

SIDE QUEST

FORMULA X

EP-RACE

Rules Guide

Organiser:



Side Quests Challenge Booklet 2024

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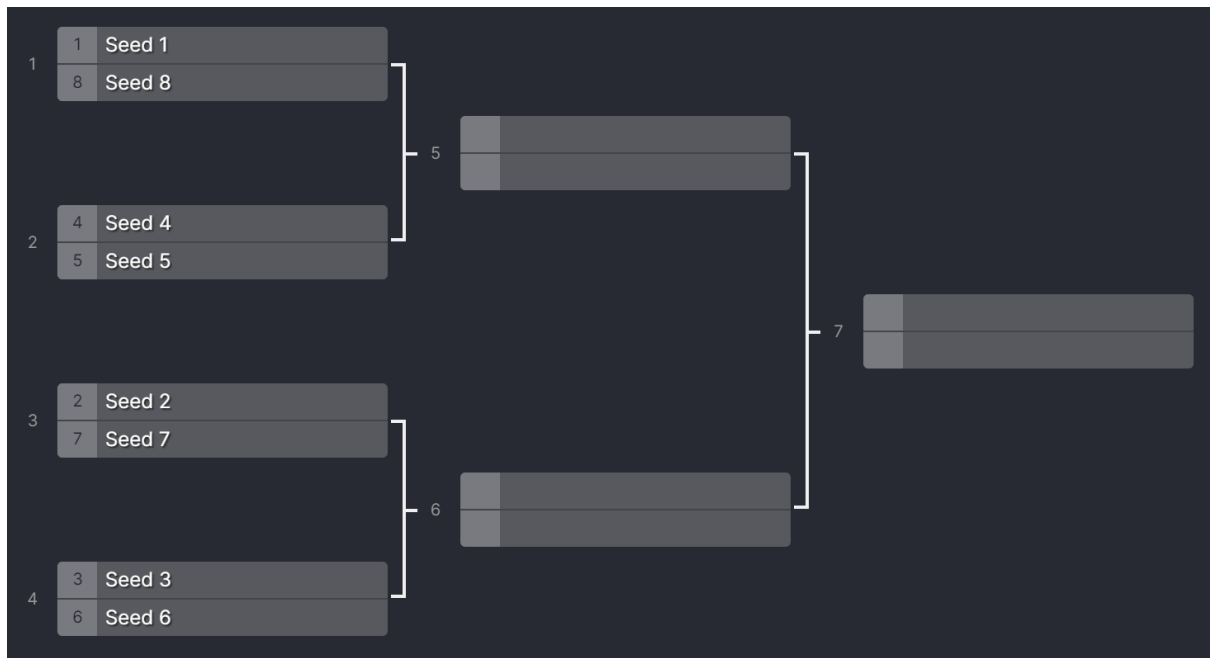
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Side Quests: Formula X Race

Formula X Race consists of 2 parts:

- A. Speed Rush (Seeding)
- B. Obstacle Rush Tournament

Speed rush is the process through which teams compete to set the fastest lap time. The fastest team in speed rush will receive the top seed for Obstacle Rush Tournament and Fastest Lap award. The slowest team will receive the last seed.



Obstacle Rush Tournament will have the teams facing off head-to-head on a dynamic track filled with obstacles. The winner of the face off will proceed to the next bracket until the final winner is determined.

Eligibility & Requirements

Eligibility: Competitors can sign up for **only one** MakeX event.

Participants: The number of contestants is 1-2 student(s) for each team.

Age: Junior: Ages 6-12 (As of 2024)
Senior: Ages 13-16 (As of 2024)

Technical Requirements

The Robot General Specification is prepared for better preparation for teams and ensures a fair and safe competition standard. We suggest teams to program and construct the robot under a fully comprehensive understanding of this specification. All robots must follow the Robot General Specification strictly and any against of the requirement will be asked to rectify. The robot might be disqualified if seriously against the specification.

