

COVID – 19 Challenges



Senior Beginner Category **To Rebuild**





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General Rules

1. There are no teams, only single competitors.
2. The competitor must be of the age group category or younger.
3. The competitor must never be older than the age group of the category.
4. **Your username must be visible at all times, it can be on the brick’s name or on the program name**
5. **No changes to the environment or track are allowed before, after and during the simulation.**
6. **It is not allowed to import your own robot.**
7. When the simulation starts, the competitor can only use the camera tools and the scoreboard button.
8. All tasks must be solved only using the code created by the competitor for the robot.
9. **In case the judging team is suspicious of any competitor's score/time, they may request a video or a conference from the participant, to prove how their result was obtained according to the allowed rules and requirements. In case the competitor does not accept the video or conference or does not prove how the score/time was obtained, the result will be eliminated from the ranking.**
10. In all categories, **the top 20 among the competitors must submit a video** of their robot solving the challenge.
11. In the video, the robot must score the same points as shown on the leaderboard. The time of the robot must be the same as the time on the leaderboard ± 2 seconds.



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If there is any insufficiency or alteration in the rules, the final decision will be announced by the judges.



Judges have the ultimate authority to amend the rules and regulations.

Judges have the ultimate authority to disqualify a result if:

1. Participants pause and resume the simulator between the code.
2. The participants create any other situation that the judges deem unacceptable.

How to create your video?

You need to record your computer screen using the Windows 10 feature, QuickTime player, OBS or another screen recording option (power point).

Options (Choose the one that is easiest for you):

Recording screen Windows 10, from [RDKtutorials](#).

<https://www.youtube.com/watch?v=kpZUN-ae4ts&t=0s>

Recording screen Mac, from [Think Media](#).

<https://www.youtube.com/watch?v=prUVS0HF2gU>

Recording screen OBS, from [Gauging Gadgets](#)

<https://www.youtube.com/watch?v=LWwqbHU8L0>

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

Video tutorial to upload a video to YouTube, from the [VideoMarketingViral](#) channel.

<https://youtu.be/jq363d1mziw?t=14>

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



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If you upload your video to Google Drive confirm that the video is accessible.

Register Details

-In the video, the participant has to show the robot solving the entire challenge. If the video starts after the robot starts solving the challenge cut the video before the robot finishes the task, the video will not be valid.

-The robot and the marker must be visible at all times.

-In the video the participant must use the tracking type "Top Camara" and "Tether".

Top Camera and Tether tracking

1) You need to open the Advanced Mode.

To access "Advanced Mode", all you have to do is press "F12" on your keyboard.

It could be:

-F12

-Ctrl+F12

-Fn+F12

-Alt+F12

-Cmd+F12

Simple mode looks like this:



Advanced mode looks like this:

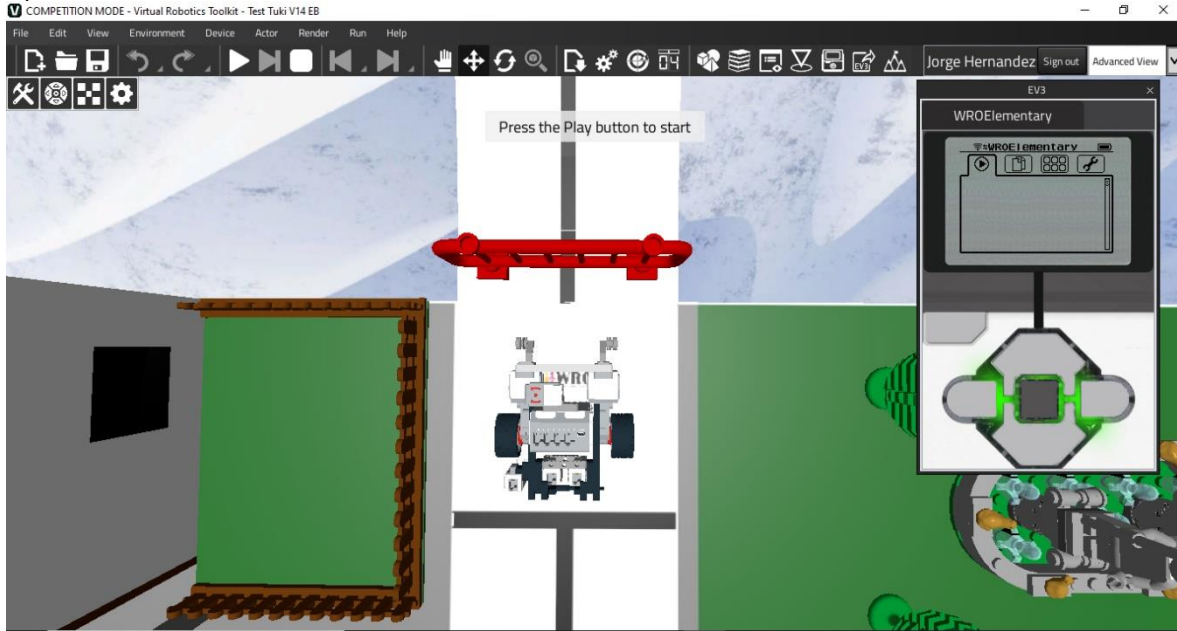




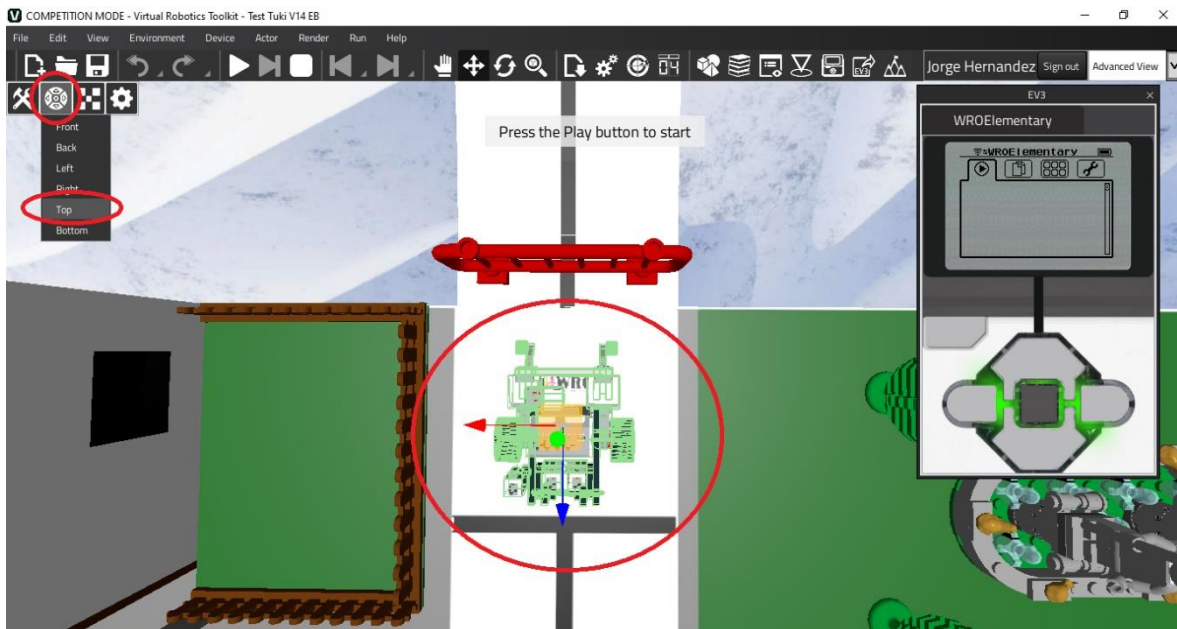
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2) Move the EV3 brick.

