

LEGO Robotics First Competition (Nov 4)

Challenge

- make a robot that moves without the help of wheels (the motors can be used in any fashion)
- you can not use any other material but the LEGO core set
- the competition will be held on the lobby (main floor, indoors) of the Smithtown Science building, on the polished floor surface.
- First, the robots must be presented to the judges for inspection.
- Next, the robots will be aligned and race a 1-m race (i.e., robots must cover the unobstructed distance in the least amount of time), marked with meter sticks and tape on the floor.
- The winner of the race gets 40 points; second place gets 25 points if it completes the race; third place gets 10 points if it completes the race.

Competition day

BEFORE the competition day, groups must make sure they have done all the necessary adjustments, and loaded all necessary programs into their robots. There will be no time for adjustments on the day of the competition. Make sure to leave your robot ready on top of the LEGO core box. This is how it will be transported to the competition venue.

Again: Robots must be ready for action. There will be no time for adjustment, apart from selecting different programs the groups might have uploaded previously to the robots.

Robots will be brought in by faculty.

Groups must be at the lobby of the Smithtown science building to present their robots precisely at 11:15am, no delays are accepted. Late groups will be disqualified.

One group at a time, the robots will be presented to the judges for visual and manual inspection, and questions for the team.

Once the inspection is over, groups will align their robots at the starting line, and prepare to click on their programs (to start motion) when Prof. Denicolo gives the signal.

The race accounts for 40% of the points in the competition. 60% of the points are received in regards to design and teamwork. A copy of the score sheet for the first competition is attached (next page).

AFTER the competition, the groups are invited for pizza & beverage in room T12, when the 2nd challenge will be presented (2nd competition day: Nov 18).

Score Sheet for LEGO Robotics Competition (for the judges)

Rank each group from 1 to 30, with 30 as the highest ranking value. The group with the highest cumulative score at the end of the three competition events will win.

Group name/color: _____

1. Rank the robot according to its design (Does it look robust enough for task? Does it obey the rules of the competition? Artistic points can also be included in this category.)

1 5 10 15 20 25 30

2. In an interview with the group, was teamwork evident?

1 5 10 15 20 25 30

3. Add 40 points for winning robot; 25 if robot completes the race in 2nd place; and 10 points if it completes the race in 3rd place. Robots that do not complete the race receive zero.

Points from race: _____

TOTAL OF 1st COMPETITION =

The total of the 3 judges will be added and averaged. The average becomes the official result for the team for this competition.