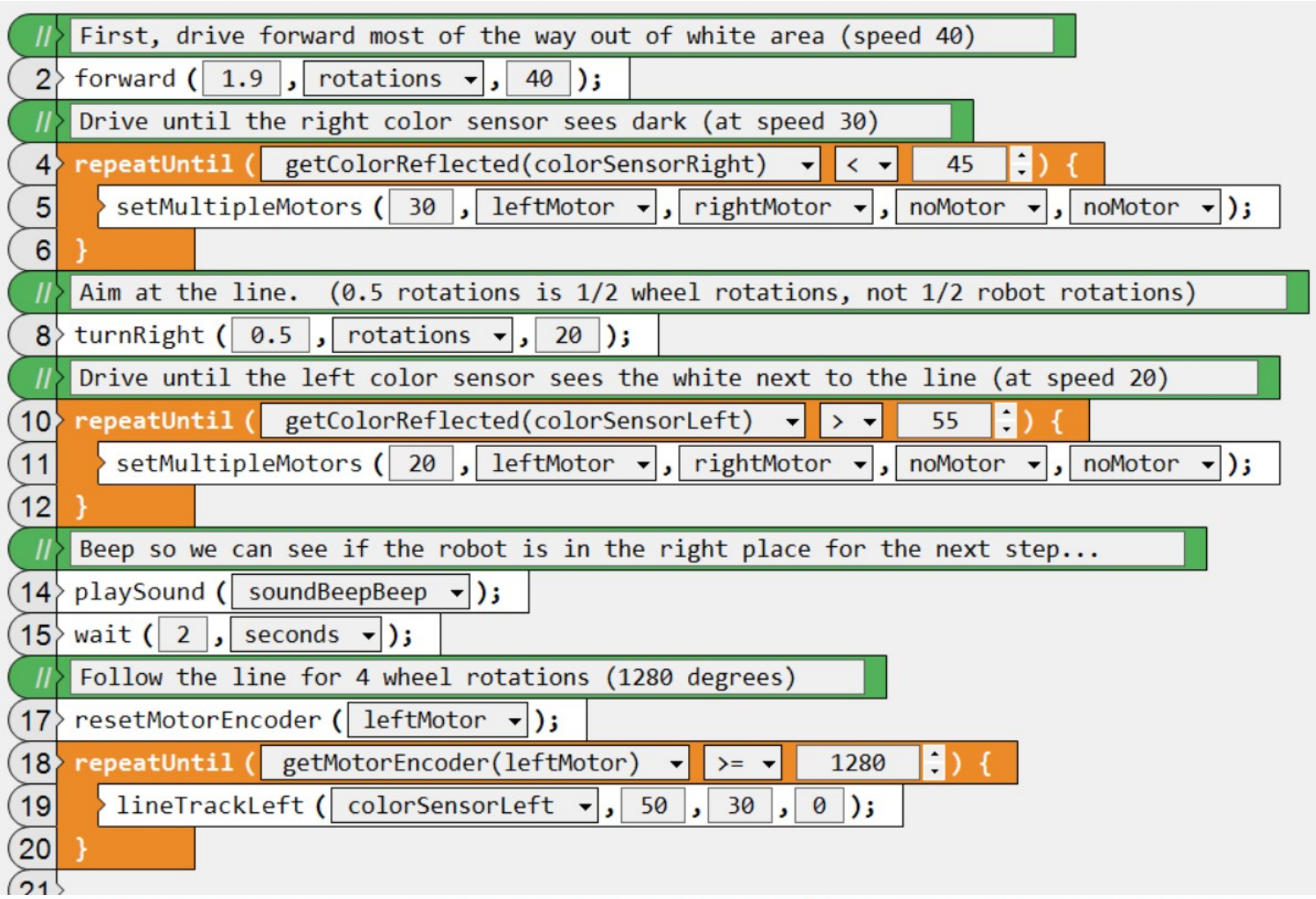
Mission Programs

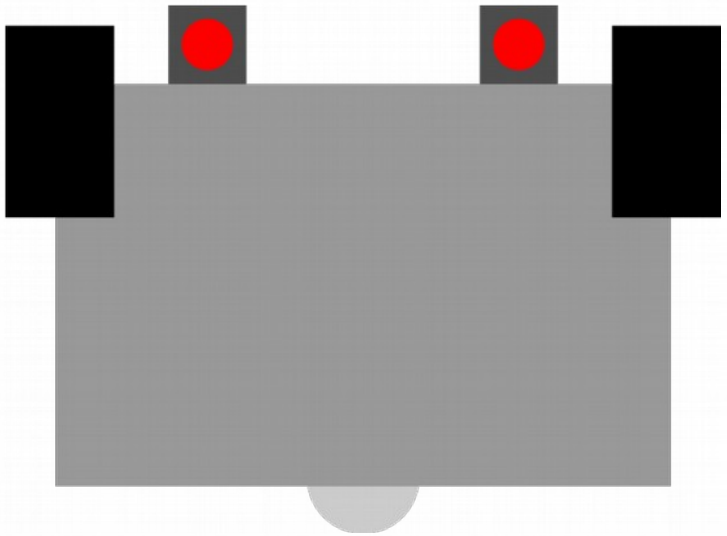
Techie Pizza (#44267)
Robot, Lesson 3
Michael Lyle

Last Meeting's Program



Other Robot Changes

- Added a second color sensor (Sanjay)
- Built an alignment jig (Brendan)



Quick Programming Lesson

Two Kinds of Statements

Statements that WAIT:

- forward
- backward
- turnLeft
- turnRight
- moveMotor
- wait

(They all wait for rotations or time)

Statements that start something happening:

- setMotor
- setMultipleMotor
- lineTrackLeft*
- lineTrackRight*

(And then keep going to the next statement, as fast as the computer can!)

