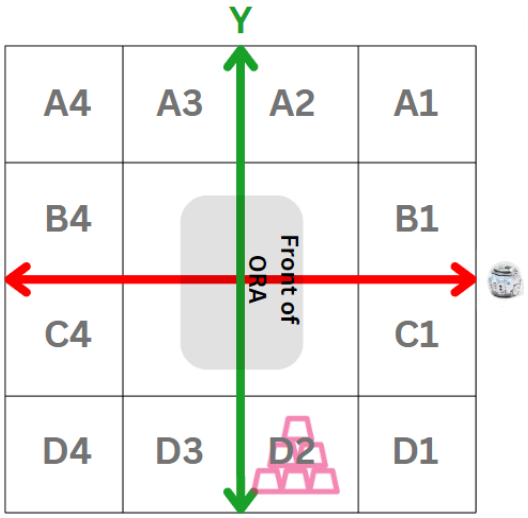
Elaborate | ORA Recycling Wrecking Bot

Activity Instructions:



In this challenge, students will use ORA as a cobot in a recycling facility. ORA will be used to physically dismantle complex objects for further processing.

Setup: Stack 6 of the wooden cylinders in a pyramid shape in Quadrant D2. Place the Evo outside the Quadrant map at the intersection of B1 and C1 (See diagram, right)

Task Requirements:

1. ORA must "sweep" the pyramid to dismantle it, coming down directly on the pyramid will put the ORA in an error state.
2. ORA must start in the Initial Position.
3. ORA must move into a pre-demolition position and wait for Evo's signals.
4. The Evo must count down from 3 to alert workers that demolition is about to take place.
5. The Evo must also use lights to signal that demolition is about to take place.
6. After demolition, ORA must wait for 5 seconds to give workers an opportunity to clear away the recycled material and to get to a safe distance (**Do not actually have students reach into the area to clear the blocks, this is only for the simulation).**
7. ORA must return to the Initial Position after demolition.

Direct students to plan this code in the Elaborate section of their Student Activity Sheet. After creating the pseudocode and drawing the code, direct them to create this code on their devices in the ORA Editor (example of code given below). If they have disconnected from the Shared Workspace, follow the instructions from the Explain section to get them connected to the workspace.

As students complete their code, they will test their code. Click on a given student's or student group's tab on the ORA Editor. Click "Run" to execute their

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code. Reset the pyramid between each code run. Remember to follow the Safety Protocol established in Lesson 1.

As students test their code, direct them to the Elaborate section of their Student activity sheet. Have them answer the question about whether or not they were successful at the task or, if not, what changes are necessary to be successful.

When a student has finished successfully completing the challenge (or they are waiting to run their code) direct them to complete the exit ticket in the Evaluate section of their Student Activity Sheet.

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