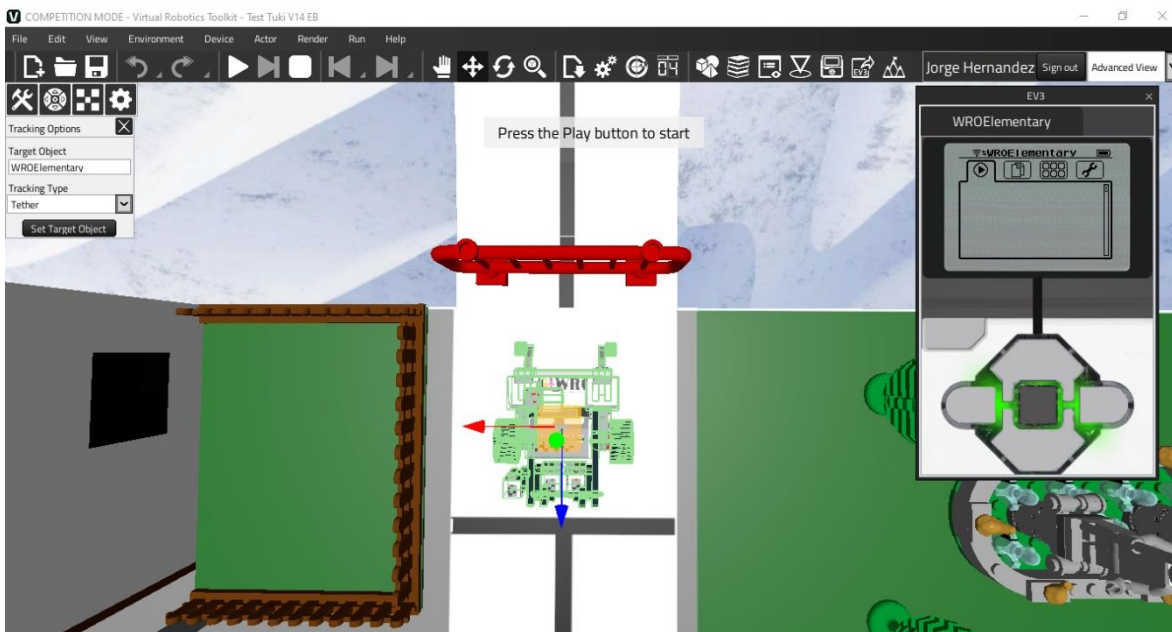
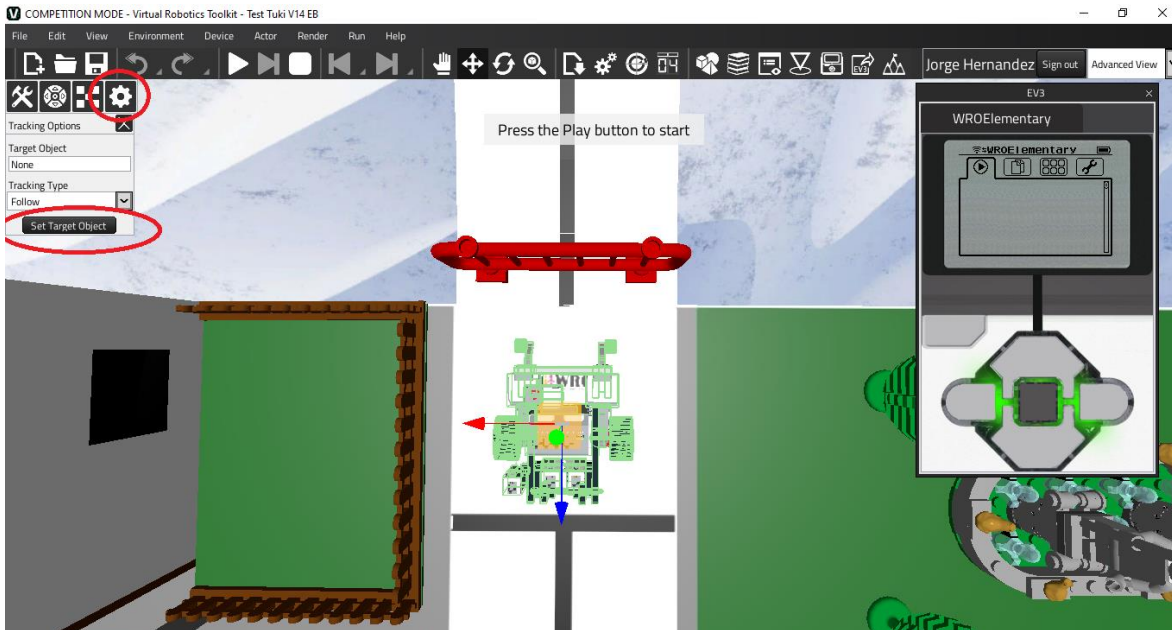


3) Select the robot and use the top camera.