Must be used with repeatUntil, etc.

How to Understand Programs

Pretend you are the robot.

Look at the program one line at a time.

Try to predict what will happen.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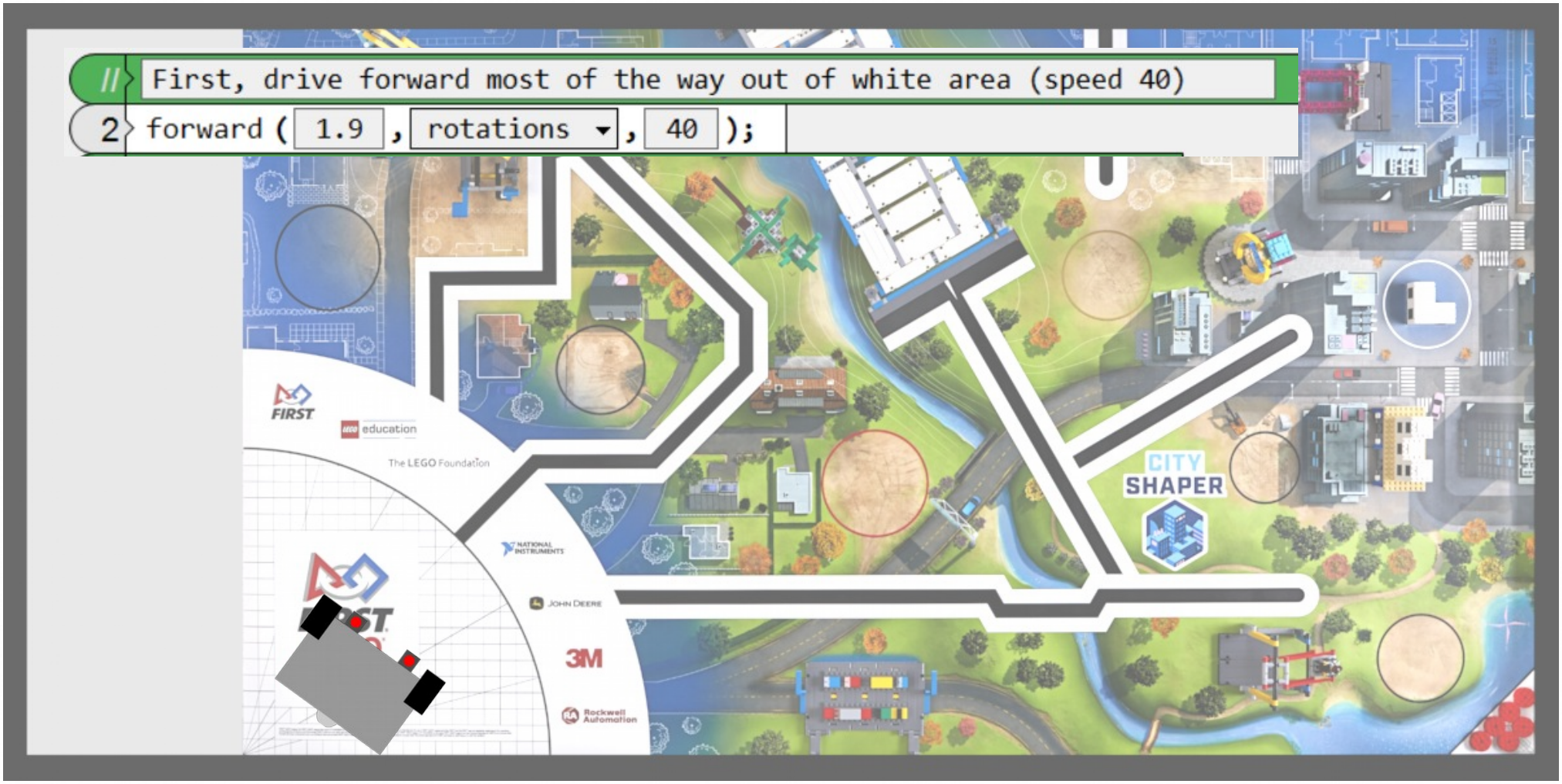
