ROBOGENESIS' 2026

THEME OF THE YEAR: SUSTAINABLE CITIES AND COMMUNITIES

CATEGORY 3: WASTE MANAGEMENT (GRADES 7 TO 9)

EVENT DATE: 29TH AUGUST 2026

WASTE MANAGEMENT: Separating degradable and non-degradable waste is essential for protecting the environment and promoting sustainability. Degradable wastes like food scraps, vegetables, fruits, paper and other garden waste breaks down naturally and can be decomposed. In contrast, non-degradable waste such as plastic, glass and metal does not decompose easily and should be recycled or disposed properly. Using color-coded bins, such as green for degradable waste and red for non-degradable waste helps with effective sorting. Proper separation reduces pollution, conserves resources and minimizes landfill use, leading to a cleaner and healthier environment in a sustainable city.

Objective: Students should build a fully autonomous movable robot that can complete the given task on its own within a specific time.

General Rules:

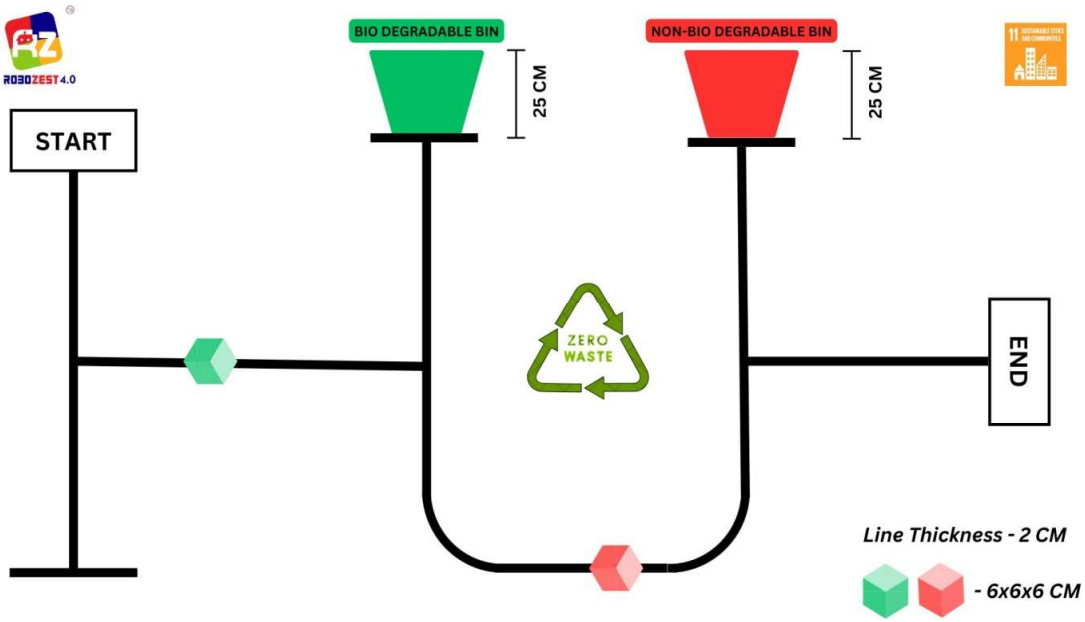
- Each team should consists of 3 students
- A team should have students only from Grades 7 to 9
- The Robot should be designed as per the given dimension and perform the complete task within the given time

Robot Dimension (Max): Length x Breadth x Height = 35 cm x 35 cm x No Limit

Game Rules: In this category, students need to build a **fully automatic robot** that follows a line path, picks up/drags **degradable** and **non-degradable blocks (which are represented in two colors – Green and Red respectively**) and places them in the designated bins. No Wired/Wireless remote controlled robot is allowed in this category. The maze is designed with the **black line on a white surface. The line thickness will be 2 Cm.** The robot must be calibrated in such a way that follows

the black line properly and also push/grab the color block in between its movement. The blocks will be placed on the line itself. The robot should start from the starting zone and reach the end point after completing both the sorting tasks.

