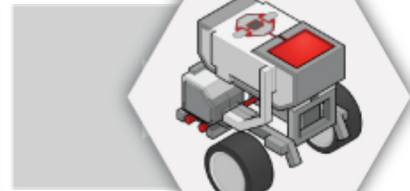


# Introduction to Programming LEGO® MINDSTORM® EV3

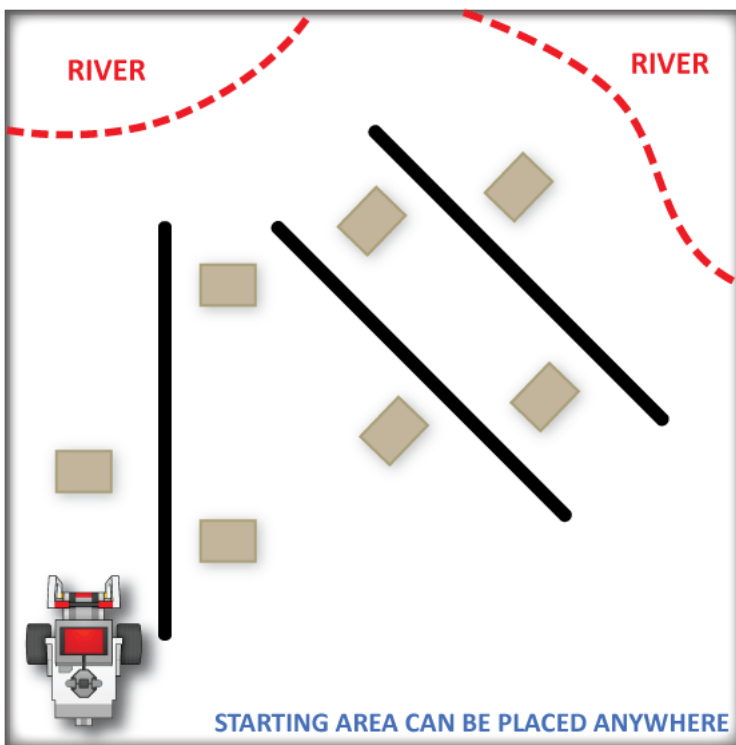


## CHAPTER CHALLENGE

### CHAPTER 9: Obstacle Orchard Challenge

In this challenge, you will program your EV3 robot to move from its starting area through three rows of fruit trees. In addition, however, there will be one or more obstacles placed at random throughout the orchard. The robot should not touch these obstacles; instead, when it encounters one, it should stop moving until they are removed by hand... at which point the robot should continue on its way.

#### Rules and Procedures:



- This challenge uses the same game board layout as the Orchard Challenge from Chapter 2 (Turning).
- Like the previous challenge, the robot can start anywhere there is space available.
- Place one to two obstacles randomly alongside a side of a row for the robot to encounter.
- Be aware to not place an obstacle where the robot may bump into when turning a corner.
- When the robot encounters an obstacle, it should stop and wait for the Obstacle to be removed by hand. It should then continue moving without additional human intervention.

#### Hints:

- Use a meter stick or ruler to measure the distances to each line on the board so you know how far you need to move each time.
- The obstacle can be completely removed from the challenge after the robot approaches it and stops.
- Use lower speeds to minimize the effects of momentum when turning.