// First, drive forward most of the way out of white area (speed 40)
2 forward (1.9 , rotations , 40);
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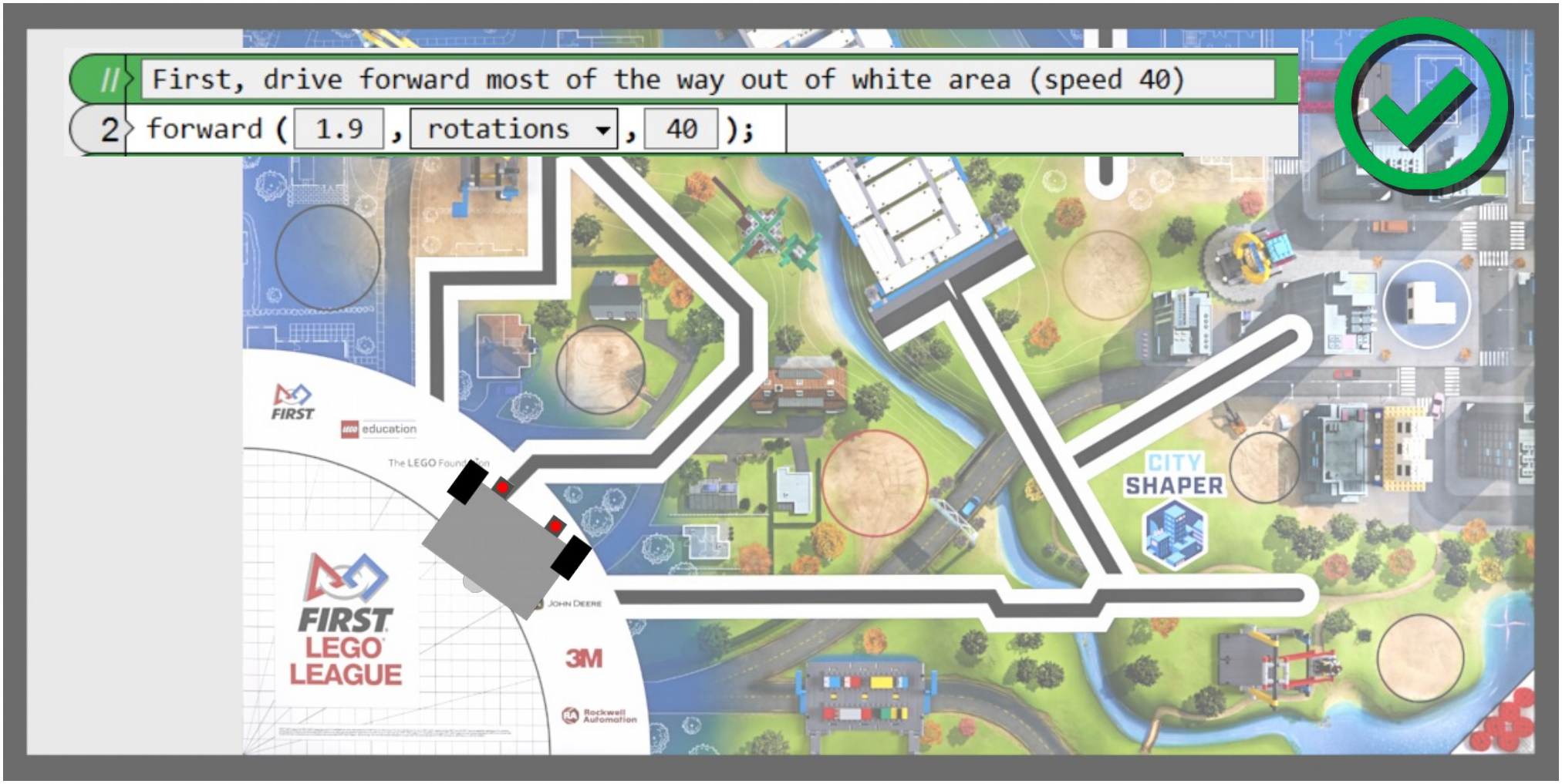
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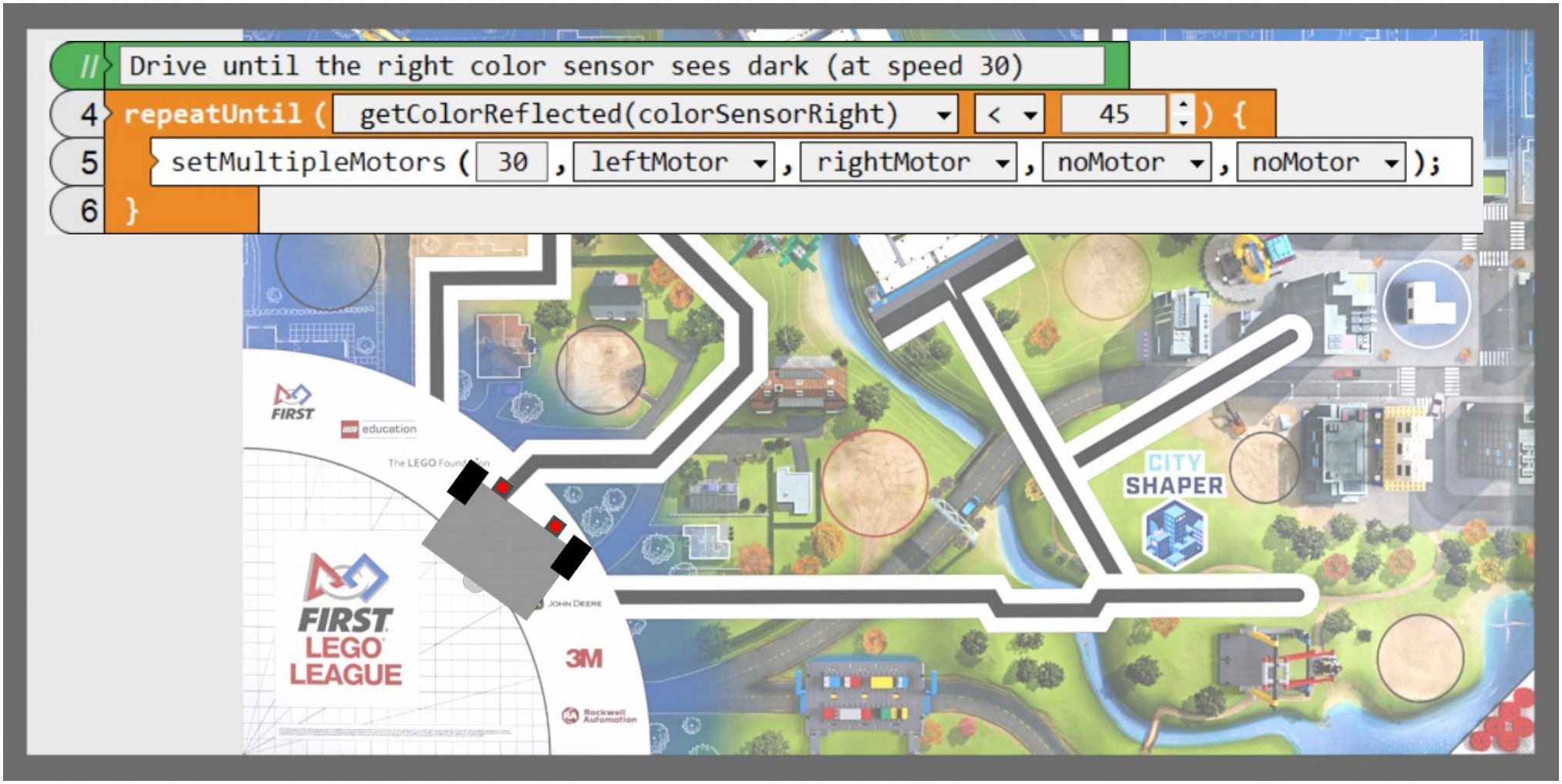
// Drive until the right color sensor sees dark (at speed 30)
