

CIJE-Tech Lower School

Robotics Competition

2024-2025

City Technology

CENTER FOR  
INITIATIVES  
IN JEWISH  
EDUCATION

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Revision A, 08/15/2024

# The Center for Initiatives in Jewish Education (CIJE)



The Center for Initiatives in Jewish Education (CIJE) strengthens and enriches the quality of education in Jewish schools throughout the United States. CIJE is investing in our nation's future by providing beneficiary schools with cutting-edge technology, engaging curricula, and vital support so that students can acquire the skills they need to excel in our global society. Currently, CIJE has more than 245 beneficiary schools across the United States and programs which span grades K-12. CIJE's innovative programs are paving the way for the achievement and success of tomorrow's leaders and thinkers.

## CIJE-TECH STEM PROGRAM: AN OVERVIEW

More than ten years ago, the Center for Initiatives in Jewish Education began the implementation of various STEM programs in elementary Jewish schools. The success of these programs brought about the initiation of the CIJE-Tech Principles in Engineering and Applied Engineering programs.

### *Goals:*

The CIJE STEM education programs:

- Provides a challenging and rigorous program of study focusing on the application of STEM subjects.
- Offers courses and pathways for preparation in STEM fields and occupations.
- Bridges and connects in-school and out-of-school learning opportunities.
- Provides opportunities for student exploration of STEM related fields and careers.
- Prepares students for successful college and university STEM education.

To increase STEM learning, the CIJE-Tech programs include activities that improve student and teacher content knowledge and teacher pedagogical skills. Innovative strategies are used, including small group collaborative work and the use of hands-on activities and experiments to promote inquiry and curiosity. Learning is connected to the real world through an emphasis on the application of STEM subjects to everyday life, employment, and the surrounding environment.

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# Robotics Competition

Game Rules

2024-2025



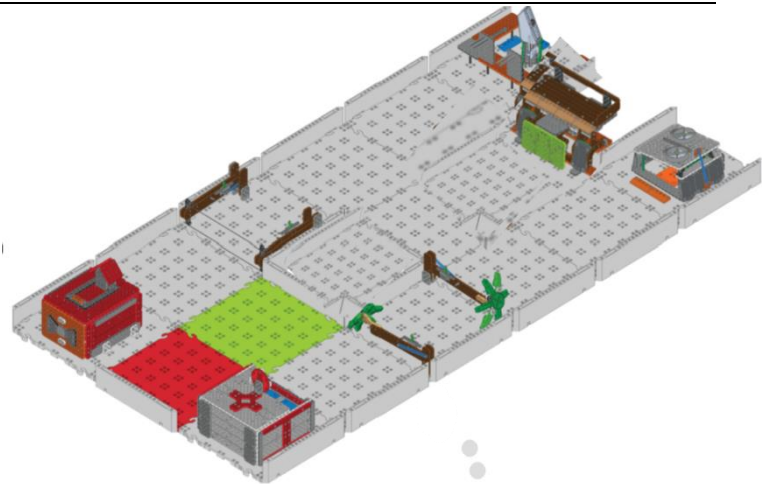
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## Summary

In the City Technology Rebuild Competition, students will learn about the different elements of the Field and compete in the City Technology Rebuild.

An *Alliance* composed of two (2) *Robots* works together to score as many points as possible in a ninety (90) second *Match*

Students achieve points by completing up to 13 different tasks, each worth 1 point.



**Note: 2 additional empty tiles have been added to the middle of the board to allow for more room to maneuver**

## Robots Rules

1. Robots must be built specifically from pieces part of the VEX GO robotics system. A complete list of parts can be found at [www.vexrobotics.com/go](http://www.vexrobotics.com/go)
2. Controlling the VEX GO robot:

The VEX GO app can be used to control your GO robot from any smart device or tablet.



