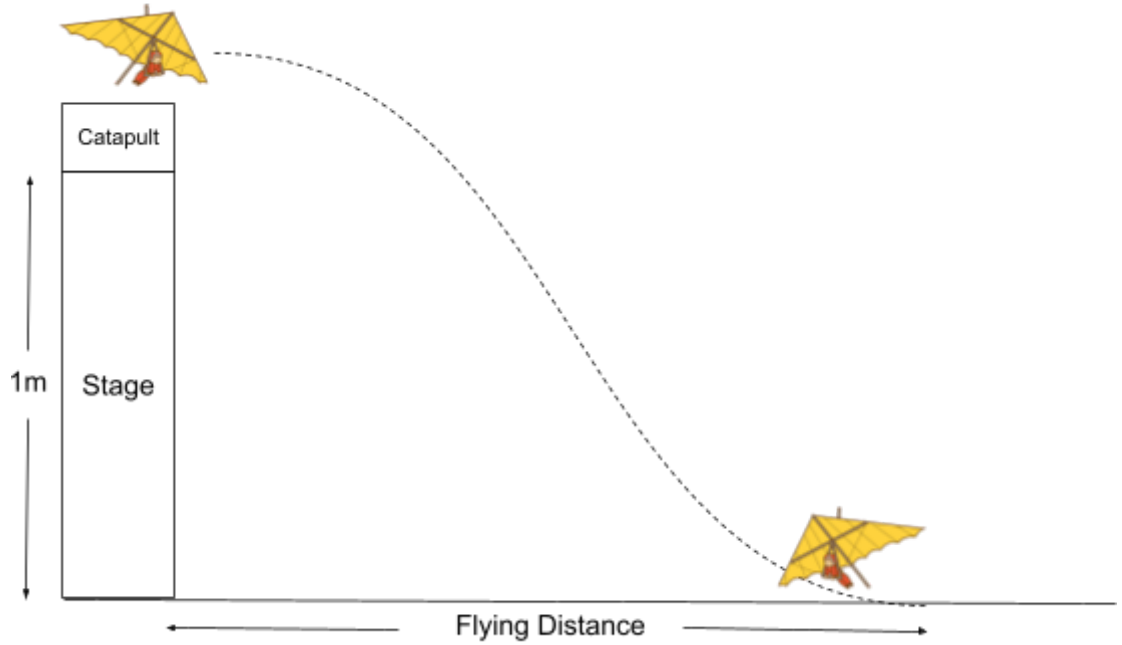
- Participants need to make their own catapult platform, which must not exceed 42cm in length, 30cm in width and 24cm in height (A3 paper box), as measured by the organizer.
- Catapults must use rubber bands for propulsion and incorporate micro:bit programming to control launching speed and angle.
- Catapults must be placed on a 1-meter-high platform, and gliders must have a hook at the rear to connect to the rubber band for propulsion.
- Participants may adjust the catapult’s speed and projection angle to modify the catapult system.

3.3 Definition of Flight Termination or Landing

- A flight is considered terminated or landed when:
    - Any part of the glider touches the ground.
    - The glider collides with any object in the air and stops.
    - A participant touches the glider within the gliding zone.
    - The glider enters other gliding zones.

3.4 Calculation of Flying Distance

- Flying distance is measured from the point where the glider leaves the catapult to its landing position (including the length of glider).
- All gliders must take off from the catapult.
- Gliders must remain intact to complete the competition.



