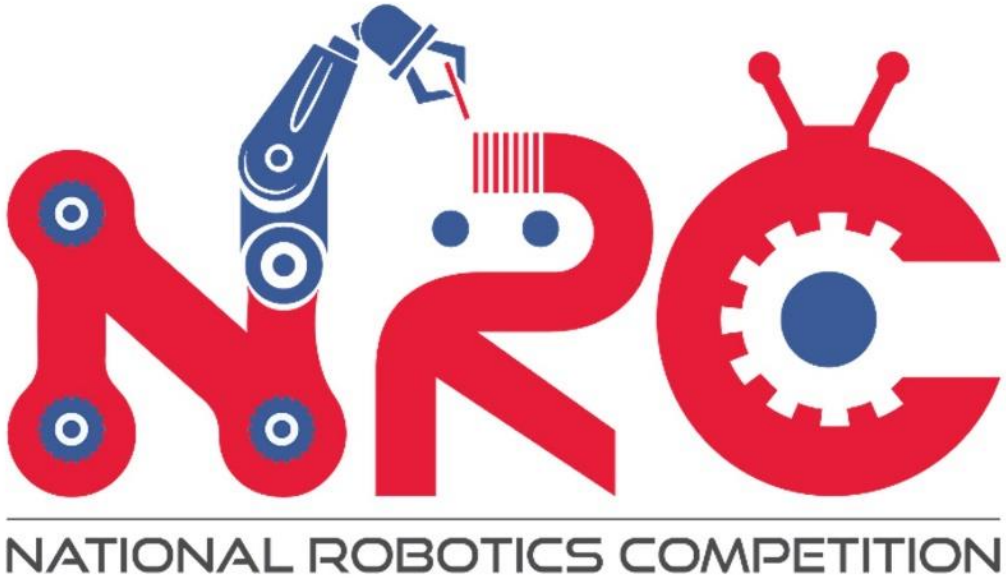

Welcome to National Robotics Competition 2023

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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

AI Maker Series

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

NRC Pre-School Kubo Challenge

5-6 years old

NRC Pre-School 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

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

Organiser:

Science Centre Singapore

DUCK LEARNING opportunities in education

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Ministry of Education SINGAPORE

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GLOBAL ROBOTICS GAMES

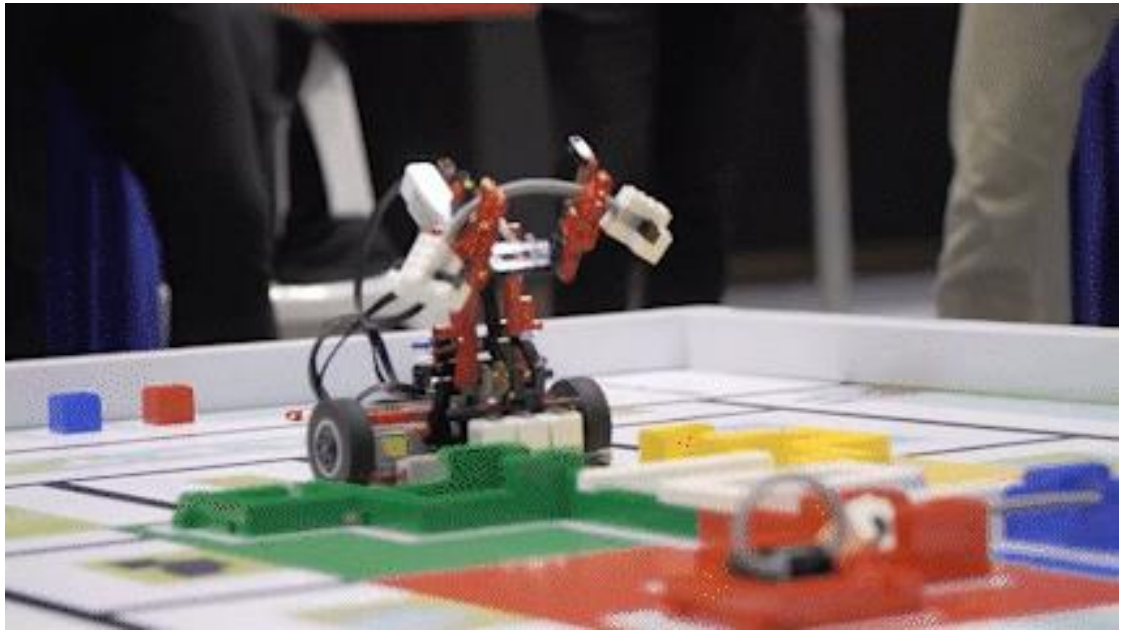
SP Singapore Polytechnic

RoboCup SINGAPORE

WOW Learning

NATIONAL ROBOTICS COMPETITION

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



Organiser:

Science Centre Singapore

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NRC CoderZ Coding Challenge

Primary | Secondary

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Agenda for the Webinar

- Introduction to the NRC CoderZ Coding Challenge
- Introduction to Gameplay
- Judging Criteria
- Scoring
- Awards & Prizes
- Rules
- Programme Schedule

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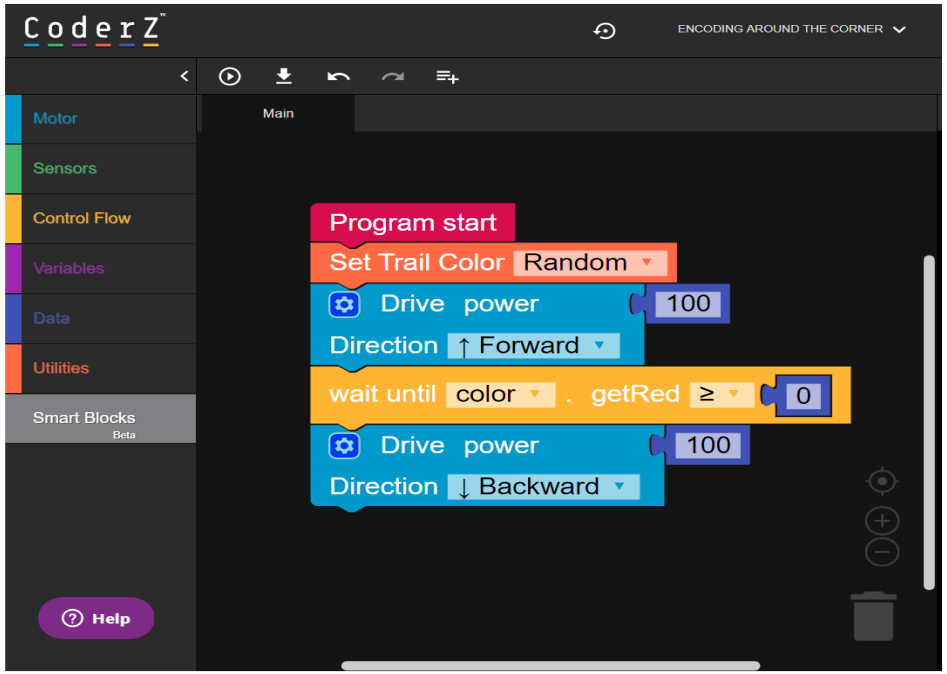
Introduction to the NRC CoderZ Coding Challenge



- A powerful, award-winning online platform through which students learn valuable STEM skills such as coding, robotics, and physical computing.
- Block-based programming

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Introduction to the NRC CoderZ Coding Challenge

- Primary & Secondary Category
- Ages: 8 -12 yrs old / 13 – 16 yrs old
- Team size: 6 students

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Introduction to the NRC CoderZ Coding Challenge

Two parts to the programme:

1. **Recap of CoderZ**
   - Coding training by Duck Learning trainers
   - Students can explore the platform, try out coding missions and clarify doubts

2. **CoderZ Coding Challenge**
   - Primary: CoderZ League in a Box – Novice
   - Secondary: CoderZ League in a Box - Junior