4 repeatUntil (getColorReflected(colorSensorRight) < 45) {
5 setMultipleMotors (30 , leftMotor , rightMotor , noMotor , noMotor);
6 }
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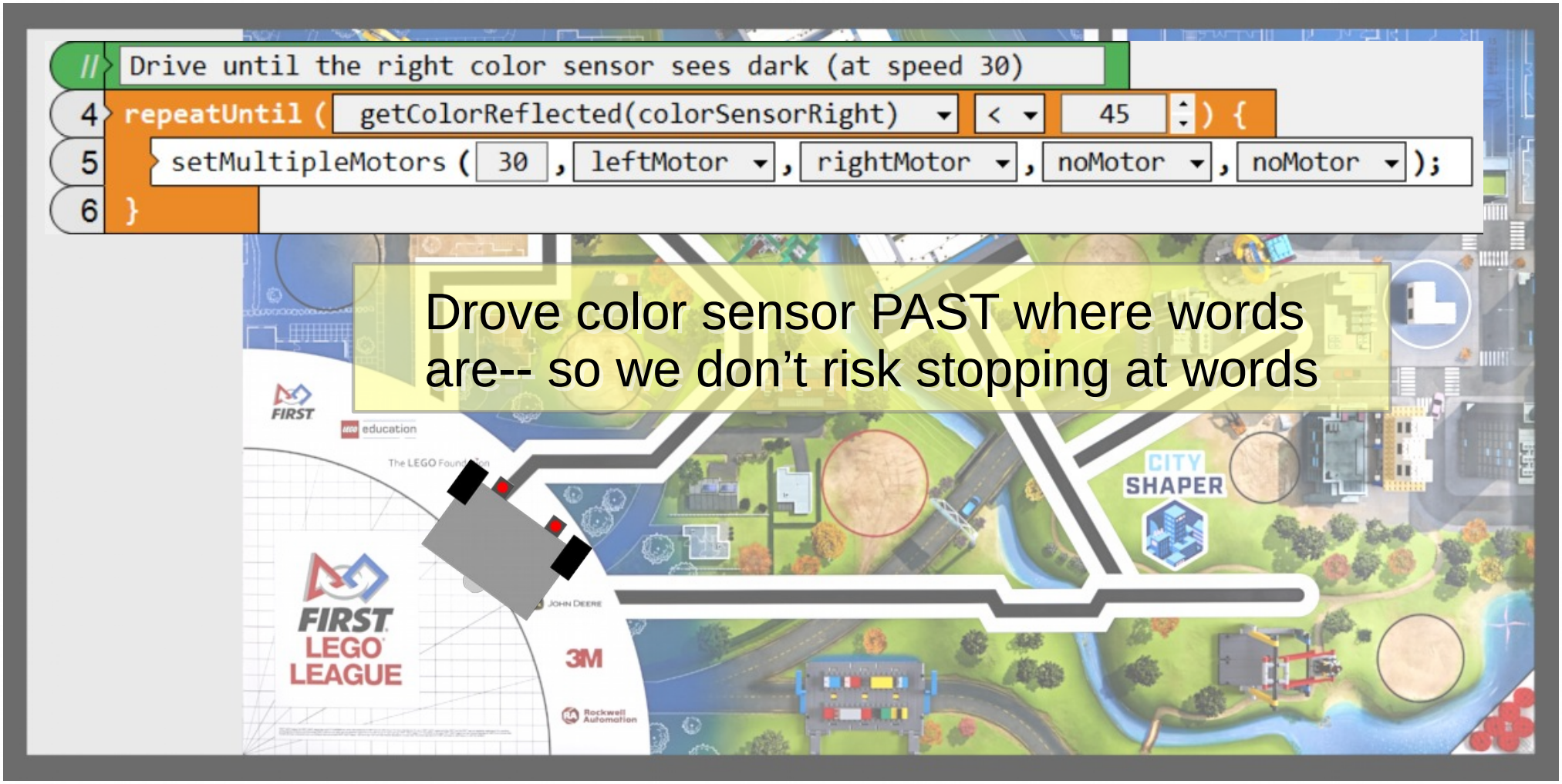