4) Use the "Tether" tracking type. The robot must be selected and then click on "Set Target object".

Change the tracking type to "Tether".



Top Camera & Tether Tracking tutorial:

<https://youtu.be/hNvJNMnV9dM>



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How to share your video with us?

The participant must click on the following link and fill out the form.

Please make sure to enter the correct email address. In case there is a problem with your video or your results, we would like to contact you.

Form: <https://forms.gle/tvnfrj15QiD8r7NR9>

Tie Result:

18		2020-11-05	5	100	00:55.955
Participant 1					
18		2020-11-05	3	100	00:55.955
Participant 2					

If the participants have the same score on the leaderboard, the judging team will check the next highest scores of the participants. When the judging team knows who has the best score, they will take 0.001 seconds off the winning participant's time on the leaderboard to break the tie score.





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In the example "Participant 2" getting a second-best high score, means that we will take 0.001 seconds from the participant's time result.

18		2020-11-05	3	100	00:55.954
Participant 2					
19		2020-11-05	5	100	00:55.955
Participant 1					

If one of the participants has only one round submitted, the other participants will be the tiebreaker winners.

Difference of the result in real time

The team of judges detected that less than 1% of the users have a problem with the PC where the time result presented removes the decimal seconds.

Example:

Real time result: 00:55.230

Delivery time result: 00:55.000

If the participant has this problem and is in the Top 20, we will swap with the time shown in the video.

Remember that if you are in the Top 20 it is very important that you fill out the form with your video, in case the participant has not filled out the form with the video the result will be taken out of the leaderboard.

