K12 Robotics2025-2026
Initial Friendly Challenge
Grades: 4-6

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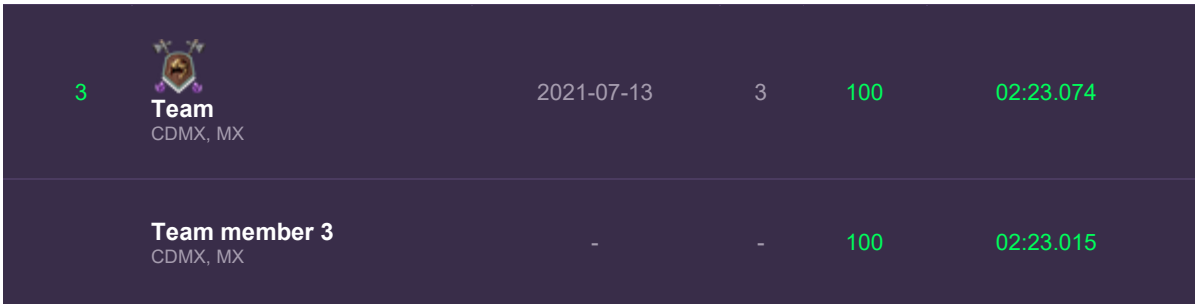
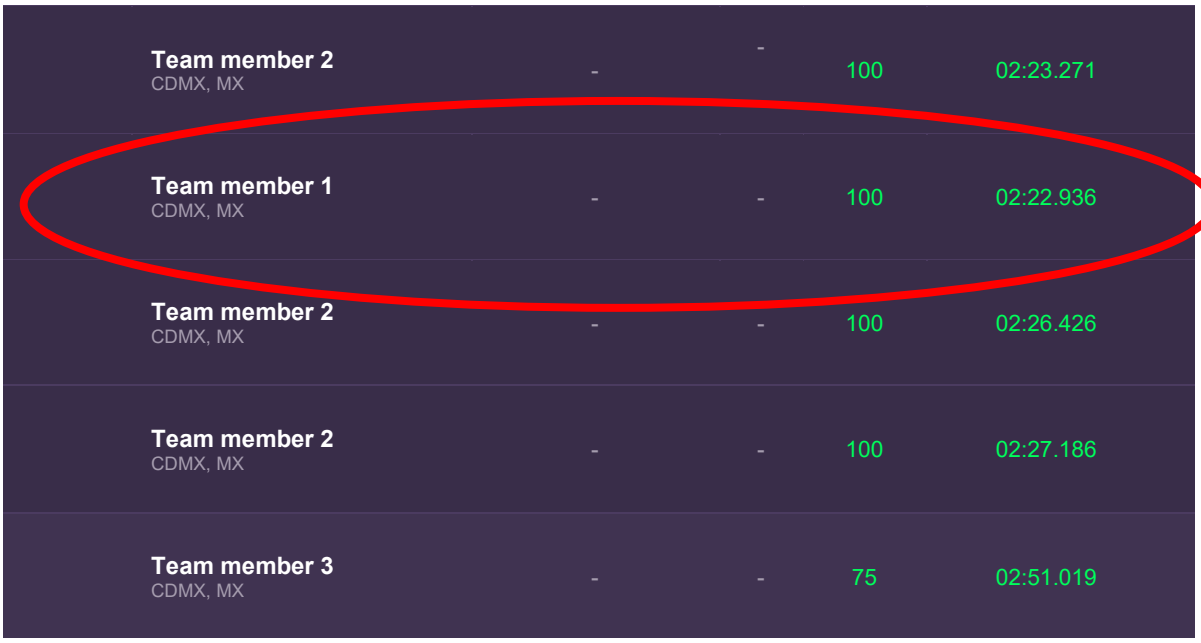
General Rules

1. All teams must consist of 1 to 3 competitors.
2. **The team must be from the category age group or younger. The competitor must never be older than the category age group.**
3. **It is not allowed to make changes in the environment before, after and during the simulation.**
   It is not allowed to import your own robot.
4. When the simulation starts, the competitor can only use the camera's tools and the scoreboard button.
5. All the tasks need to be solved only by using the code created by the team for the robot.
6. In case, the Judging Team suspects of the score/time of any competitor, they can request a video or a conference from the team, to prove how their result was gotten according to the rules and requirements allowed. In case the competitor doesn't accept the video, conference or doesn´t prove how the score/time was gotten, the result will be deleted from the ranking.
7. In all the categories, ALL THE TEAMS must send a video (one per team) of their robot solving the challenge.
8. **In the video, the robot's points must be equal and the time must be equal or within ± 1 seconds of the best round obtained by the team members and is displayed in the leaderboard.**





In the example the best round was from "Team member 1", so the robot in the video must have the same score (100) and in the time be equal or ± 1 seconds (21.936-23.936 seconds).

