

# Welcome to National Robotics Competition 2023

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## **NRC Regular Category**

Lower Primary: 7-9 years old | Upper Primary: 10-12 years old  
Secondary: 13-16 years old | Tertiary: 16-19 years old

## **NRC Open Category**

Primary: 8-12 years old | Secondary: 13-16 years old | Tertiary: 16-19 years old

## **NRC AI Maker Series**

Primary: 8-12 years old | Secondary: 13-16 years old

## **NRC Preschool (KUBO Challenge)**

5-6 years old

## **NRC Preschool (ARtec Challenge) \*NEW\***

5-6 years old

## **NRC CoderZ Coding Challenge (Online)**

Primary: 8-12 years old | Secondary: 13-16 years old

## **NRC RoboCup Singapore CoSpace Coding Challenge \*NEW\***

Primary: 8-12 years old | Secondary: 13-16 years old | Tertiary: 16-19 years old

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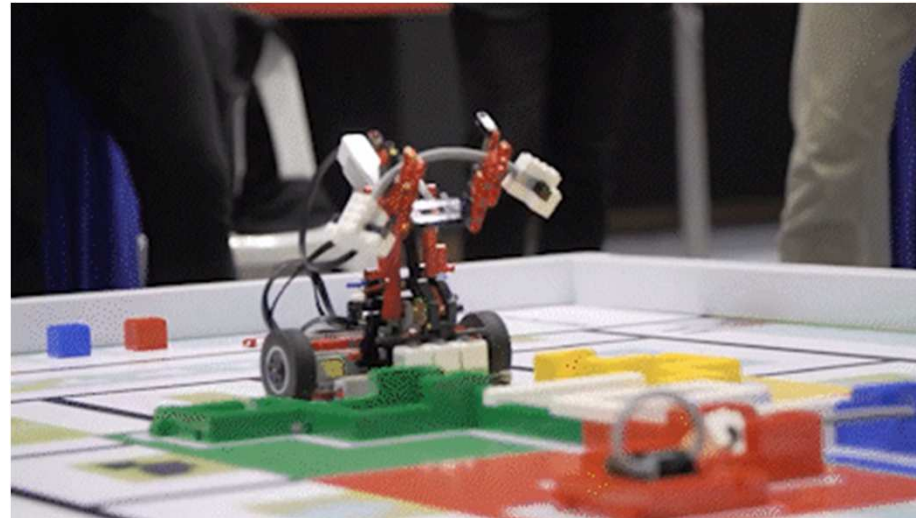


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## Held live on-site at Science Centre Singapore from 21 August to 9 September 2023



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# NRC Preschool Category (ARTec Challenge) 2023

5-6 years old

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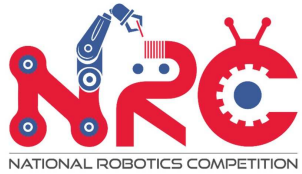


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# Agenda for the Webinar

- Introduction to the NRC Preschool Category (ARTec Challenge)
- Introduction to Gameplay
- Scoring
- Award
- Important Dates



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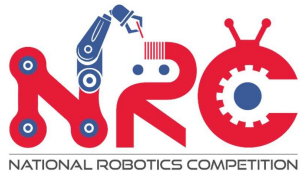


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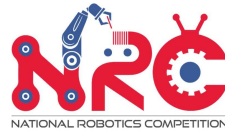




# Introduction to the NRC Preschool (ARTec Challenge) 2023

- Build and code robots to perform different tasks in their neighbourhood
- Discovering and learning of Singapore's National agenda on sustainable development
- Engage in purposeful play, spark their interest and curiosity in STEM learning





# Introduction to Gameplay

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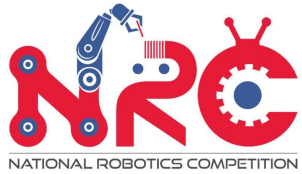


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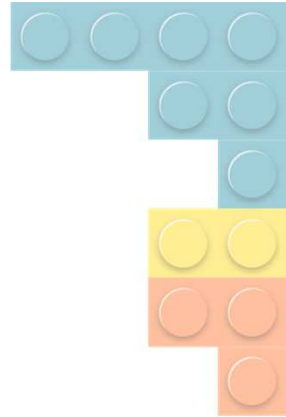


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# NRC ARTec (Pre-School) 2023