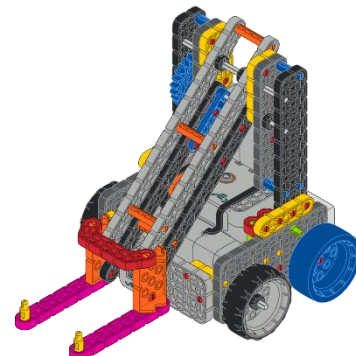
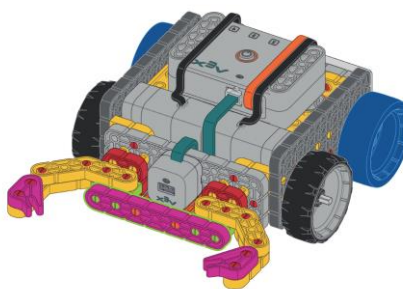
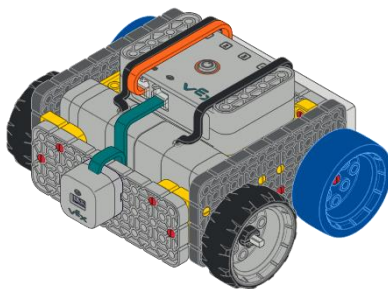
You can also use a VEX IQ joystick (sold separately) to control your VEX GO robot.



It is highly recommended that teachers use the VEX Classroom app to assign each GO brain a unique name.



3. VEX offers instructions for 3 versions of the Hero bots: (1) base, (2) claw, and (3) advanced. All are able to compete. The advanced bot can complete all the tasks of the game.



4. Instructions for building all the robot versions, as well as the playing field, can be found at: [www.vexrobotics.com/go/downloads/build-instructions](http://www.vexrobotics.com/go/downloads/build-instructions)

**Game Rules**

5. 2 robots, chosen at random, play a 90-second match together (2 robots are in the rink at one time).
6. Robots must start on the green tile.
7. If a robot becomes stuck, the human player can pick up the robot and place it on an adjacent empty tile.
8. You play as a team. BOTH robots receive all the points from the match, regardless of which robot scored them.