In case of any unforeseen circumstances in which the rules have to be altered, the judges will have the final say in the results.
The judges have the utmost authority to amend the rules and regulations.
The judges have the utmost authority to disqualify a result if:
1. Participants pause and resume the simulator in between the code.
2. Participants create any other situations which judges deem unacceptable

How to score in a team competition?

To determine the team's score, the system will take the best result of each team member to determine an average score and an average time.
In this video you will find a better explanation of how to create a team and how to submit results.
https://youtu.be/Ih2l4UfuFpk

- Video: How to create a Solo Team

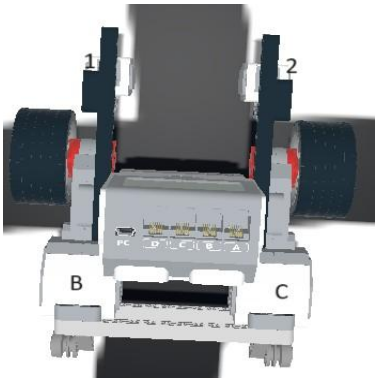
Important Information

Start time to submit results: January 9 at 4:00 pm ET.
End Time to submit results: January 16 at 11:00 pm ET.

Closing Ceremony: January 19 at 4:00 pm ET.

Robot Ports

***Remember, is not allowed import a new robot.**



Robot Missions

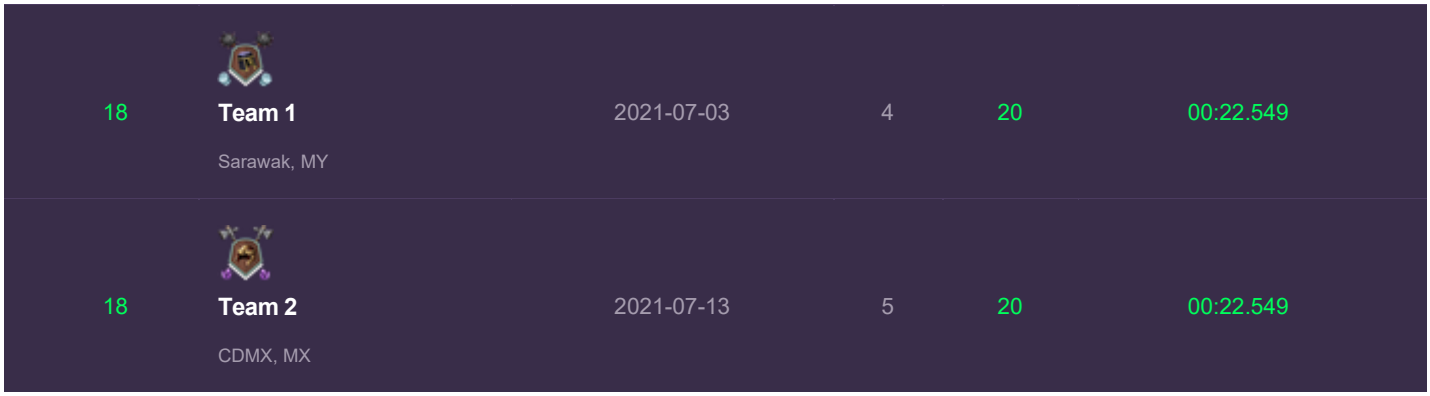
Make a program to command the robot to run through the track once.

