# VEX EXP  Activity



Wall

1
3
5

Binders
or blocks

Start
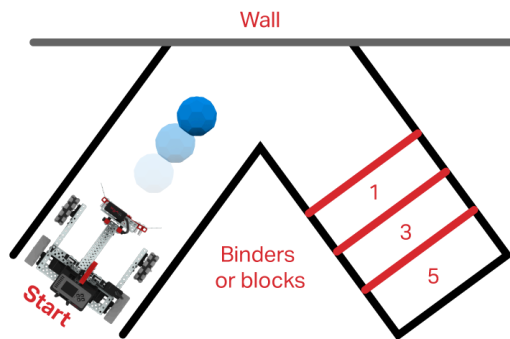
# Rebound!

Use your EXP Clawbot to play a fun scoring game.

## Step by Step

1. For this challenge, you hit a ball against a wall and score points when it rebounds.  First, create your gameboard near a wall in the classroom (gray line in the diagram). Using blocks or binders, create "walls" like in the diagram above (black lines).  Use tape to make the scoring lines on the floor (red lines).

2. Build the Clawbot and open the Clawbot (Drivetrain 2-motor) template in VEXcode EXP. Build the code shown in the image to the right.



3. Download the project to the Brain, and place the Clawbot at the start area, facing the right side. Place a small ball about an inch from the left side of the Claw.

4. Run the project, which directs the Clawbot to lower the Arm, close the Claw, and turn to the left to hit the ball, making it roll towards the wall, bounce off of it and hopefully stop on in one of the scoring areas.

5. Change the project to have the Clawbot turn to the right. Did it change how the ball rolled? How about at a different angle?

## 'LEVEL UP'

- **Change the Velocity!** Adjust the project to have the Clawbot hit the ball at a different velocity and see if that changes the scoring outcome.

- **Change the Object!** Try to push a Buckyball ball or Ring from your kit to see if it's easier or harder to score.

## Pro Tips

- By default, other blocks will wait until the Motor or Motor Group is done moving. You can select the arrow to expand and don't wait - this will cause other blocks to continue running while the Motor or Motor Group moves..
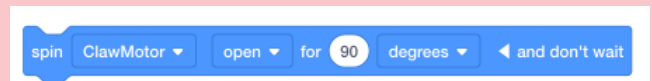


**Standard:** CSTA 1A-AP-11: Decompose (break down) the steps needed to solve a problem into a precise sequence of instructions.