## Presentation (30%)

- Online Presentation
- To showcase the design and coding of the ARTec Robots
- To share their learning

## Robot Runs (70%)

- Robot Runs based on scores from solving missions



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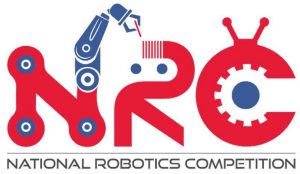
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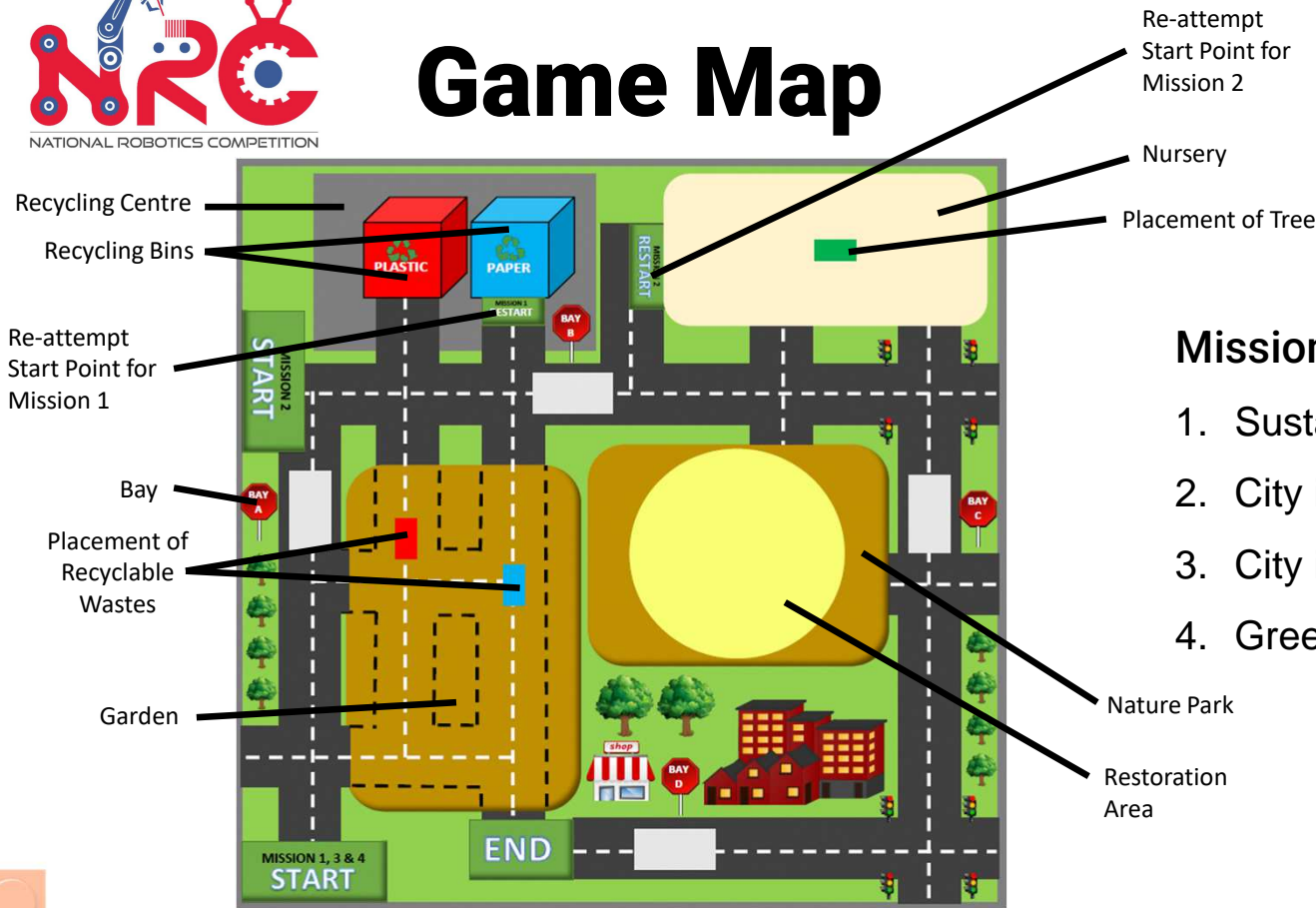
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# Game Map



