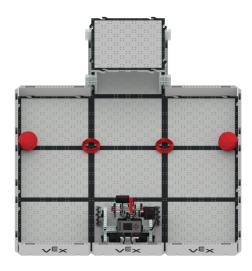
VE**XEXP** Practice Activity

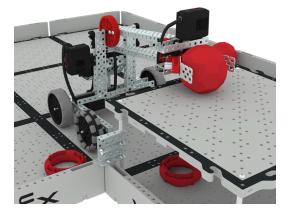


Moving Objects

Drive your Clawbot to score rings and Buckyballs on two different platforms.

How to Practice

- **1.** Set up a 3'x3' Field with walls, with one additional Tile attached to the center of one side of the Field, as shown above.
 - <u>Build a Medium Platform</u>, (approximately 15cm or 6in) to the additional Tile, as shown in the image above.
- 2. Set up your Clawbot, two Buckyballs, and two rings as shown in the image above.
 - Your first test should be using the Clawbot built from the instructions.
- 3. The goal of this activity is to use the built-in drive program and the Controller to drive your Clawbot to score two game objects on the lower platform, and two game objects on the raised platform.
 - Rings and Buckyballs can be scored in any order.
 - Any game objects that fall out of the Field during practice should be placed back in their starting position by hand.



- 4. Document the results of your trial in your engineering notebook.
 - How effectively could you manipulate a Buckyball? How effectively could you manipulate a ring?
- **5.** Be ready to iterate! Select one thing to iterate on at a time, (ie. driver strategy, driver configuration, manipulator design, etc.), document that change, and test it.
 - What would help you score either of these objects more easily or effectively? Do you want to focus on driver strategy or manipulator design?
 - Test and document each design and strategy change you make, including how it affected your scoring outcome.

'LEVEL UP'

 Score in Time - Can you score all four objects in one minute? What about all four objects on the raised platform in one minute?

Pro Tips

 Optimize your manipulators - As you iterate on your robot, be sure to account for how well it manipulates <u>both</u> rings and Buckyballs. Try to optimize your design to more effectively score both types of game objects.