Robot Mechanical base:

- mBot or mBot2

Modification:

- Teams can modify their robot base with any official MakeBlock product.
- The use of tape or glue is prohibited.
- The size of the robot will be strictly limited to 20cm(length) x 15cm(width) x 20cm(height) at the starting area. All extensions beyond the size limit must be deployed autonomously.
- Teams are allowed to add mechanical components to overcome obstacles.
- Teams are allowed to use tactics to delay opponents. (for e.g. Leaving rubber tire on playfield to create obstacles for opponents)

Wireless Controllers:

Participating teams need to prepare their own wireless controllers. Some examples of controllers are:

- MakeBlock Bluetooth Controller
- CyberPi
- Mobile Applications
 - Makeblock App
<https://www.makeblock.com/pages/software>

Teams who attempt to interfere with the wireless controllers of other teams during pairing or gameplay will be disqualified.

Competition Information

A. Speed Rush

Objective: Teams are to guide their robot to cross the finish line as quickly as possible. The lap completion time will determine the seeding for the Obstacle Rush.

Penalties: Robots that deviate from the track will incur a 5-second time penalty. The robot will be placed back to the point where it left the track.

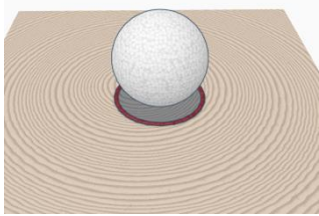

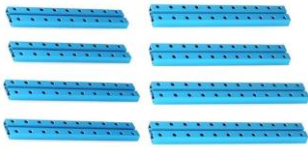

Did not finish: Robots that are not able to cross the finish line in the allotted time will be classified as DNF. The seeding of the DNF will be based on the distance travelled during Speed Rush.

B. Obstacle Rush

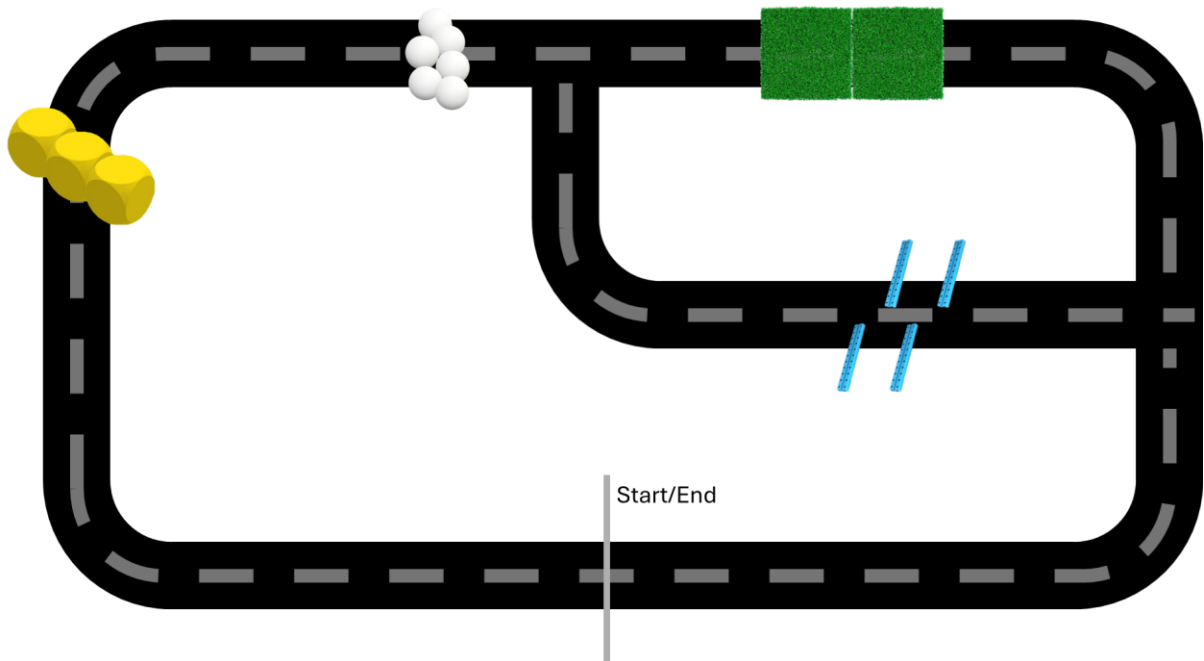
Objective: Teams are to guide their robot to cross the finish line as quickly as possible. The fastest team will be the winner of Formula X Race.