Video:
https://youtu.be/O0_04I89efM

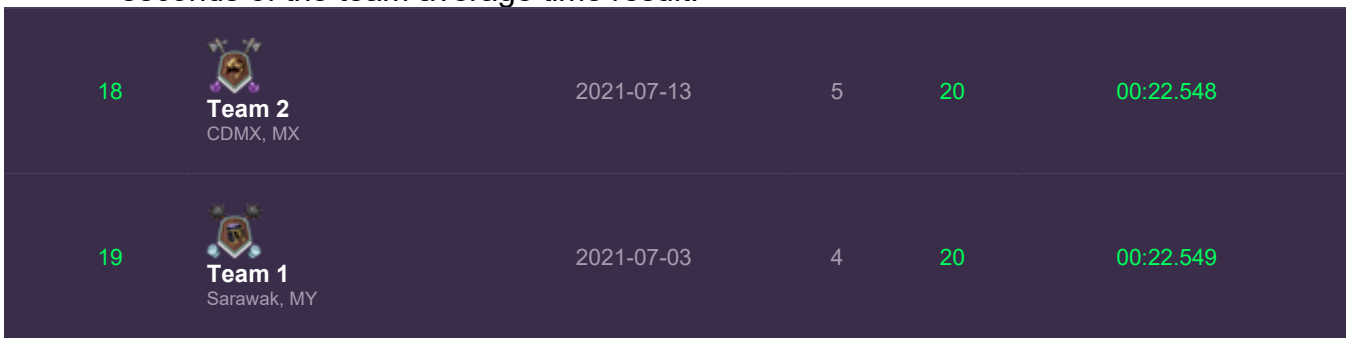
Score

2025-2026 Friendly Challenge 4 to 6 Grade	Each	Total
Checkpoints		
Crossing the checkpoints	**5**	**20**
Maximum Score		**20**

Tie Result



If two or more teams have the same average result on the leaderboard, the judging team will review the next highest average results of the participants.
When the judging team finds out which team got better results, they will take out 0.001 seconds from the time on the leaderboard of the team winner team to tiebreaker the result.
On the example “Team 2” got a second better high score, it means we will take 0.001 seconds of the team average time result.



If one of the teams only have 1 submitted average result the other team will be the winner of the tiebreaker.

How to share your ALL TEAMS video to us?

The participant can share a video of your robot solution filling the form.

Please be aware of your email.

https://forms.gle/7qvJp6hmPtboLrgq8

*Please be careful, the form is specific for this category

How to create your video?

You need to record the computer screen using Windows 10 Function, QuickTime player, OBS or other option to record the screen.

Screen record Windows 10

https://youtu.be/mVJsm_000c0

Screen record Mac

https://youtu.be/s9xnsj6ditM

Screen record OBS

https://youtu.be/QKmrDUJFRkM Install

OBS:

https://obsproject.com/

The participant must upload the video on YouTube, Vimeo, Google Drive, etc.

How to upload a video on YouTube?

https://youtu.be/4RZ3FooBKYE

If you upload your video on YouTube, you have to publish it as Public or Unlisted.

Record Details

-On the video, the participant has to show the robot solving all the challenge. If the video starts after the robot begins solving the challenge or cuts the video before the robot finishes the task, the video will not be valid.

-Participants must place their Team name in the virtual brick or in the name of their

code.

-The robot and the scoreboard must be visible all the time.

-On the video the participant must use “Top Camera” and “Tether” tracking type.

Top Camera and Tether tracking type

1) Need to open Advanced Mode.

To access "Advanced Mode", all you have to do is press "F12" on your keyboard.
Could be:
-F12
-Ctrl+F12