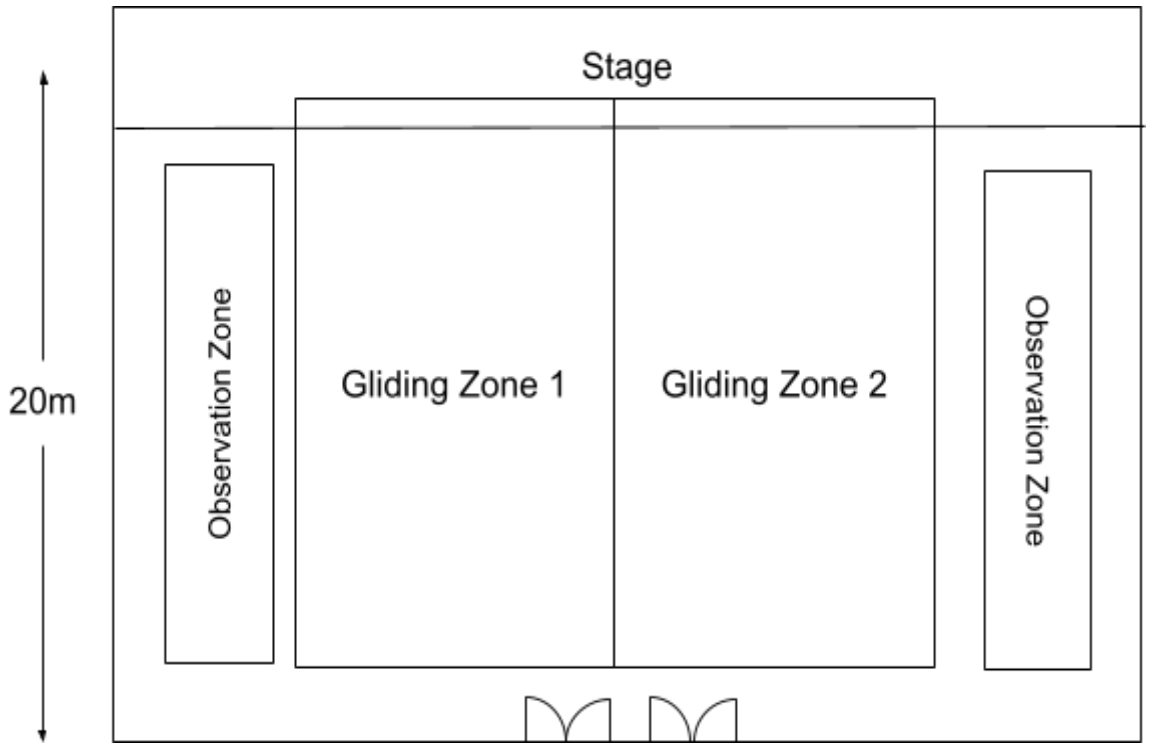
3.5 Launching Rules

- Each team has 2 rounds of competition.
- Each round provides 2 launch attempts.
- Each launch attempt is limited to 1 minute. If the glider is not launched within 1 minute, the flying distance is recorded as 0 meters. Early completion of a launch does not grant additional attempts.

For detailed competition rundown and floor plan, please refer to the following:

		Time	Launch Zone		Presentation
			Zone 1	Zone 2	
Round 1	**Session 1**	12:30 - 13:00	Group A	Group B	Group F
	Buffer	13:00 - 13:05	Buffer		
	Session 2	13:05 - 13:35	Group C	Group D	Group E
	Buffer	13:35 - 13:40	Buffer		
	Session 3	13:40 - 14:10	Group E	Group F	Group A
	Break	14:10 - 14:20	Break		
Round 2	**Session 4**	14:20 - 14:50	Group A	Group B	Group D
	Buffer	14:50 - 14:55	Buffer		
	Session 5	14:55 - 15:25	Group C	Group D	Group B
	Buffer	15:25 - 15:30	Buffer		
	Session 6	15:30 - 16:00	Group E	Group F	Group C

Competition Rundown
(Please refer to the final announcement on the official competition website)



Competition Floor Plan

3.6 Violations and Disqualifications

- All gliders and catapults must be judged and verified to meet specifications before they can compete. Violations of any competition specifications and rules (including exceeding glider or catapult specifications, using prohibited materials or propulsion methods, or failing to comply with safety regulations) will result in disqualification.
- During the competition, please note the following:
    - Only team members or individuals can enter the launching and gliding zones.
    - Competitors must strictly adhere to safety regulations.
    - Unless directed by the judges, unauthorized test flights are not permitted at the competition venue.
    - By registering, participants acknowledge that environmental conditions may affect competition results, despite the organizers' efforts to control them.

  Failure to comply with these regulations will result in a warning for the first violation and immediate disqualification for the second violation.
- Continuous or serious violations (such as vandalism, unauthorized modification of the catapult mechanism, or repeated safety violations) may result in disqualification from the entire competition.
- Disqualified competitors forfeit all prizes or prize money. The organizers' decisions on violations and disqualifications are final.

Awards

Categories	Awards
Team	• Champion • 1st Runner-up • 2nd Runner-up • Creative Award • Technology Award • Best Presentation Award • Best Participation School Award
Individual	• Champion • 1st Runner-up • 2nd Runner-up • Creative Award • Technology Award • Best Presentation Award

- Awards for the group and individual categories will be judged separately, and the judges' decisions will be final.

Prizes

Target	Prizes
All participants	• Certificate of Participation & HTYC Souvenir

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	• Trophy
	• **3-hour Free Flight Course (This course will be tutored by professional pilots.)**
	  ○ flight theory
	  ○ flight simulator experience
	  ○ aviation career planning

- The specific time and location of the free flight course will be announced by the organizer after the competition.
- The organizer reserves the right of final interpretation and modification of prize arrangements.

Judging Criteria

- Longest flying distance: Scoring is based on the best flying distance in all rounds. In case of a tie, a third flight will be conducted.

- **Creative Award:**

Judging Criteria	**Weighting**
Theme originality	50%
Aesthetics	50%

- **Technology Award:**

Judging Criteria	**Weighting**
Glider technical design	40%
Catapult system functionality	40%
Micro:bit programming skills	20%

- **Best Presentation Award:**

Judging Criteria	**Weighting**
Presentation Content	80% ● Design principle of glider: 20% ● Programming skills of catapult system：20% ● Difficulties faced: 20% ● Solutions: 20%
Presentation Skills	20%

- **Best Participation School Award:** Selection based on the number of participating teams from the school.

Other Notes

- The organizer is not responsible for any damage or loss of gliders during the competition.
- Participants are fully responsible for the safety of their gliders. The organizer reserves the right to disqualify a team's glider at any stage of the competition if their glider poses a risk to the safety of other participants.
- The organizer reserves the right to limit the number of participating teams, depending on time and venue availability.
- Photos and videos will be taken during the competition, and the organizer retains all rights to all photos and videos.
- The organizer reserves the right of final arbitration and the right to exhibit and publish the entries.
- The organizer reserves the right to amend the rules and regulations. All teams will be notified of any changes at least one week before the competition begins.
- The organizer reserves the right to make final decisions regarding the competition.
- For any questions regarding the competition, please email steam_info@sch.htyc.edu.hk.