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Drove color sensor PAST where words are-- so we don't risk stopping at words
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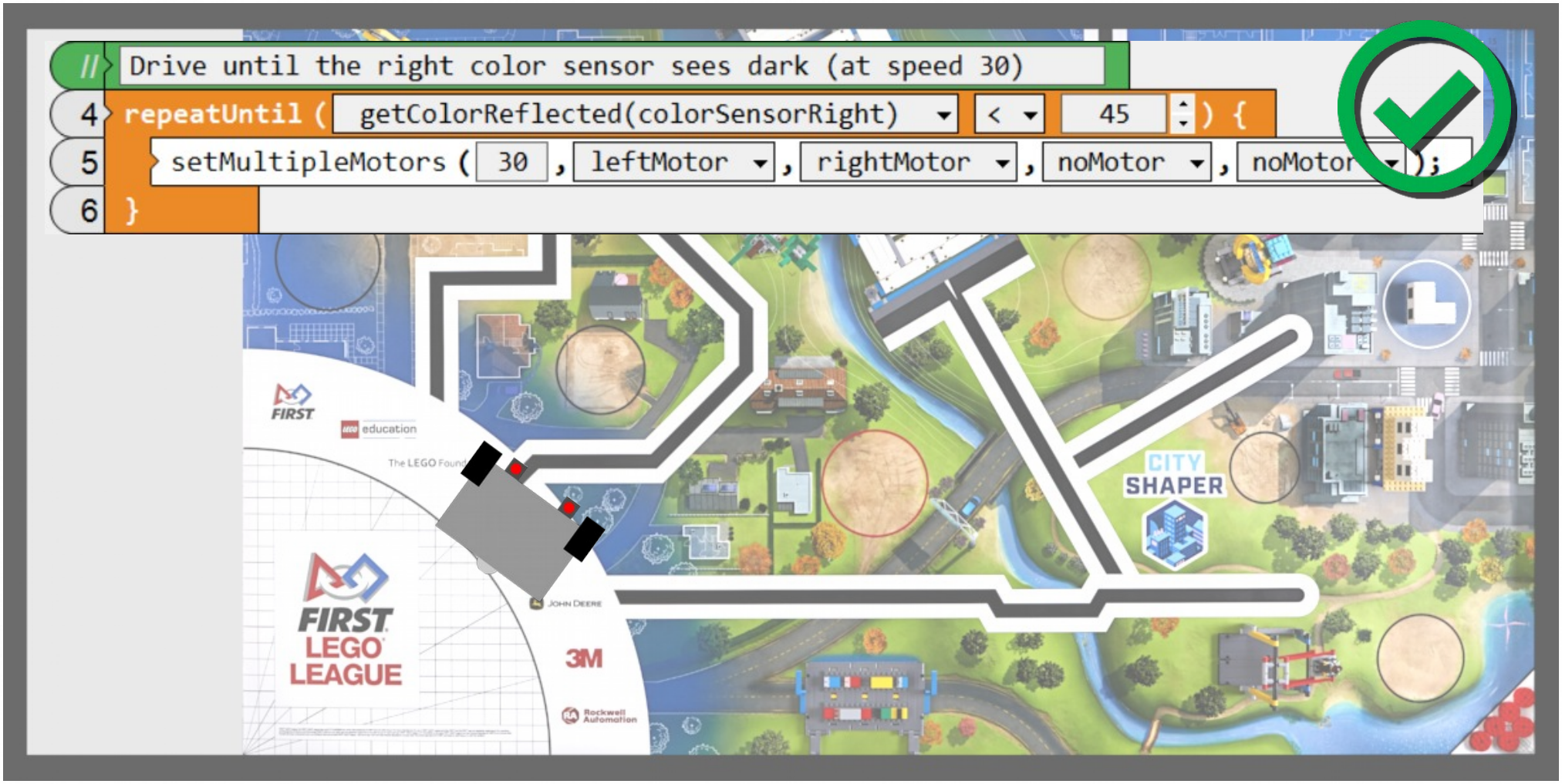
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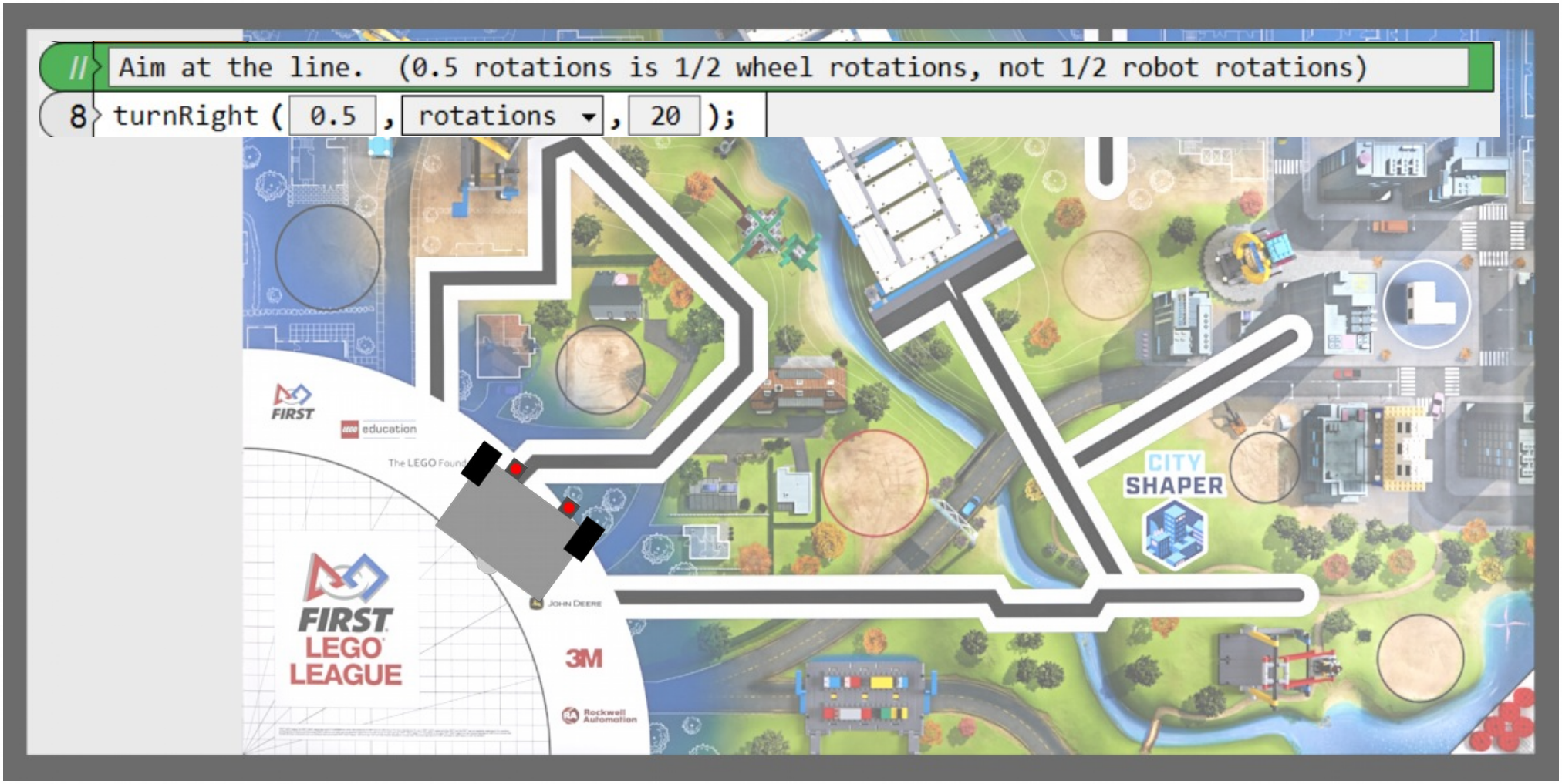