-Fn+F12

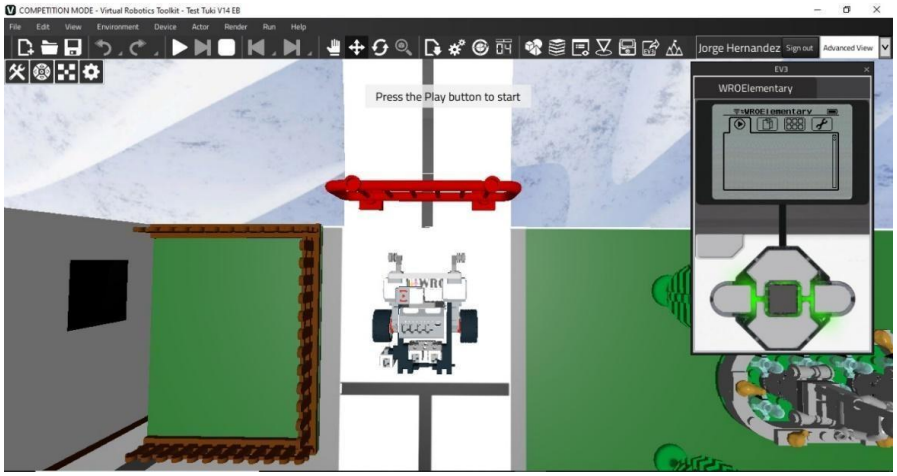
-Alt+F12

-Cmd+F12

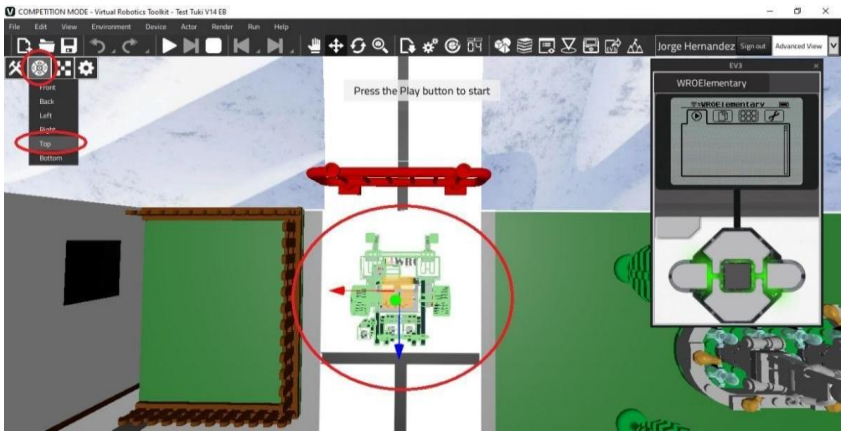
Simple Mode

Advanced Mode

1) Move the Virtual EV3 Brick.

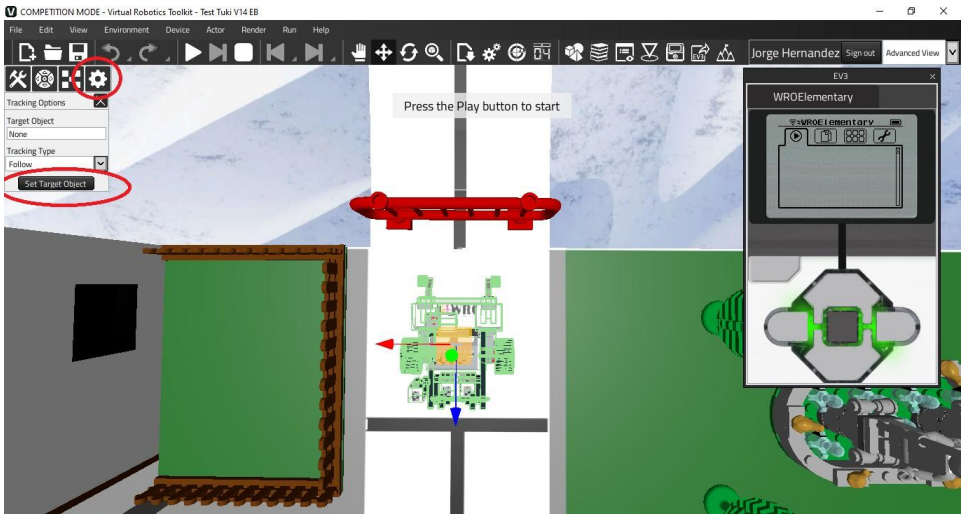


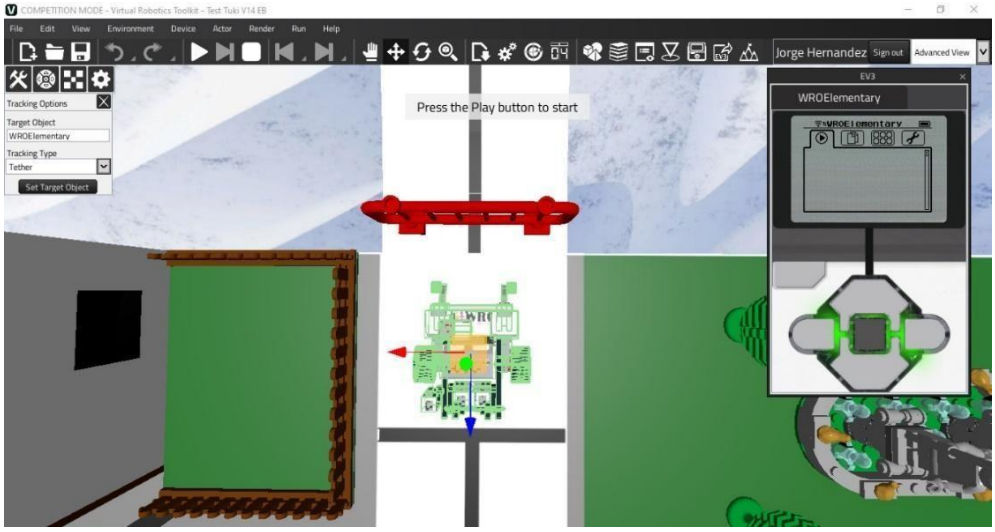
2) Select the robot and use Top Camera.



3) Use “Tether” Tracking type.

The robot must be selected and then click on “Set Target object”. Change Tracking type to “Tether”.





Top Camera & Tether Tracking type tutorial:
https://youtu.be/hNvJNMnV9dM