## Missions:

1. Sustainable Living - Recycle to reduce waste
2. City in Nature - Restoring Nature
3. City in Nature - Decorating our Garden
4. Green Energy - Self-drive electric vehicle

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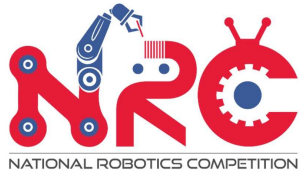


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# Allowed Material

<b>Hardware</b>	ARtec Coding+ Set (Batteries not provided)	
<b>Software</b>	ARtec Icon Programming	
<b>Building Materials</b>	For the building of Robots, ONLY ARtec branded elements are allowed	
<b>Laptop (Not Provided)</b>	<p>The system requirements for Window:          OS : Vista/ 7/ 8/ 8.1/ 10 (32 bit/ 64 bit)          CPU : Pentium 4, 2 GHz or higher (or equivalent) recommended          Memory : 256 MB or higher          USB : USB 2.0 port</p>	<p>The system requirements for Mac:          OS : Mac OS X 10.6 to 10.13          Hardware : Minimum required by OS (Please check the Apple website to confirm)          USB : USB 2.0 port</p>

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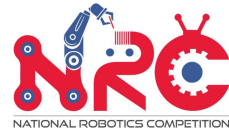


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# Scoring

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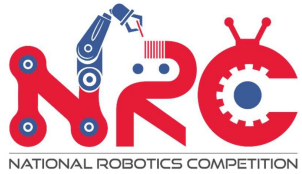


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# Judging for Presentations

- 5 min of Presentation
- 3 min of Q&A
- Max 10 PowerPoint Slides
- May include Photos or Video in Slides
- Refer to Section 7.1 for scoring rubrics

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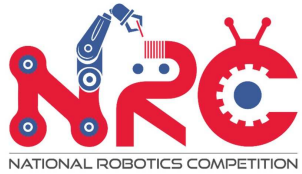


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# Scoring for Robot Runs

Mission	Preparation (Min)	Robot Attempt (Min)	Total Duration (Min)
<b>Sustainable Living - Recycle to reduce waste</b>	3	12	15
<b>City in Nature - Restoring Nature</b>	3	12	15
<b>City in Nature - Decorating our Garden</b>	3	7	10
<b>Green Energy - Self Drive Electric Vehicle</b>	10	10	20

- Refer to Section 7.2 for scoring rubrics

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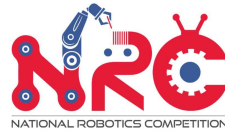


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# Awards

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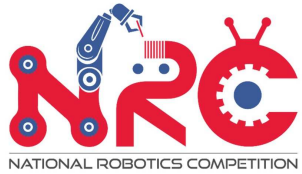


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# Awards & Prizes

- **Overall Championship**
  - 1<sup>st</sup> Place: \$400, trophy, banner, medals (per participant)
- **Best Robot Performance**
  - 1<sup>st</sup> Place: Trophy, medals (per participant)
  - 2<sup>nd</sup> Place: Medals (per participant)
  - 3<sup>rd</sup> Place: Medals (per participant)
- **Best Presentation**
  - Top 3: Medals (per participant)

\* *The Organiser reserves the right to amend the prizes without prior notice.*

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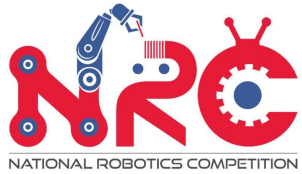


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# Awards & Prizes

- **Best ARTec Robot Design**
  - Top team: Medals (per participant)
- **Best Teamwork**
  - Top team: Medals (per participant)
- **All Participants**
  - Certificate of participation

*\* The Organisers reserves the right to amend the prizes without prior notice.*

Organiser:



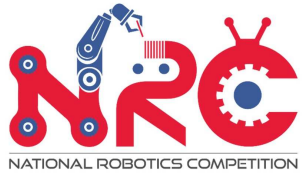
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# Important Dates

	Dates	Time	Remarks
ARtec Training	TBA	TBA	Training will be conducted onsite at Newton Room, SCS
Kit Collection	TBA	10am – 5pm	Collection at Wow Education
Online Presentation	23 <sup>rd</sup> August 2023	10am – 5pm	Date and time slot will be released closer to date
Onsite Competition	30 <sup>th</sup> August 2023	9am – 5pm	

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# Contact us/Updates/FAQ

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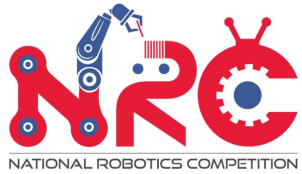


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# FAQ – ARTec Category

1. Where can we download or purchase the ARTec playfield mat?

Ans: You may purchase the playmat from Wow Education. The printable playmat will be uploaded onto the NRC webpage.