// Aim at the line. (0.5 rotations is 1/2 wheel rotations, not 1/2 robot rotations)
8 turnRight (0.5 , rotations , 20);
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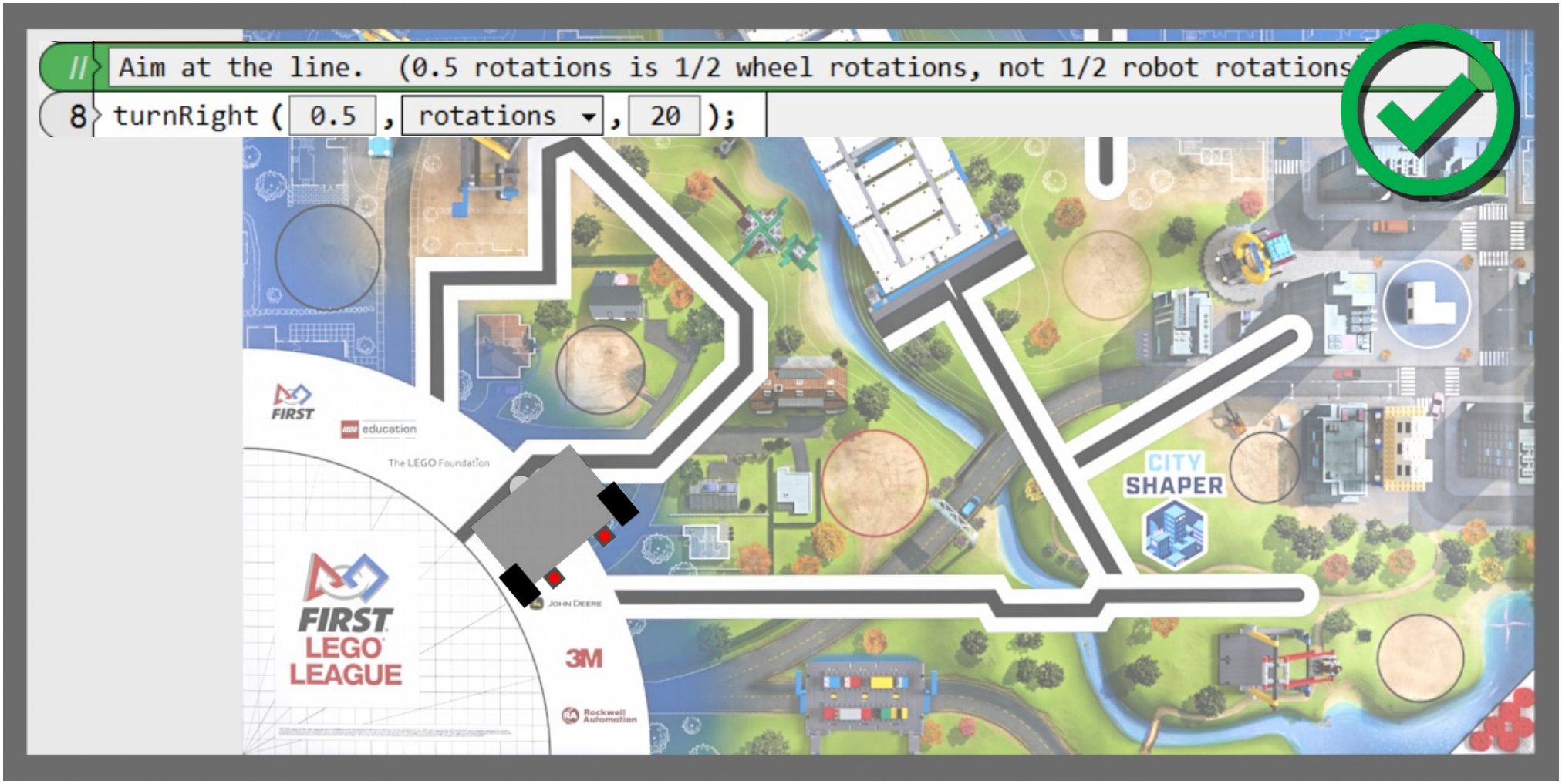
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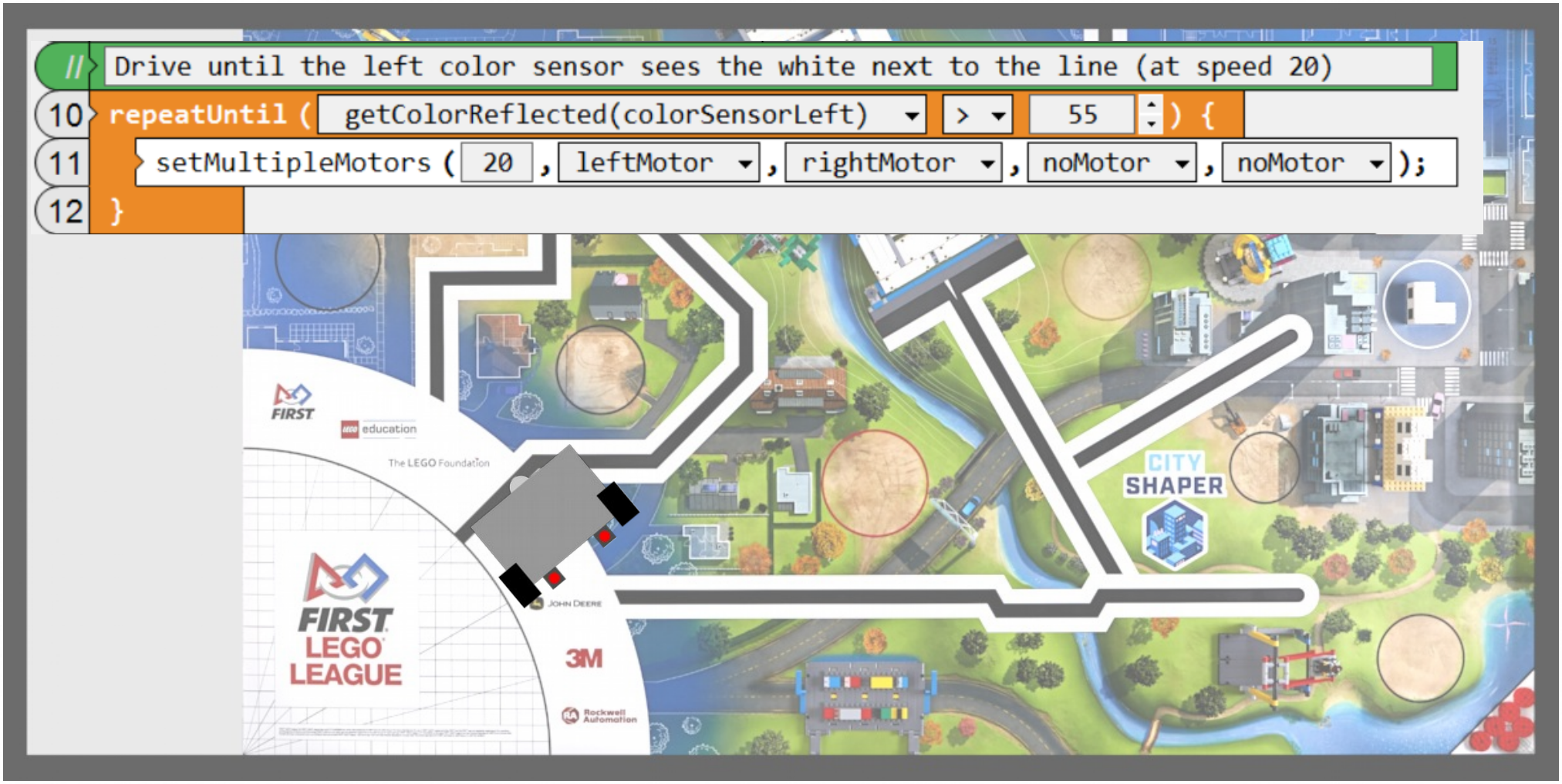