WASTE MANAGEMENT MAZE:



Prelims:

- The robot should start from the **Start zone** and follow the designated line path **autonomously**
- In prelims round, each team will be allocated to sort only one block either green or red based on the lots chosen by the team themselves (Two color blocks will be shuffled inside a closed box, one team leader should pick a block from the box. Based on the result, the color will be allotted to that team)
- The robot must follow the line from the start and travel to pick up or drag the chosen block and drop them in the respective bins **properly** and **reach the END.**
- Each team will get **3 minutes of trial round** before the prelims round to calibrate their sensor based on the ambient light intensity present in the arena.

- **Any further disagreements/compliances about the arena or the light intensity are strictly not entertained once the round starts.**
- The total time to complete the task is **5 minutes.**
- In case of any deviations occurred in the robot's movement, each team will be allowed to restart the game **only once** from the **START Zone (But the timer will not be paused/restarted at any cause for any teams)**
- If the team requires more than one chance to restart, in case of their robot deviates from the line; Negative scoring will be given for each chance taken.
- Teams should first **inform the referee for availing the chance to restart.** Touching the robot or giving any external interference to the robot in motion is strictly not allowed, which may lead to **Disqualification**
- **The game starts once the referee gives the whistle.**
- **Judge's decision will be the final.**

Finals:

- Only the selected teams from the prelims will participate in the **final round**.
- In the final round, the robot should sort both the color blocks by following the black line.
- The robot must start from the **Start Zone** and travel to drag or grab the color block to the **degradable and non-degradable bins respectively.**
- The robot must complete the task by reaching the **End Zone** after placing the blocks in the correct bins.
- Each team will get **2 minutes of trial time** before the finals round to calibrate their sensor based on the ambient light intensity in the arena.
- **Any further disagreements/compliances about the arena or the light intensity are strictly not entertained once the round starts.**
- The total time to complete the task is **7 minutes.**
- In case of any deviations occurred in the robot's movement, each team will be allowed to restart the game **only once** from the **START Zone(But the timer will not be paused/restarted at any cause for any teams)**
- If the team requires more than one chance to restart,in case of their robot deviates from the line; Negative scoring will be given for each chance taken.

- Teams should first **inform the referee for availing the chance to restart.** Touching the robot or giving any external interference to the robot in motion is strictly not allowed, which may leads to **Disqualification**
- **The game starts once the referee gives the whistle.**
- **Judge's decision will be the final.**

SCORING CRITERIA:

PRELIMS ROUND SCORING		
S.No	**TASK**	**SCORE (50)**
1	For proper line follower from START Zone to the Designated Bin without deviation or restart	15 Points
2	For proper pick up and drop of Colour block inside the respective Bin	25 Points
3	Reaching the END Zone	10 Points
4	*For restarting the Robot from START zone after the given first chance*	*-5 each time*
TOTAL TIME TAKEN WILL BE CONSIDERED FOR QUALIFICATION		

FINALS ROUND SCORING		
S.No	**TASK**	**SCORE (100)**
1	For proper line follower from START Zone to both the Bins without deviation or restart	30 Points
2	For proper pick up and drop of Green block inside the Bio-degradable Bin	25 Points
3	For proper pick up and drop of Red block inside the Non Bio-degradable Bin	25 Points
4	Reaching the END Zone	10 Points
5	For complete execution without taking any restart	10 Points
4	*For restarting the Robot from START zone after the given first chance*	*-5 each time*
TOTAL TIME TAKEN WILL BE CONSIDERED FOR WINNING		

General Info:

- *Pre registration is mandatory; On-spot registration is not allowed*
- ***Last date for Registration: 20 August 2026***
- *Participants must come with their school ID card*
- *Certificate will be provided for all the participants*

- *For Registrations – www.greenfieldchennai.com*
- *For any queries or clarifications -* **9499945291 / 7845140131**

RoboGenesis 2026 – CODE . BUILD . COMPETE – WHERE YOUNG MINDS BUILD TOMORROW

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