



ROBOGENESIS' 2026

THEME OF THE YEAR: SUSTAINABLE CITIES AND COMMUNITIES

CATEGORY 1: SUSTAINABLE WATER BODIES (GRADES 4 TO 6)

EVENT DATE: 29TH AUGUST 2026

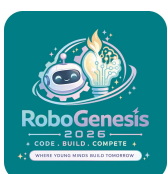
Sustainable Water Bodies: Maintaining the water bodies like Rivers, lakes and canals are the most important measures to be taken for the efficient usage of rain water in any sustainable cities. The well maintained water bodies will help the city to support the agriculture, farming and in turn increase the yield economically. Therefore continuous monitoring and maintenance of such water bodies becomes mandatory for any sustainable cities. There are various maintaining measures taken to preserve the healthier water bodies, one such process is called **Dredging**. Dredging is a process of removing the soil accumulations, sediments and debris from a water body and transporting it to the other location. Dredging will increase the storage capacity of a water body and also increases the efficient flow of water from one place to another place through its proper channel.

Objective: Students should build a wired/wireless remote controlled movable robot, which can be able to perform the given task within a specific time.

General Rules:

- Each team should consist 3 students
- A team should have students only from Grades 4 to 6
- 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 = 35cm x 35cm x No Limit



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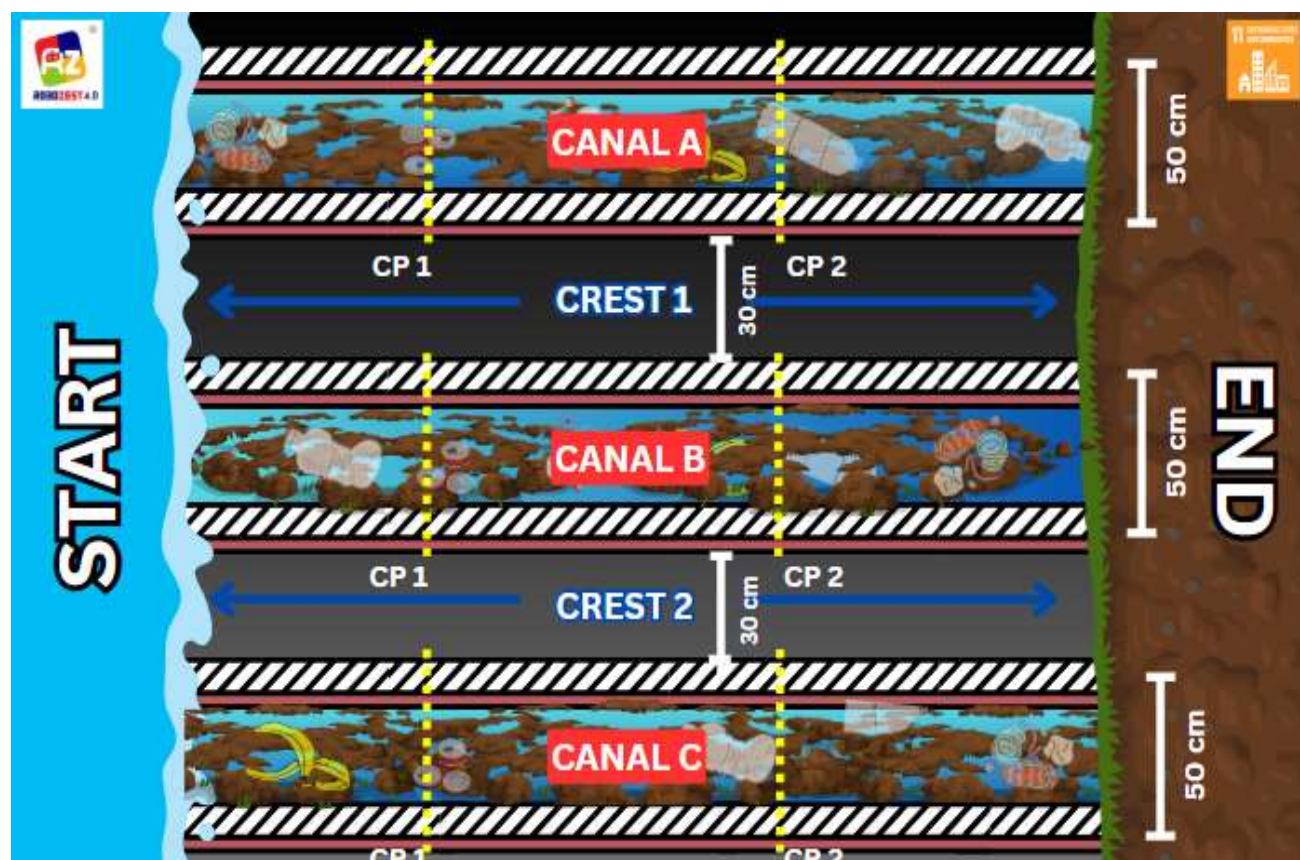


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Game Rules: In this category, students should build a **wired/wireless remote controlled dredging bot** which can move from one end of the canal to the other end by removing the soil deposits and waste debris in its path. The robot shall perform the dredging by removing the soil/debris from the canal and collect it on the sides of the canal i.e crest. The canal banks present on both the sides of the water route is called as Crest.