// Drive until the left color sensor sees the white next to the line (at speed 20)
10 repeatUntil (getColorReflected(colorSensorLeft) > 55) {
11 setMultipleMotors (20 , leftMotor , rightMotor , noMotor , noMotor);
12 }
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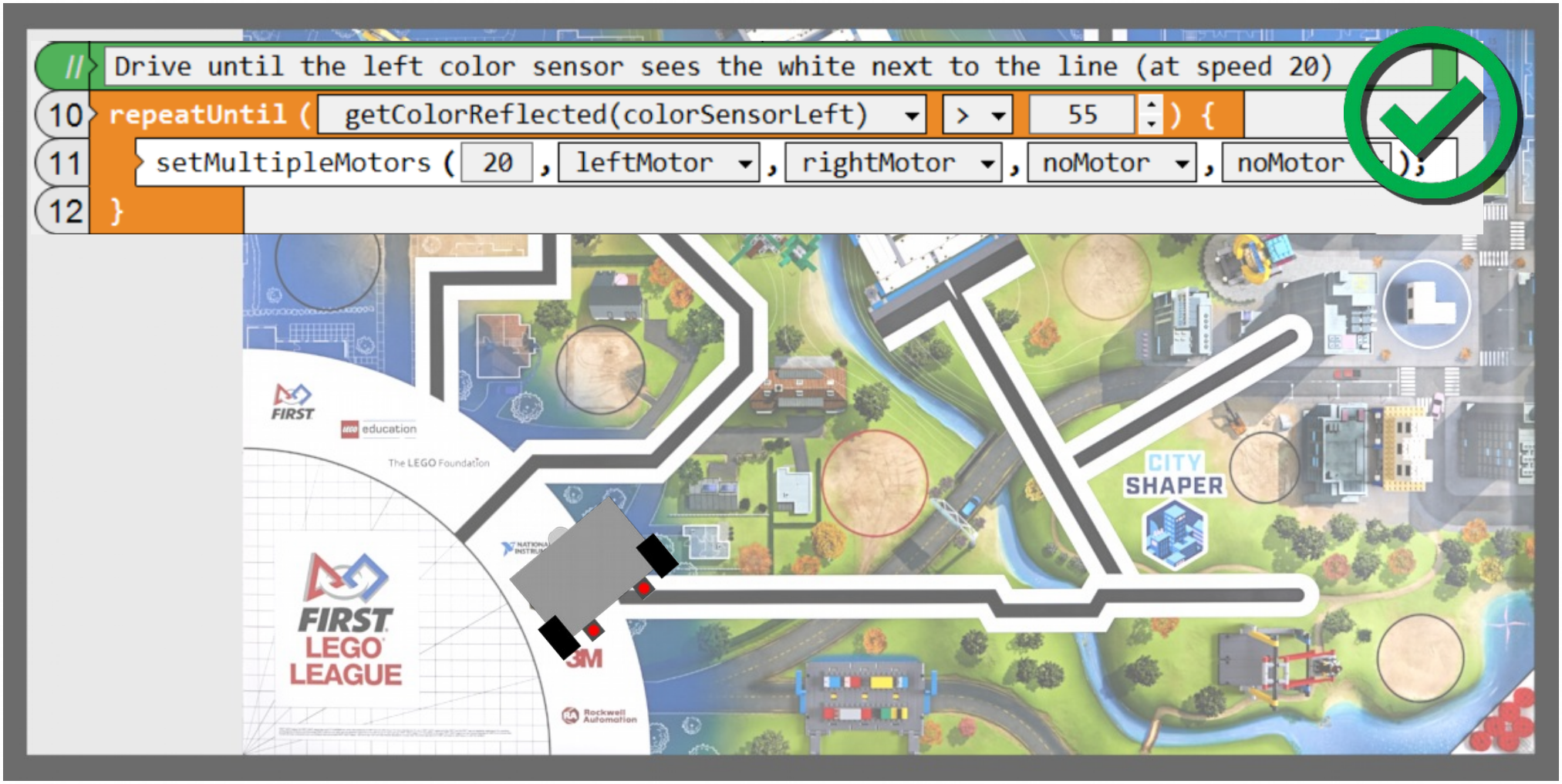
