

LEGO® Robotics Grades 4/5 and 7/8

Important Challenge Update

Tuesday, April 20, 2021

The Challenge has been adapted to allow you and your team members to participate in the Challenge virtually and from your own homes. **Please ensure that your team has read and understood the Scope in conjunction with this Update.**

Virtual Robot Design

Submission due Wednesday, April 28, 2021

The team should design their own unique robot to perform a specific function of their choice. The virtual robot cannot be tested so teams will need to explain their design and how it would function using words, hand-made drawings or CAD drawings. Virtual Robot Design is completely independent of the Programming Simulation part of the Challenge.

Refer to page 19 of the Scope for Virtual Robot Design Restrictions and Suggestions.

Business Documentation

Submission due Wednesday, April 28, 2021

Your submission should include Background on the Team's Virtual Robot Design and the Team's Work Processes. As well, you should include a "Bill of Materials" for the Robot that is costed using a tool like those on Bricklink or Rebrickable.

Autonomous Programming Simulation

Released to Team Supervisors on Monday, April 26, 2021

Teams will choose to perform the Programming Simulation on either April 26, 27, 28 or 29.

Team Supervisors will provide the Programming Challenge to the Team only on the day that the team has chosen to perform the Programming, and the Team's work will be submitted that day. They must submit a video and a copy of their code for each of the parts of the programming simulation for scoring by the judges. Teams can also submit a short team video (10 minutes or less) or something written. Teams will need to be organized and plan who is doing the submission uploads for the Team so there are no duplications.

In the Programming Simulation teams will demonstrate their innovative programming skills through dead reckoning and sensory input as they work through two or three small challenges that teams will upload into Open Roberta. **Note that teams will code in Open Roberta and then run the simulation for the standard virtual robot.** Teams should know how to make the standard robot follow lines and detect colours and objects, and they should be able to calculate turns and distances.

Please follow the rules as outlined in the Scope. Assistance during the Challenges will be available by e-mail or Google meet, if required.

Team Skills and Spirit

Since we cannot see you virtually this year, you will need to be creative about how your team will demonstrate team spirit! Make sure that you have looked at everything requested in the Scope.

See the Judging Criteria for the Challenge on page 29 of the Scope.