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Introduction to Gameplay

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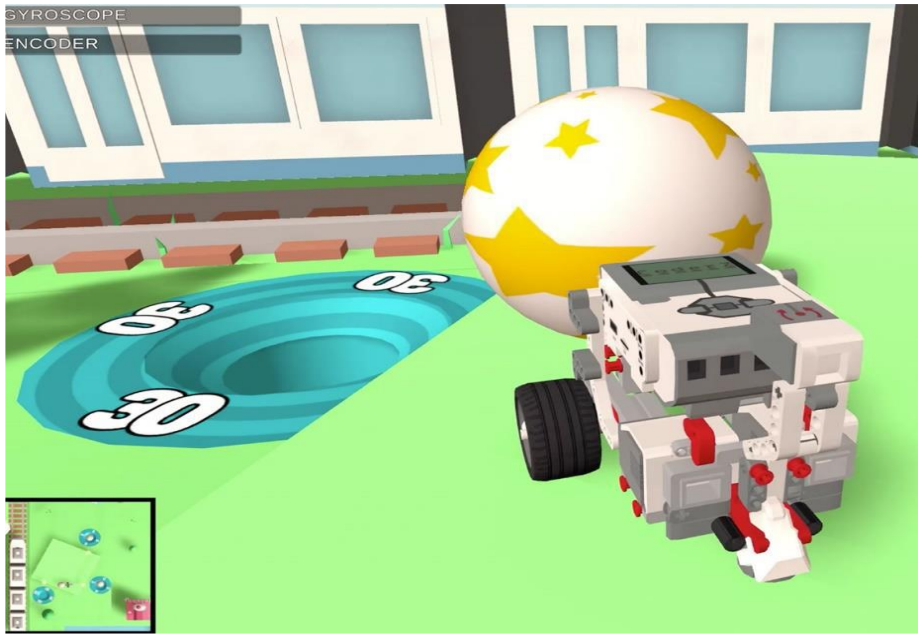
Introduction to Gameplay



Example of virtual robot environment

- Teams must code their virtual robots to accomplish a series of tasks
- Consist of missions and challenges
  - Missions involve principles of coding and robotics
  - Challenges require team members to collaborate using the knowledge they have gained