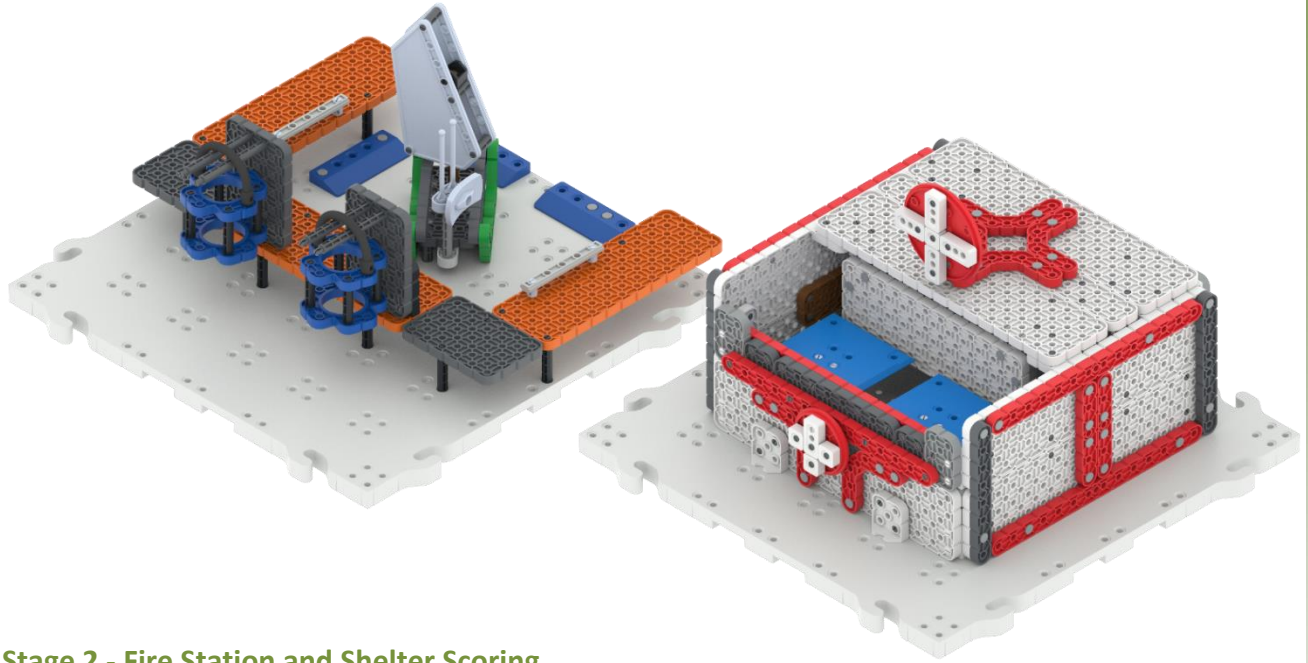
**Scoring Points**

Points can be scored by completing the following tasks, in no particular order

TASK		POINTS
Stage 1 - Hospital and Dock Scoring		
Remove Medicine from the Dock		1 each
Deliver Medicine to:	The Hospital tile	1 each
	Place Medicine on a blue square inside the Hospital	2 each
Stage 2 - Fire Station and Shelter Scoring		
Remove Supplies from the Fire Station		1
Raise the Emergency Shelter roof		1
Deliver Supplies to the Emergency Shelter		1
Stage 3 - Trees and Power Lines Scoring		
Raise a fallen Tree (There are 2 trees)		1 each
Raise the fallen Power Poles (There are 2 poles)		1 each
Stage 4 - Landslide and Rock Scoring		
Trigger the landslide (remove rocks from hill)		1
Move a Rock to the red tile to help clear the roads (There are 2 rocks)		1 each
End with the robot touching the red tile		1 each
<b>TOTAL POSSIBLE POINTS</b>		<b>18</b>

