



ESTELLA 2.0

Inspiring Students, Creating Leaders



OVERDRIVE SHOWDOWN



"Engineered speed meets strategic skill
on the track."

Day 1: Qualifiers

Day 2: Finals

Categories

Young Innovators (Grades 6-8)

Youth Innovators (Grades 9-12)

**The Millennium School
Sector 119, Noida**

201305

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PROBLEM STATEMENT

Construct and race your own high-speed RC car, utilizing expert driving skills to dominate the circuit track and clock the fastest time!

BOT SPECIFICATIONS

- The bot must be powered only by an electric motor mechanism. Fuel based cars are strictly prohibited
- BLDC motors, DC motors or any other type of electrical motor may be used.
- Maximum Terminal Voltage: **24 volts**.
- Lead-acid batteries are not allowed.
- Maximum bot weight for the Young Innovators: **2 kg**
- Maximum bot weight for the Youth Innovators: **3 kg**
- Maximum Robot Dimensions for the Young Innovators: **30 cm** (length) × **25 cm** (breadth) × **25 cm** (height)

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- Maximum Robot Dimensions for the Youth Innovators: **40 cm** (length) × **30cm** (breadth) × **30 cm** (height)
- Teams may use any wireless communication method.

GUIDELINES & GAMEPLAY

- Each team may consist of a maximum of 4 participants.
- 1 or more teams may race together. This will be confirmed on the day of event.
- Points will be given as per the marking scheme and negative marking will also be applied.
- If the bot gets stuck, the participants may restart from the previous checkpoint.
- Touching the bot during the run is not allowed except for placing at the previous checkpoint.
- Any robot not moving for more than 3 minutes will be disqualified.

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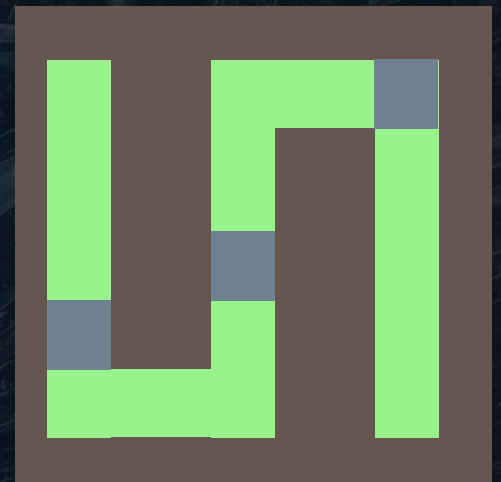
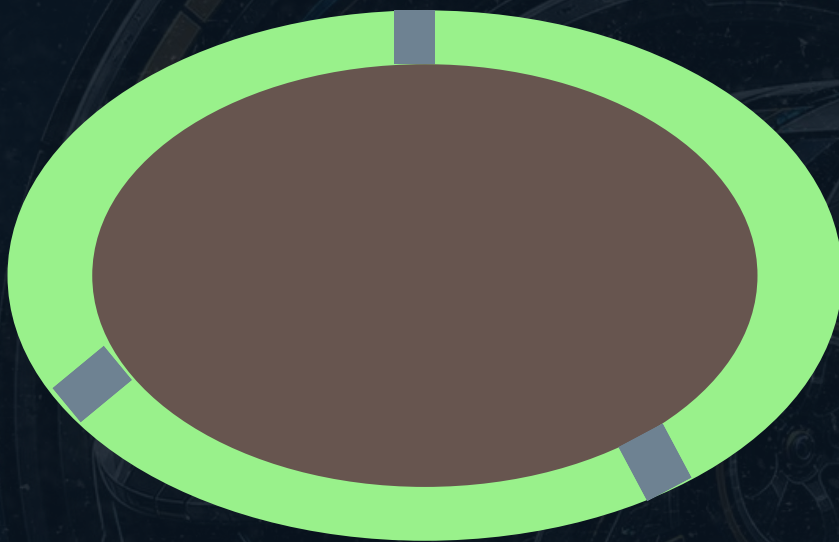
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- The number of runs a team gets and laps per run will be notified on the day of event. The best run will be counted.

ARENA



- Any of these or a combination of both designs may be used.
- Arena may consist of hurdles including ramps, speed breakers, gravel, sand. etc.
- These diagrams are only given as rough reference and are not drawn to scale.
- The arena is subject to changes.

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MARKING SCHEME

<u>Criteria</u>	<u>Points Given</u>
Time Taken in Secs(s)	1000 - s
Completing hurdles	15 per hurdle
50% of bot outside boundary line for less than 5 secs	-5
50% of bot outside boundary line for more than 5 secs	-15 & move to last checkpoint
Bonus for no fouls	30

- If 2 teams get same points, factors like least number of fouls will be considered. A tiebreaker may also take place.
- Teams having most points on Day 1 will qualify for Day 2.

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DECLARATION

The organizing team has made all efforts to make sure no changes are needed. However, modifications, clarifications or adjustments may be made due to unforeseen circumstances.

Participants are expected to extend full cooperation to the organizers and abide by all instructions communicated.

Any form of disorderly conduct, use of unfair means or intentional attempts to hamper the decorum and smooth conduct of the event shall result in immediate disqualification.

Teacher In-Charge: Mr. Manish Chandra Jha (99106 32320)

Student In-Charge: Varad Bansal (85128 43345)

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