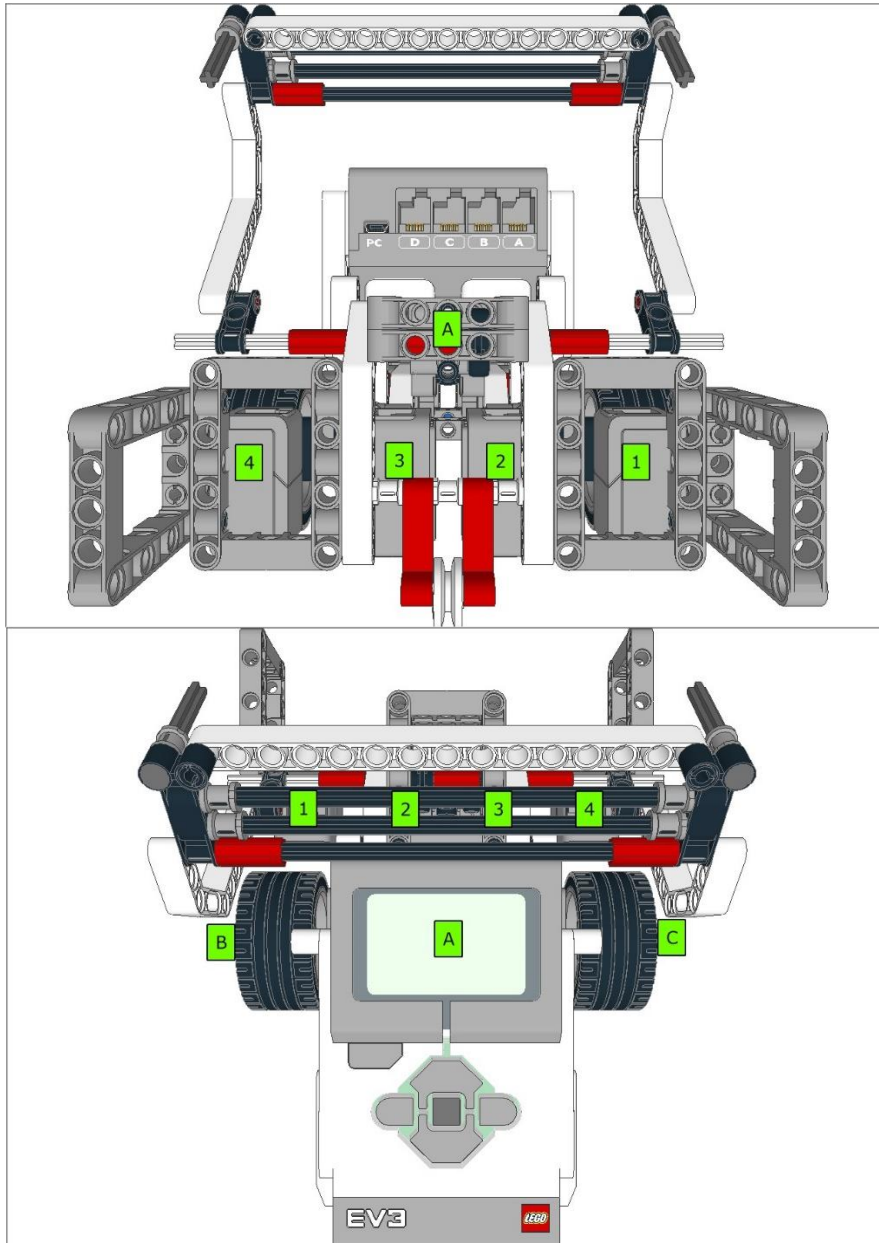


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Robot Ports

* Remember, it is NOT allowed to import a robot.





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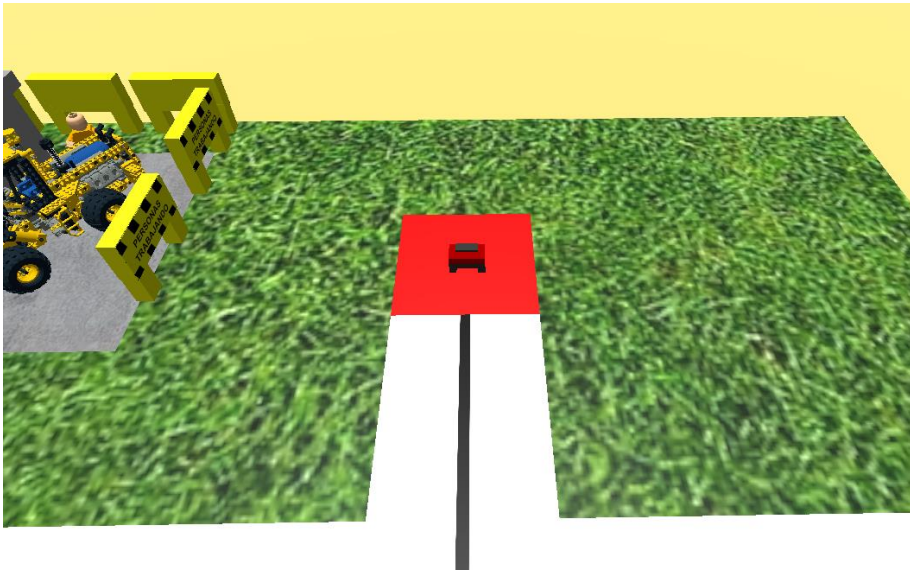
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Robot Mission

The economy is quite weak and needs your help to recover. In order to restore it, we need to make renovations throughout the city.