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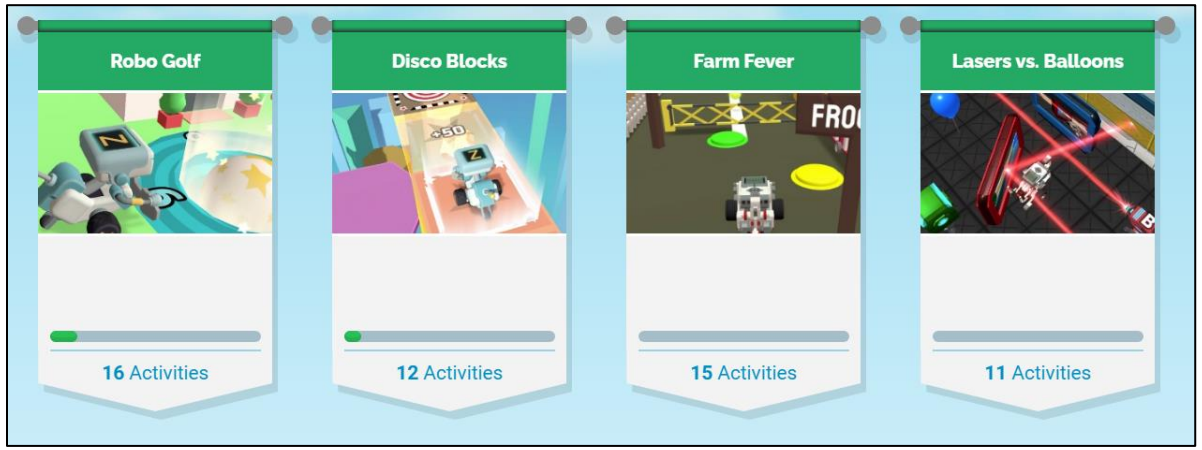
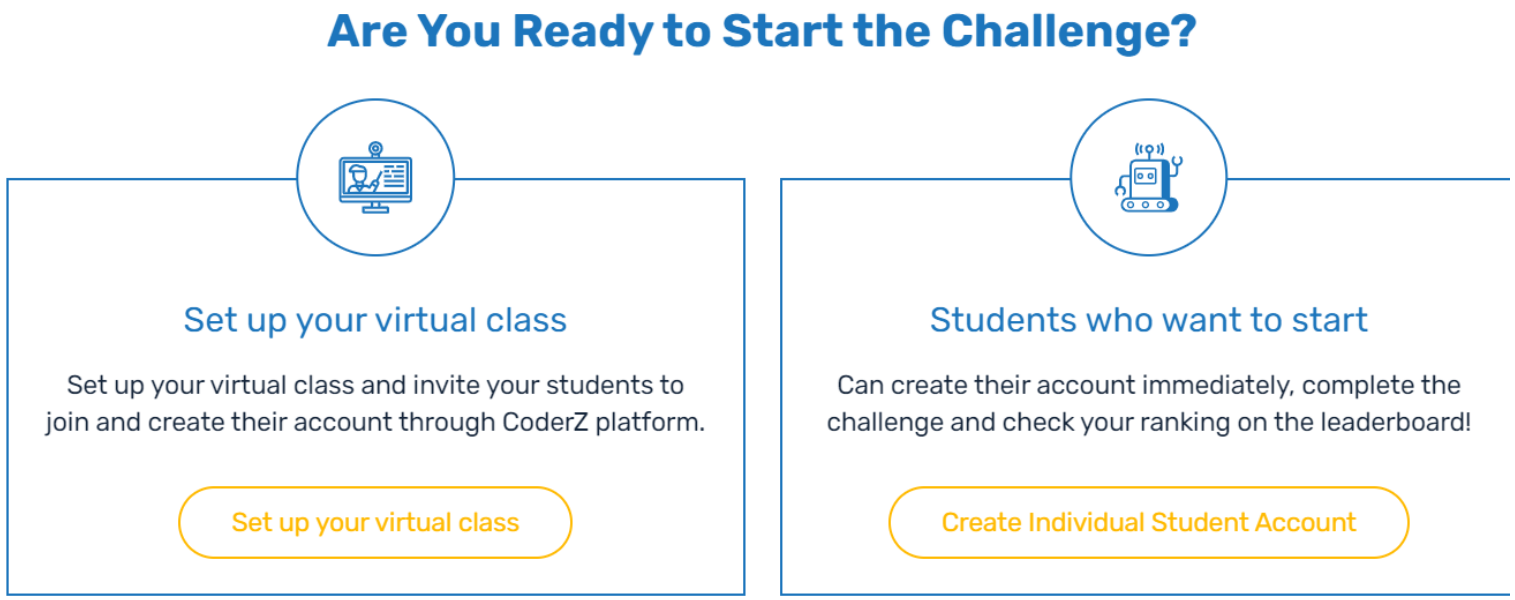
Introduction to Gameplay



Example of missions and challenges

- Teams will have to attempt as many missions and challenges in their competition pack as possible to gain points for their team.
- It is not compulsory for every team member to attempt all the missions and challenges.

Pre-competition Resources



https://gocoderz.com/courses/amazon-cyber-robotics-challenge/

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Judging Criteria

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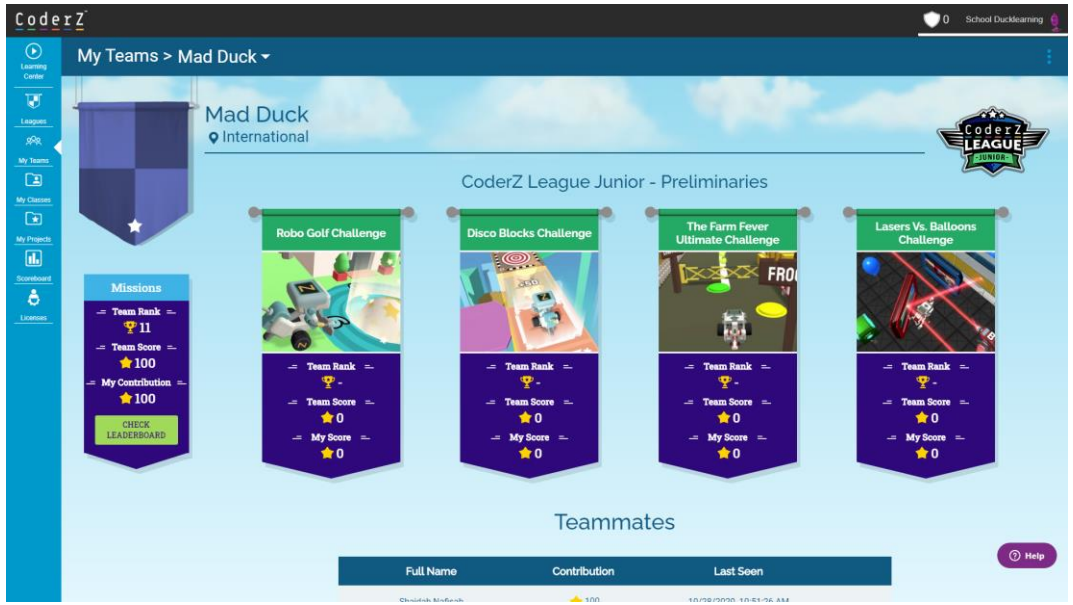
Judging Criteria