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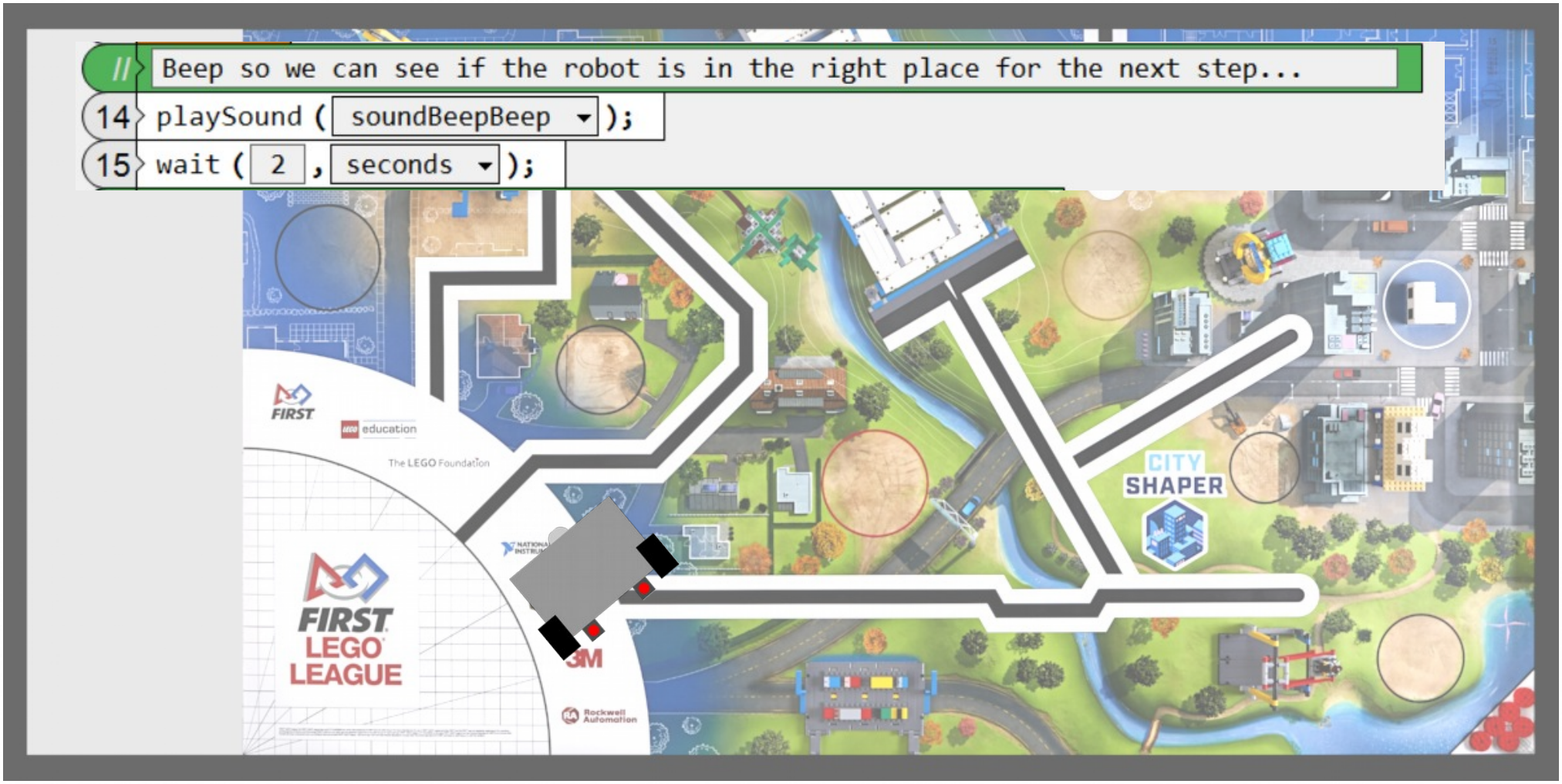
// Beep so we can see if the robot is in the right place for the next step...
14 playSound (soundBeepBeep);
15 wait (2 , seconds);
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