2. Can the participants bring robots pre-assembled? Will there be dismantling of robots?

Ans: We do not require robots to be assembled on the spot during competition. You may bring pre-assembled robots

3. Apart from showcasing their physical robot for robot game, is the team expected to present on their robot game strategy, robot design, build and coding process?

Ans: Yes. The processes are important for judges to gauge participants' learning journey. It also helps to demonstrate originality of work i.e. not just a solution given by mentor.

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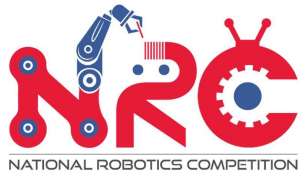


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# FAQ – ARTec Category

4. How will the presentations be conducted?

Ans: Presentations will be conducted online. More details can be found in the challenge booklet.



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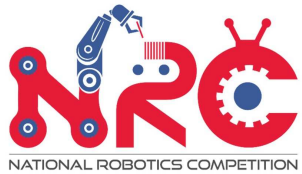


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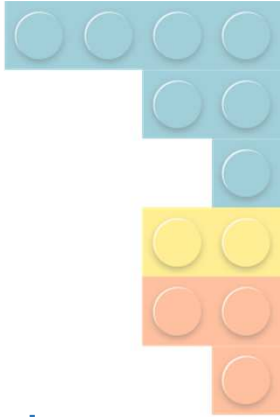


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# FAQ - Registration



1. Can I register for more than one category?

Is there a maximum no. of teams each school can register for?

Ans: **Yes, if the dates are not overlapped. There is no maximum no. of teams a school can register.**

2. If we are registering as a private team, what do we put under school name?

Ans: **You can indicate as “independent” or “private”.**

3. Can we pay the registration fee by e-invoice? Is there any other method of payment?

Ans: **We only accept credit card payment through our registration platform.**

4. Can a coach/mentor be repeated for multiple teams?

Ans: **Yes.**

5. When is the latest cut off for registration?

Ans: **Registration opens from 24 Feb to 1<sup>st</sup> July 2023**

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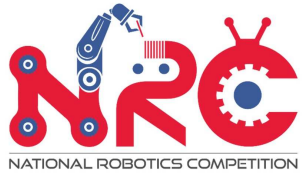


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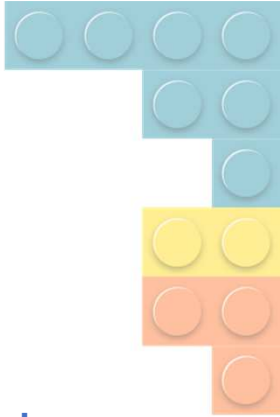


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# FAQ -Others

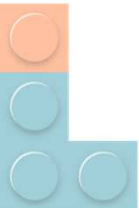


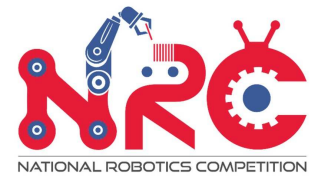
1. Can I get tickets as a bystander to view the competition?

Ans: There is no need of bystander tickets to view the competition, walk-in is allowed. There will be a designated zone for the audience to sit and view the competition.

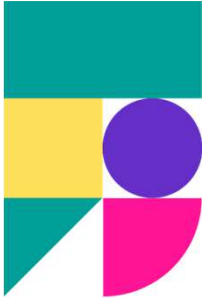
2. Is there any preparation class from Science Centre?

Ans: A training session will be provided by Wow Education. Please contact [enquiries@wow.com.sg](mailto:enquiries@wow.com.sg) for more details.





# Contact us/ Updates/ FAQ



Website



Social  
Media



Sign-up  
Link



Email

[enquiries@wow.com.sg](mailto:enquiries@wow.com.sg)

For any queries, please type in the Zoom Chat

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