CIJE STEAM Lower School (CSLS)

Robotics Competition 2026-2027

Space Mission Challenge

CENTER FOR INITIATIVES IN JEWISH EDUCATION

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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 STEAM PROGRAM: AN OVERVIEW

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

Goals:

The CIJE STEAM education programs:

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

To increase STEAM learning, the CIJE STEAM 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 STEAM subjects to everyday life, employment, and the surrounding environment.

Center for Initiatives in Jewish Education

President	Jason Cury
Vice President	Philip Brazil
Vice President, Education Administration	Faigy Ravitz
Director, Curriculum Development	Adam Jerozolim, P.E.
Director, Innovation	Orly Nadler, M.A.

CIJE STEAM Specialists:

Aryeh Laufer	Dewain Clark, M.A.
Barbara Sehgal, M.A.	Joseph Saltzman, M.S.
Christopher Auger-Dominguez	Karen Sinai
David Seay, M.A.	Ruth Garber

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Summary provided by:
Center for Initiatives in Jewish Education
148 39th Street, Suite A311, Brooklyn, NY, 11232
info@theCIJE.org
212-757-1500 Phone
212-757-1565 Fax

This program was facilitated with the generous support of the Center for Initiatives in Jewish Education (CIJE) as part of its ongoing quest to achieve excellence in education. For inquiries on how to support or get involved with CIJE, please contact Philip Brazil at pb@thecije.org.

Robotics Competition

Game Rules

2026-2027



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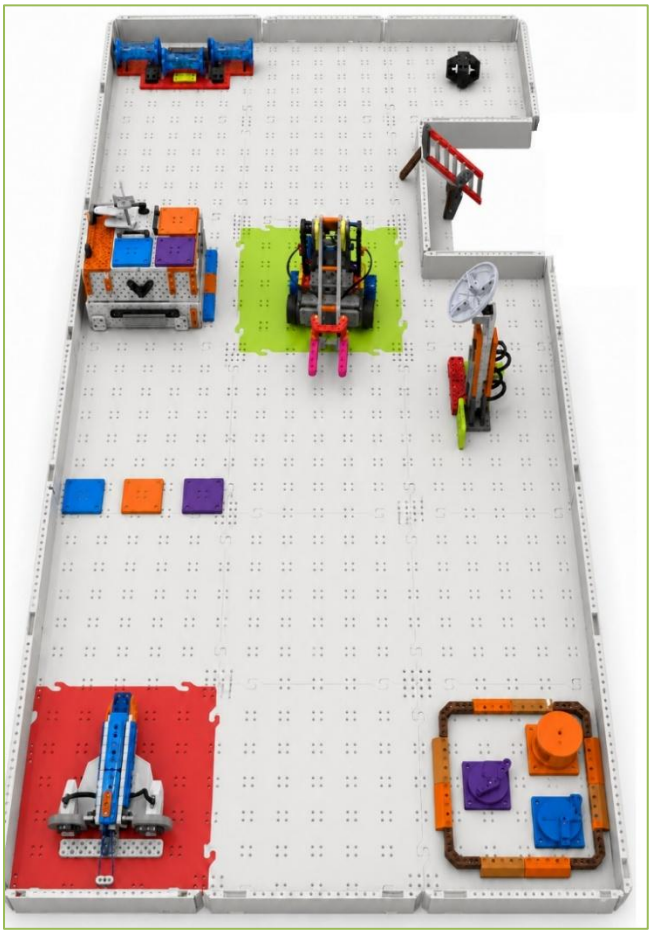
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Summary

Students will compete in the Vex GO Space Mission Challenge. 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 different tasks. Each robot in the alliance receives the points, regardless of which robot scored the point.



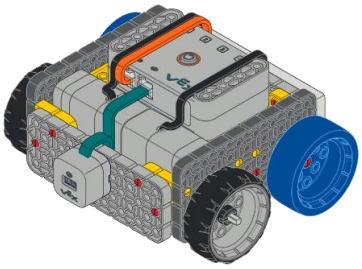
Robot Rules

1. Robots must be built specifically from pieces that are part of the VEX GO robotics system. A complete list of parts can be found at 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 bot: (1) base, (2) claw, and (3) advanced. All are able to compete. The advanced bot can complete all the tasks of the game.

		
Base	**Claw**	**Advanced**

4. Instructions for building all the robot versions, as well as the playing field, can be found at: https://www.vexrobotics.com/go/downloads/build-instructions#heroBot2

Game Rules

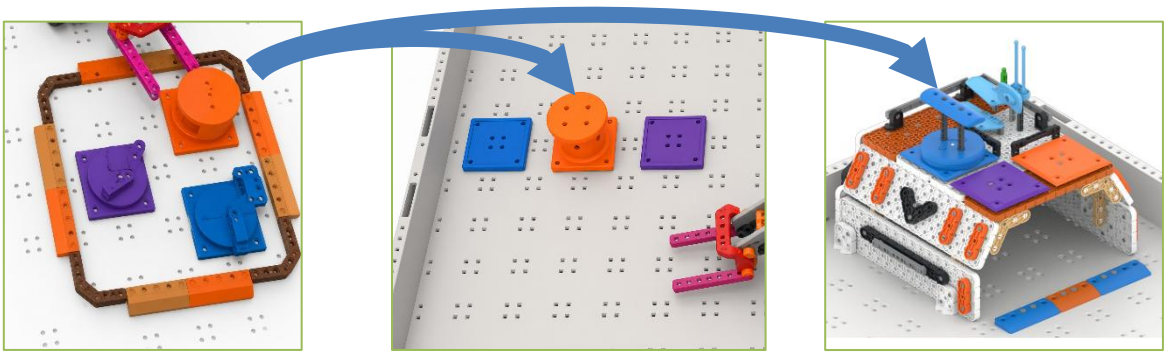
5. Two robots, chosen at random, play a 90-second match together (2 robots are in the rink at one time).
6. Robots must start on the green tile.
7. If a robot becomes stuck or tips over, the judge can free up and right the robot.
8. You play as a team. BOTH robots receive all the points from the match, regardless of which robot scored them.
9. All tasks are only scored when the match ends