Penalties: Robots that deviate from the track will incur a 5-second time penalty. The robot will be placed back to the point where it left the track. The robot can only move after completing the 5 seconds time penalty

Obstacle: Obstacle will be deployed at a predetermined location in the track. The obstacle are:

Obstacle	Image	Remarks
Snowball		Standard ping pong ball resting on a rubber band
Organic Crystal		Yellow round corner cube with the side of 100mm
Barrier		Makeblock Beam (0824-160)
Green Grass Carpet		Artificial Grass Carpet
Track		Width 50cm

Sample Playfield:

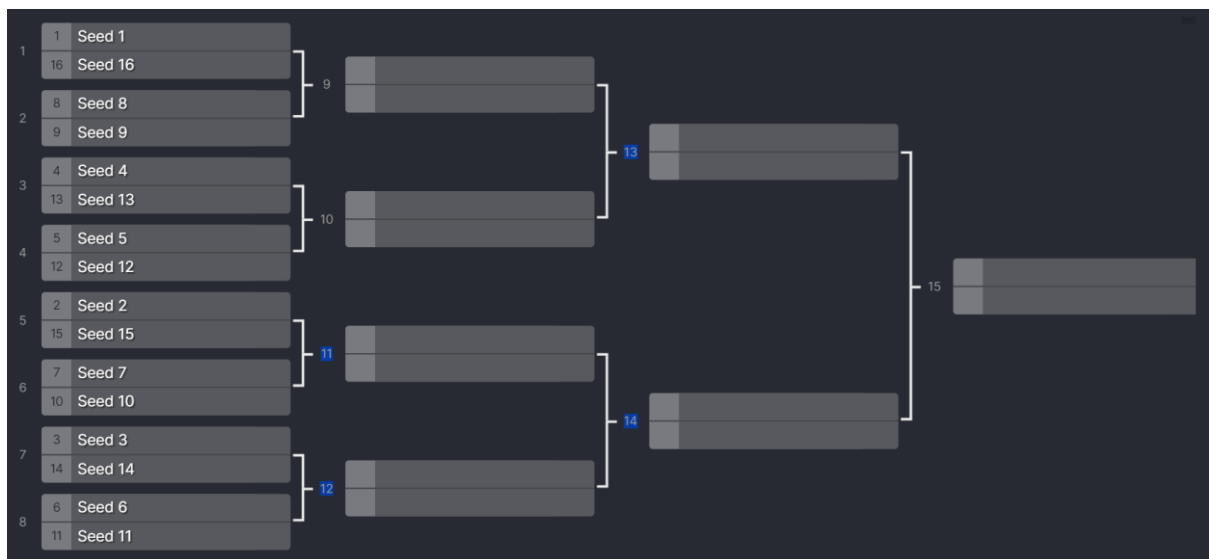


Note: The above is an example of the track.

Arena Size:

- 3m x 13m

Seeding:



Prizes & Awards

Category	Awards	Remarks
Primary / Secondary	Champion	
Primary / Secondary	1st Runner Up	
Primary / Secondary	2nd runner Up	
Primary / Secondary	Most Creative design	
Primary / Secondary	Technical Award	
Primary / Secondary	Fastest Lap	
Primary / Secondary	Judges award	

Event schedule

Closing Registration	25th October 2024
Competition Date	8 November
Competition Venue	ITE College East 10 Simei Ave Singapore 486047

Sample schedule is provided below and is subject to changes:

Time	Side Quests: Formula X Race	Remarks
0830	Registration begins	
0900	Competition Briefing	
0930	Speed Rush	
1200	Lunch	
1300	Obstacle Rush	
1600	Award presentation	
1630	Event Ends at 1630	