SUSTAINABLE WATER BODIES MAZE:



Prelims:

- In prelims round, all the teams will be assigned to dredge only the **Canal B**.
- The objective of the robot is to dredge waste sediments (mud, metals, paper balls, wood pieces, logs, etc.) from the **Canal B** and move it to either **Crest 1 or 2** which are present in the sides of the canal B.
- The robot must start from the **Start Zone** and navigate through the **Canal B** to clear all the sediments till the **END** of the Canal.

- Waste or Soil deposits must be moved completely to the **Crest 1** or **Crest 2** without spilling backs to the **Canal B** or into the other two nearby canals.
- Scoring will be given based on the completion till the checkpoints given in the canal. Teams which dredges till the maximum checkpoints will get the maximum scores
- If any soil sediments/debris falls back into the Canal B or into the **Canal A** and **C**, it leads to the **Negative points**.
- Robots can either be wired or wireless based on the team's preference.
- No external interference is allowed with the robot while it is in motion during the competition.
- **Total time for the task is 5 minutes**
- **The game starts once the referee gives the whistle**
- **Touching the robot in middle of the game and pulling/pushing the robot with cable or any external material is strictly prohibited**
- **Judges decision will be the final**

Finals:

- Only the shortlisted teams from the prelims will compete in the Finals.
- In finals round, all the teams must dredge the **Canals A and C**.
- The robot must start from the **Start Zone** and dredge either **Canal A or C** first based on their preference. After dredging the first canal, **the robot should travel back into the cleared canal and start dredging the next canal from the START only**. Lifting the Robot to the next canal by hands is strictly not allowed.
- Same as prelims round, Canal should be thoroughly dredged and all the sediments must be placed in either the **Crest 1 or 2**. The dredged soil or debris should not fall back inside the cleared canals.
- **Negative points** will be given if the soil/debris is not placed properly in the Crests or falling back inside the canals.
- Scoring will be based on the completion till the checkpoints given in both the **Canals A and C**. Teams which dredges till the maximum checkpoints in both the canals will get the maximum scores.
- **Total time for the task is 7 minutes**
- **The game starts once the referee gives the whistle**



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- Touching the robot in middle of the game and pulling/pushing the robot with cable or any external material is strictly prohibited
- Judge's decision will be the final

SCORING CRITERIA:

PRELIMS ROUND SCORING		
S.No	TASK	SCORE (50)
1	Proper dredging of the Canal B clearly till the Check Point 1 (CP.1)	15 Points
	<i>Improper dredging If any soil debris remains inside the canal till CP.1</i>	10 Points
2	Proper dredging of the Canal B clearly till the Check Point 2 (CP.2)	15 Points
	<i>Improper dredging /If any soil debris remains inside the canal till CP.2</i>	10 Points
3	Proper dredging of the Canal B clearly till the END ZONE	15 Points
	<i>Improper dredging /If any soil debris remains inside the canal till END</i>	10 Points
4	Robot Reaching the END zone	5 Points
5	<i>If the dredged soil/debris falls back into the Canal B or pushed into the other 2 canals</i>	-5 each time
6	<i>Driving the robot out of the Canal B/driving on the crests/deviating from the designated path</i>	-5 each time
TOTAL TIME TAKEN WILL BE CONSIDERED FOR QUALIFICATION		

FINALS ROUND SCORING		
S.No	TASK	SCORE (100)
CANAL A - DREDGING (50 POINTS)		
1	Proper dredging of the Canal A clearly till the Check Point 1 (CP.1)	15 Points
	<i>Improper dredging If any soil debris remains inside the canal till CP.1</i>	10 Points
2	Proper dredging of the Canal A clearly till the Check Point 2 (CP.2)	15 Points
	<i>Improper dredging /If any soil debris remains inside the canal till CP.2</i>	10 Points
3	Proper dredging of the Canal A clearly till the END ZONE	15 Points
	<i>Improper dredging /If any soil debris remains inside the canal till END</i>	10 Points
4	Robot Reaching the END zone	5 Points
CANAL C - DREDGING (50 POINTS)		
5	Proper dredging of the Canal C clearly till the Check Point 1 (CP.1)	15 Points
	<i>Improper dredging If any soil debris remains inside the canal till CP.1</i>	10 Points
6	Proper dredging of the Canal C clearly till the Check Point 2 (CP.2)	15 Points
	<i>Improper dredging /If any soil debris remains inside the canal till CP.2</i>	10 Points
7	Proper dredging of the Canal C clearly till the END ZONE	15 Points
	<i>Improper dredging /If any soil debris remains inside the canal till END</i>	10 Points
8	Robot Reaching the END zone	5 Points



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9	<i>If the dredged soil/debris falls back into the Canal A or C / pushed into the other canals</i>	<i>-5 each time</i>
10	<i>Driving the robot out of the designated canal/driving on any of the crests</i>	<i>-5 each time</i>
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***



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