

2019 Illinois 4-H Robotics Challenge: STEMbot 3/8/19 Updates

1. Total maximum points for all tasks is 555, not 535
 - a. Task 10: 45 Points Max
 - b. Task 12: 40 Points Max
2. Task 3 Reworded to:
 - 5 points per chemical mixed
 - 0 points if all chemicals are not mixed
 - 20 points if all chemicals are mixed using 1 STEMbot
 - 30 points if all chemicals are mixed using 2 STEMbots

3. Task 6 corrected to:

5 points per bug removed – 5 bonus points if all four bugs are removed
0 points if the red code block is removed
25 POINTS MAX

The removed “bugs” do not need to be placed in any particular location after being “debugged” as long as they are no longer in the terminal. The red code block must remain inside the defined computer terminal to score.

Updated FAQs:

1. Can I use Zip Lines?
 - a. Yes, you may use zip lines to deliver items to other locations. As long as all of the items are arranged within the target location as described in the rules.
2. In task 7 do the STEMbots have to turn around when pacing, or can they just pace back and forth?
 - a. Your STEMbot does NOT need to turn around when pacing. Pacing back and forth is fine.
3. How far do the objects need to be from the starting location?
 - a. Items must begin 12” horizontally as measured by the distance from the robot on the table, to the base of the target item on the table. This is measured in 2-Dimensions on the mat. This distance only applies to the distance between items being delivered and their target location, NOT necessarily the total travel distance of the STEMbot

4. In the general rules #7, it states that "items must begin 12" horizontally from the target..." Does that also mean that all robots must move a min of 12" from their prior task before starting their next one? Or can a robot complete task 1, move just a few inches and begin task 2?
 - a. No the Distance is in reference to items that need to be delivered. It has nothing to do with how far robot moves between tasks
5. General Rules #11 states " Items must be delivered or transported individually." This means that we cannot line something up and have the robot move it as a group, correct?
 - a. Correct, one at a time.
6. For the zip line, can we line up several items on the same zip line and fly them in one after the other? Or would that require a different zip line for each item? Or would we have to take the first item off before moving the next one?
 - a. Each item would need to be moved one at a time. This means that if using the same zip line, the robot must trigger the action for each individual object, not a string of objects. This can be achieved in a number of ways.
7. For Broken Glass, the rules say " Additional bonus points will be awarded if the broken glass is placed randomly on the board by your judge." Must this be "anywhere" on the board or within a designated space? In other words, can we specify a space where the judges can randomly place the pieces?
 - a. The Judge would randomly place the items within a specific location that you define. That location can be no less than 12" from the target, however.
8. Because everything must start at least 12" from the target destination, can anything start on the robot, except for the pen/pencil for geometry? For example, can something be on the robot at the beginning, at least 12" away, and then be taken off, delivered, or used in the target location?
 - a. At the competition, you will see many forms and usages for the STEMbot. Some will be rovers, while others may be another kind of bot altogether. In short, yes, things can be on the bot at the start. As long as you do not violate the 12" rule, the one at a time rule, or others listed in the Challenge document.
9. For Circuitry, do we have to use a real wire, or can we use something to represent the wire? If powering a real light, does the light source need to be on the board or can it be on the robot?
 - a. You can use something that represents a wire as long as you are not powering a real light. If powering a real light, you must use a real wire and complete a real circuit.

10. Can part of the circuit be on the robot itself?
- Yes, as long as you do not violate any other rules listed in the Challenge Document.
11. Can snap circuits with battery installed be used in place of actual wire to make an actual light turn on
- Unfortunately not.
12. In the general rules #7, it states that "items must begin 12" horizontally from the target..." Does that also mean that all robots must move a min of 12" from their prior task before starting their next one? Or can a robot complete task 1, move just a few inches and begin task 2?
- No the Distance is in reference to items that need to be delivered. It has nothing to do with how far robot moves between tasks

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