Example of scoring page

Scores are automatically calculated by the CoderZ scoring system based on:

- Code quality
- Time take for virtual robots to complete the missions
- Number of missions completed
- **Team ranking for challenges**

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Judging Criteria

- Team scores can be viewed anytime during the competition

*But it is not the final score as challenge ranking bonuses have not been added

- The top three scoring teams of each category will be recognised and revealed **two days** after the event ends

NATIONAL ROBOTICS COMPETITION

Scoring

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Scoring

Missions

- Each individual team member contributes points to their team by completing missions
- Maximum number of points that can be contributed per mission is 100 points
- Students can attempt a mission multiple times but only the highest score will be contributed

Challenges

- All team members can participate and attempt multiple times but only the highest-scoring team member contributes to the total team score
- Based on the team's challenge ranking, bonus points will be awarded to the team's total score

NATIONAL ROBOTICS COMPETITION

Awards & Prizes

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Awards & Prizes

- Top three winners for each category will be invited to the NRC Award Ceremony held at Science Centre Singapore and be presented with a medal
- In addition, the champion team of each category will receive a $300 cash prize, a trophy, and be invited to join the international CoderZ League competition
- All participants will receive an e-certificate post competition
- **The Organiser reserves the right to amend the prizes without prior notice.**

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NATIONAL ROBOTICS COMPETITION

Rules

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Rules

- Every team member is required to be online on their own computer or laptop and turn on the camera function on the Zoom platform throughout the competition unless stated otherwise
- During the CoderZ Coding Challenge, coaches/mentors are not allowed to communicate with their teams
- Coding of the robot may be done only by the team
- If rules are not adhered to, or if a team member is found to be disruptive or cheating during the competition, the team will be automatically disqualified from the competition

NATIONAL ROBOTICS COMPETITION

Programme Schedule

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Programme Schedule

Primary Category: Tuesday, 29th August 2023
Secondary Category: Wednesday, 30th August 2023

Time	Activity
9:00 AM – 9:30 AM	Briefing (Team members to attend via a zoom link. Teams to remain in the zoom call for throughout the competition)
9:30 AM – 10:30 AM	Recap of CoderZ I (in breakout rooms)
10:30 AM – 10:45 AM	Break
10:45 AM – 12:00 PM	Recap of CoderZ II
12:00 PM – 1:00 PM	Lunch Break
1:00 PM – 4:00 PM	CoderZ Coding Challenge (Team members to complete as many missions and challenges as possible to gain points)
4:00 PM – 4:15 PM	Debrief

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Contact us/Updates/FAQ

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FAQ – NRC CoderZ Coding Challenge

1. Any advise on what software knowledge is required in CoderZ?
Ans: No prior knowledge is required although experience in any block-based coding software may help.

2. Is Coder Z done web-based or app-based (with installation)?
Ans: CoderZ is a fully web-based programme; no installation is needed. Do refer to the computer requirements in the challenge booklet for the specifications required.

3. Is there any python based format for Coder Z? What is the format of CoderZ?
Ans: There is no python-based coding for Coder Z. The format for Coder Z is block-based.

4. The students already have a CoderZ account, will another account be generated for them to use for the competition?
Ans: Yes. An account to CoderZ League in a Box will be provided a few days before the competition

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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 1st July 2023

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Contact Us / Updates / FAQ

NATIONAL ROBOTICS COMPETITION

Website

Social Media

Sign-up Link

For any queries, please type in the Zoom Chat

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