Game Objects

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

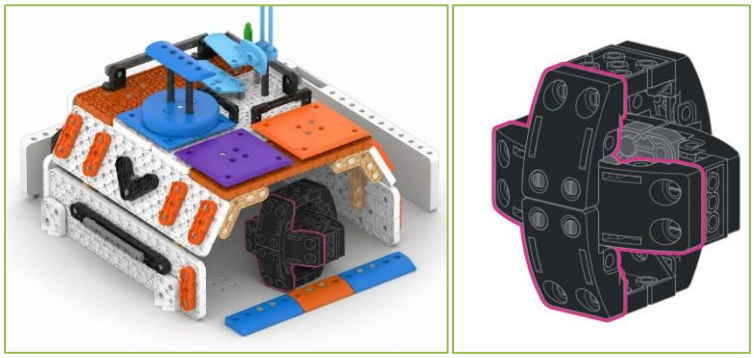
Stage 1 – Crater Samples

10. Collect Samples and bring them to:
    - matching floor squares (they cannot be touching the floor) for 1 point, OR
    - matching roof squares (in contact with the square) for 2 points
11. Bonus: 3 points if all three Samples are in scoring positions



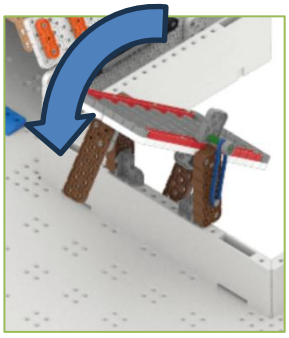
Stage 2 – Moon Rock

12. Bring the moon rock either:
    - To the Science Lab tile (1 point)
    - Touching the inside floor of the Science Lab (2 points)



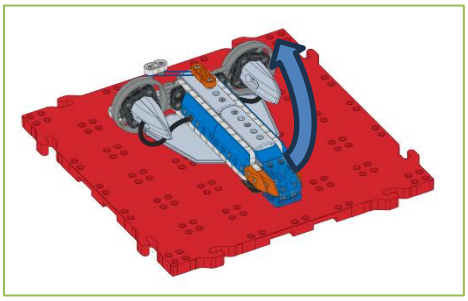
Stage 3 – Solar Panel

13. Push the solar panel back down into place (1 point)



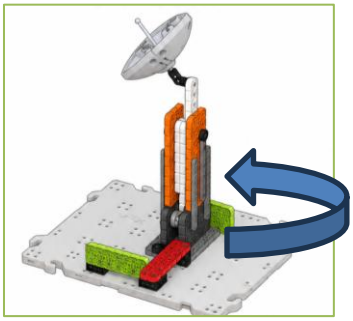
Stage 4 - Blast Off

14. Lift the Space Shuttle upright (1 point)



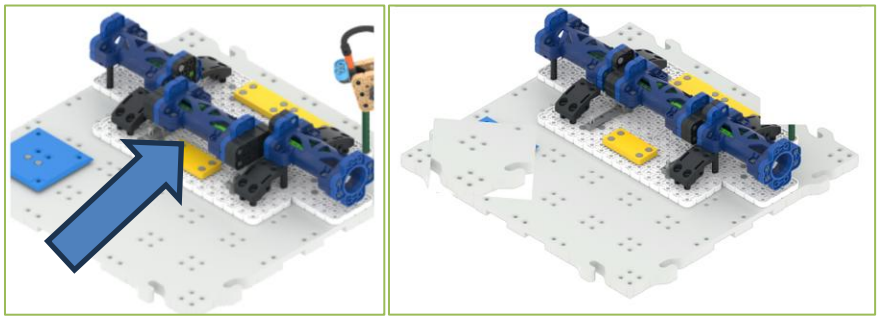
Stage 5 - Satellite

15. Spin the satellite 90 degrees from its starting position (1 point)



Stage 6 - Pipeline

16. Push the center pipe fully back into the pipeline (1 point)



End Stage

17. Robots touching a red tile (1 point per robot)

Scoring Summary

TASK	POINTS
Stage 1 – Craters Sensors	
Each Sample placed on a matching floor square	1 point each
Each Sample touching a matching roof square	2 points each
If all 3 Samples are in scoring positions	3 point bonus
Stage 2 – Moon Rock	
Place moon rock touching the Science Lab tile	1 point
Place moon rock touching the inside floor of the Science Lab (2 points)	2 points
Stage 3 – Solar Panel	
Push solar panel back into place	1 point
Stage 4- Blast Off	
Lift the Space Shuttle upright	1 point
Stage 5 - Satellite	
Spin the satellite 90 degrees	1 point
Stage 6 - Pipeline	
Push the center pipe fully back into position	1 point
End Stage	
Finish the match with the robot touching the red tile	1 point per robot
TOTAL POSSIBLE POINTS	**17 points**