E10 – Second week challenges – Summer 2022

Challenge 5 – use VEX IQ ClawBot (sonar scanner)

Sonic Scanner

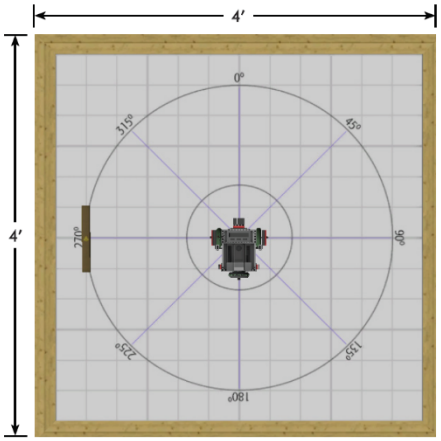
Challenge Description

To complete this challenge, program the robot to slowly spin in place (point turn) until it has detected an object using the sonar sensor. Once the robot has detected the object, it should stop spinning and move toward the object.

The object will be randomly placed every time you restart the challenge

Once the robot is within roughly half the distance of a grid square from the object, it must remain stopped for 5 seconds to complete the challenge.

Board Specifications



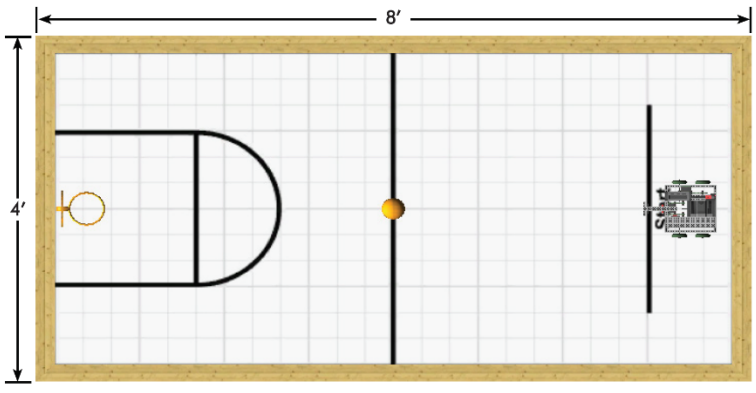
Challenge 6 – use VEX IQ ClawBot in Curriculum Companion

Robo-Dunk II

Challenge Description

To complete this challenge, program the robot to pick up the basketball at half court and drop it into the net at the other end of the court. Remote control must not be used.

Board Specifications



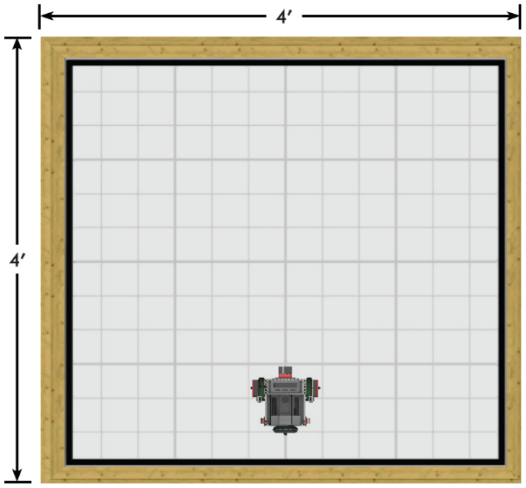
Challenge 7 - use VEX Cortex Buggybot (light sensor) in Curriculum Companion

Table Bot

Challenge Description

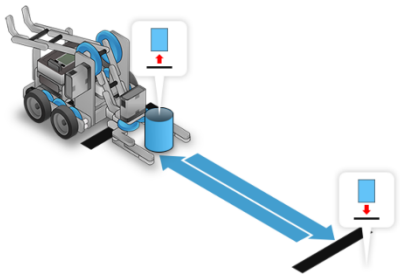
To complete this challenge, program the robot to stay in motion on the table for 30 seconds. It should move forward until it detects an edge using the light sensor, turn, and then resume moving forward. The edges of the table are borderd by a black line. Only time spent moving forward is counted towards the 30 seconds.

Board Specifications



Challenge 8 - use VEX IQ Clawbot in Challenge Pack

Cargo Transport



Achievement Available
Complete this challenge in Robot Virtual Worlds to earn this achievement.

- Virtual World: **Challenge Pack for VEX IQ**
- Level: **Cargo Transport Challenge (or Classic)**
- Robot: **Clawbot IQ - Obstacle Detection**

Program the robot to pick up an object, then transport it the end zone!

This time, place the object within the claws of the robot. Next, program the robot to pick up the object, then carry it to the end zone, then release. Finally, the robot must return to its starting position.