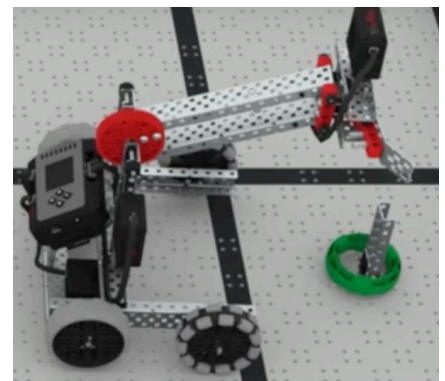# Ring Leader

Code your robot to score Rings on posts! The higher the post, the higher your score.

Challenge: Place Rings on different sized posts to score points!

- **Extra challenge:** Time yourself! How quickly can you place the Rings?

Set Up and Rules:

- Complete the challenge using a completed VEX EXP Clawbot.
- Place your Clawbot in the starting area, with the back wheels against the wall, and the claw facing the posts.
- **Scored:** A Ring is considered 'scored' when any part of it is completely around the post to count as 'scored', as shown on the right. Rings are not scored if they are hanging from the post.
- Reset the Rings to match the layout shown above each time you run your project.

Scoring:	
Each Ring on the low post = 1 point	Each Ring on the high post = 3 points

Reminders & Tips

- **Switch** blocks allow you to code with Python commands in a Blocks project. Convert blocks or type directly in a Switch block to start incorporating both block-based and text-based coding in your project. [Learn more in this article.](#)

```
drivetrain.drive_for(FORWARD, 305, MM)
```

- Use a problem-solving process to help complete the challenge.
  - **Phase 1: Planning –** The first step to solving a challenge is understanding the challenge and making a plan. Your goal is to brainstorm several possible solutions to score points in Ring Leader.
  - **Phase 2: Pseudocoding –** The next step is to break down the plan into the component steps. Your goal is to write pseudocode showing the steps and behaviors needed to score points in Ring Leader.
  - **Phase 3: Building and Testing –** The next step is to build and test a VEXcode project to solve the challenge. Your goal is to create a project that scores as many points as possible in the challenge based on your plan and pseudocode.

Additional Resources

- **VEX API –** Learn about the different commands available to you when coding with VEX EXP in the VEX API. [Information on how to use the API is available here.](#)

- **Example Projects and Templates –** Use templates to configure the Clawbot before beginning to code. Example projects are also available to learn how to code motors like the Claw and Arm. [Learn how to access example projects and templates in this article.](#)

Clawbot (Drivetrain 2-motor)

Drivetrain Moves and Turns

Claw and Arm

- **Field Tiles –** Each Field Tile is 300mm by 300mm (~12 inches by 12 inches).