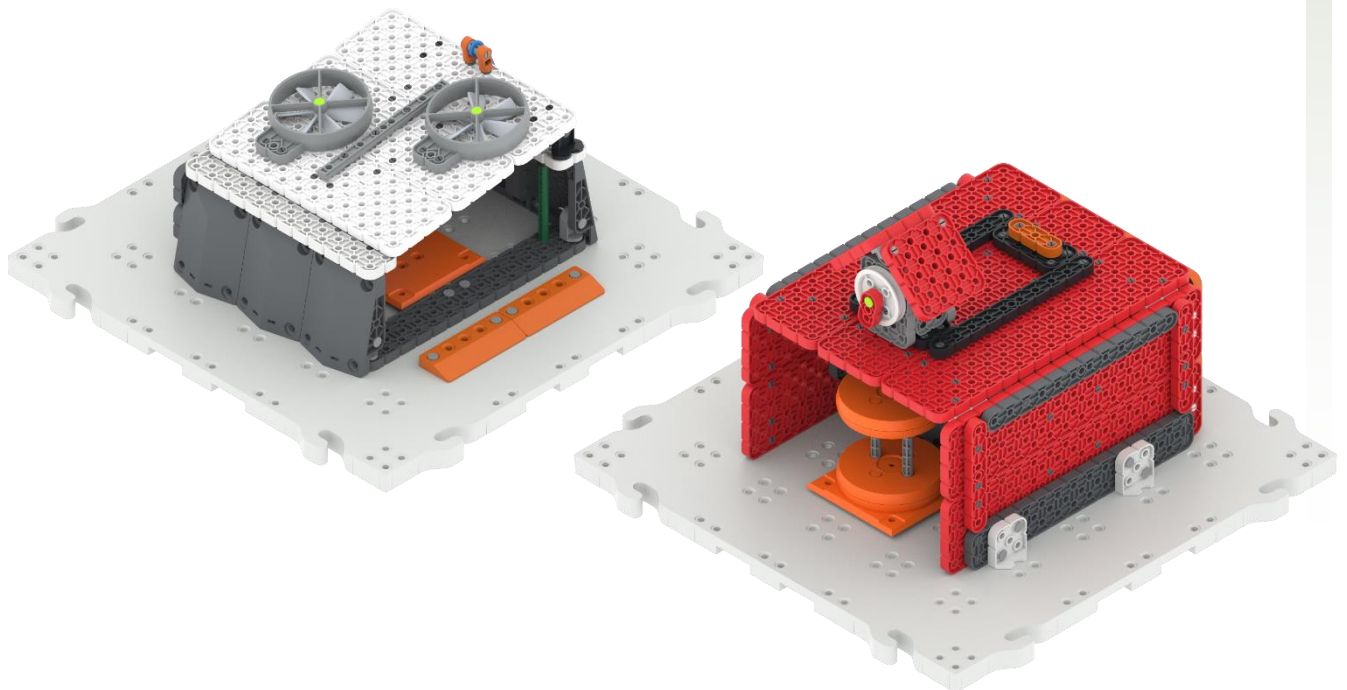
## Stage 1 - Hospital and Dock Scoring

- Remove Medicine from the Dock (no longer touching supporting stick)
- Deliver Medicine to:
  - The Hospital tile (touching Hospital tile), **or**
  - Place Medicine on a blue square inside the Hospital (touching blue square)



## Stage 2 - Fire Station and Shelter Scoring

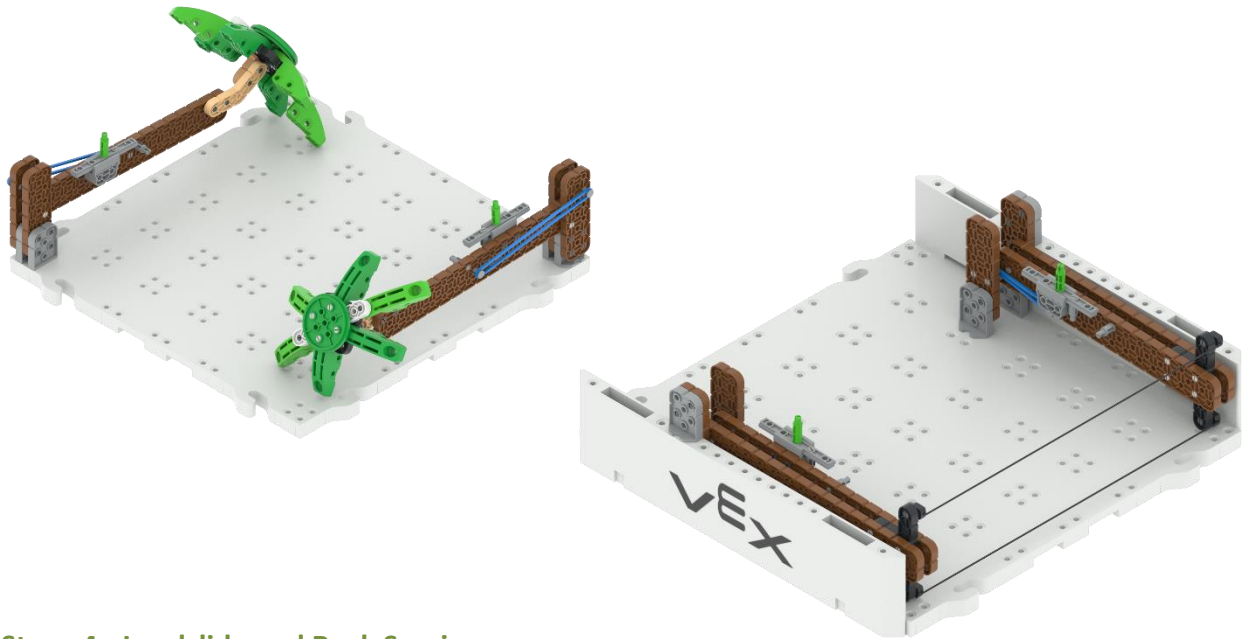
- Remove Supplies from the Fire Station (no longer touching orange square)
- Raise the Emergency Shelter roof
- Deliver Supplies to the Emergency Shelter (touching orange square)





## Stage 3 - Trees and Power Lines Scoring

- Raise a fallen Tree - 1 point per tree (raise until lock clicks into place)
- Raise the fallen Power Lines- 1 point per pole (raise until lock clicks into place)



## Stage 4 - Landslide and Rock Scoring

- Trigger the landslide (rocks must fall off the platform)
- Move a Rock to the red tile to help clear the roads (in contact with the red tile)
- End with the robot touching the red tile (1 point per robot)