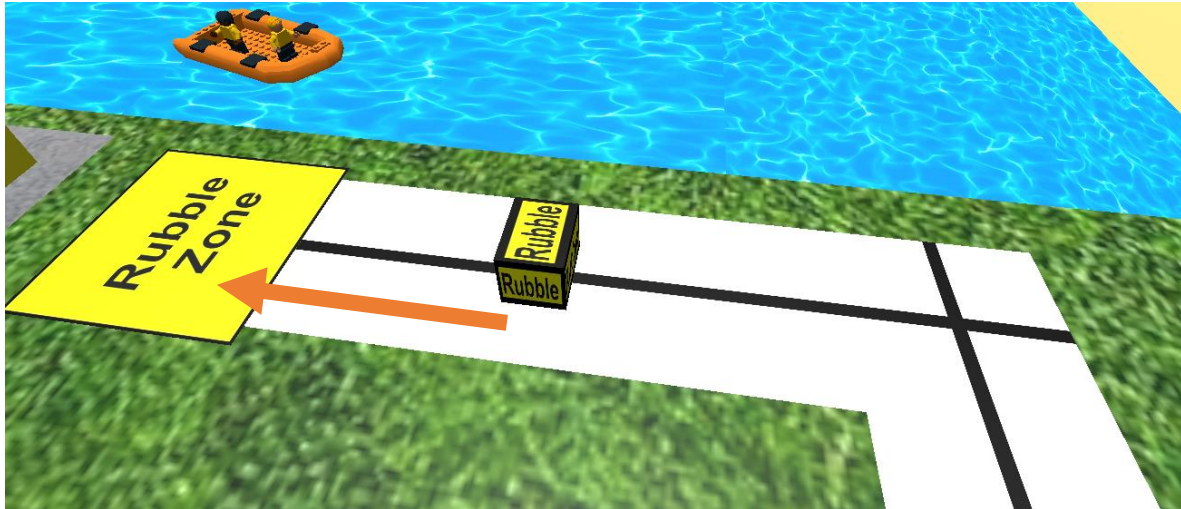
At the start of the challenge there will be 1 red container:



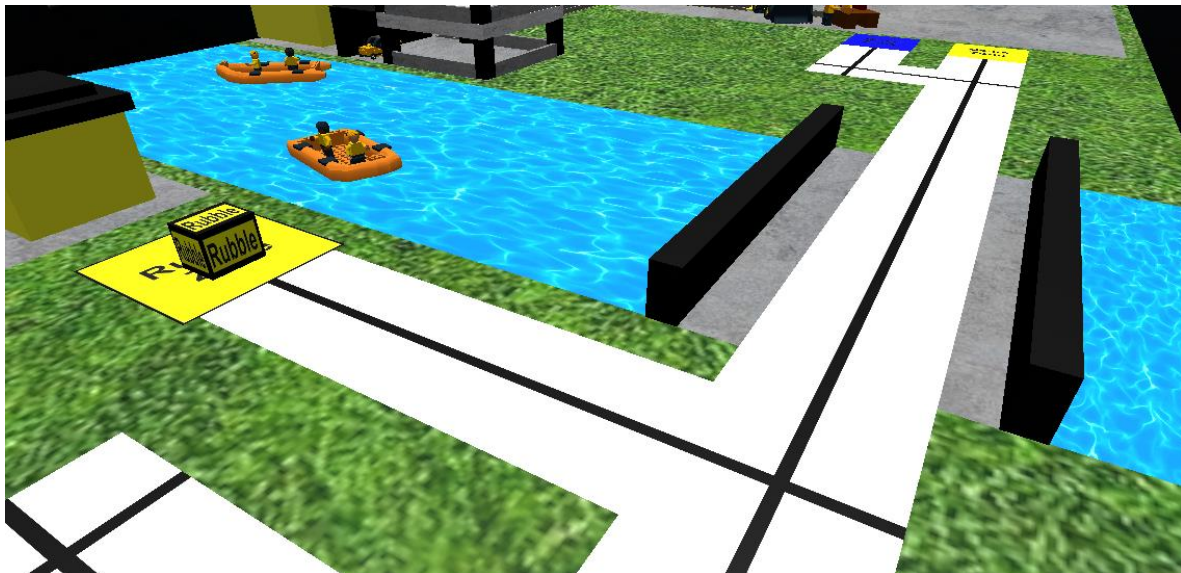
This container is a **street repair kit** and you must bring it to the city neighborhood. It must be completely inside the area.



Then, you have to go to the lake in order to build a bridge.



To build the bridge, the debris from the old bridge must be pushed into its debris area. In this way the citizens will be able to have a way between the 2 sections of the city.



This debris must be completely inside the area or no points will be scored.

To finish the challenge, you must return to the starting area where the robot started and the robot must be completely inside this area.



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Score

To Rebuild	Each one	Total
Repairing the neighborhood street		
Place the red container and place it completely inside its area.	40	40
Debris removal		
Move the debris completely within your area so that the new bridge appears.	40	40
Return to the start area		
Return to the start and bring the robot completely inside the area.	20	20
Highest Score		100