

### ROBOTIC ACTIVITY MAT



# MISSION TO MARS



NOTE: This activity mat was not designed for a specific robot but was designed to accommodate a large majority of the leading robotic platforms on the market. If you have any questions on the specific robot you have in regards to this activity, please contact us: [info@brainstormedu.com](mailto:info@brainstormedu.com)



**Summary:** Mars holds exciting new possibilities! Help deliver items for research at the Mars base, collect rock debris, water samples, and help repair the rover. Can you succeed on this mission to Mars? Be sure to watch out for aliens!

**Objective:** Collect the game pieces and complete the missions to help the Mars scientists in their research.

**Skills taught:** Students will learn Programming, Problem Solving, Based Navigation, and Critical Thinking

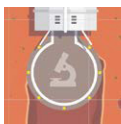
### General Setup

Students will place their robot on the starting square in the corner. Place the appropriate game piece pucks onto the designated locations on the mat.



### How To Use:

Students will need to engineer a plow or other attachment for their robot to help collect or move the game pieces.



**Scientific Microscope:** Scientists are collecting samples of ice on the planet Mars for signs of water.



**Engineering Tools:** Engineers need to repair the Rover so it can scout new locations on Mars.

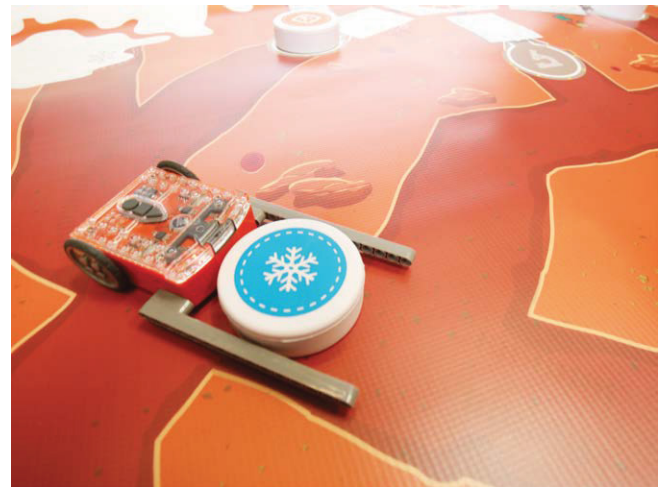
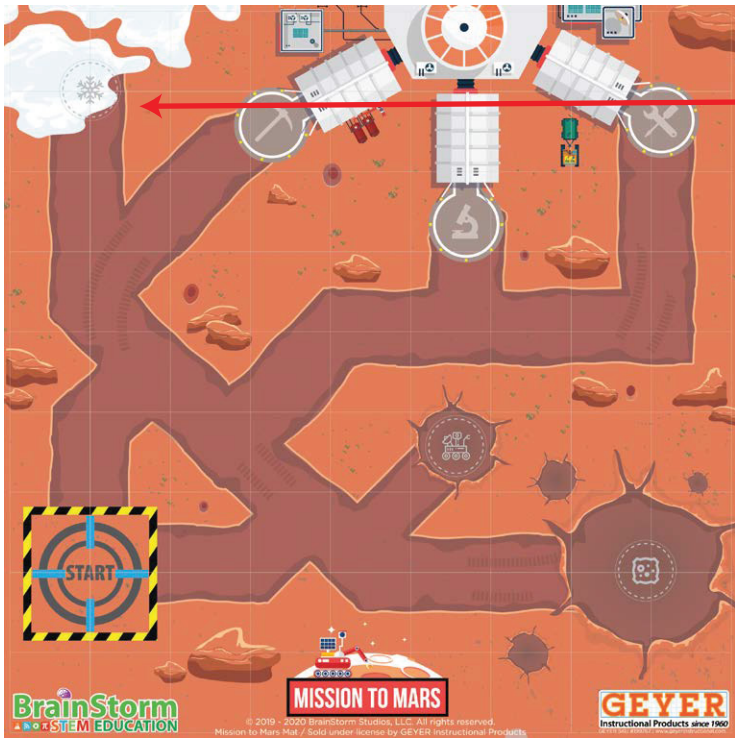


**Geologist Pickaxe:** Rock samples are needed for Geologists to find signs of life on Mars.

### Mission 1: Ice Sample

#### Water on Mars?

Scientists are collecting samples of ice on the planet Mars for signs of water. Can you collect the ice sample and deliver it to the loading zone?



#### How To Use:

Place your robot on the starting square. Place the Ice Sample game piece on top of the snow. Without going out of bounds, program your robot to navigate collect the game piece and return it to the designated delivery zone.

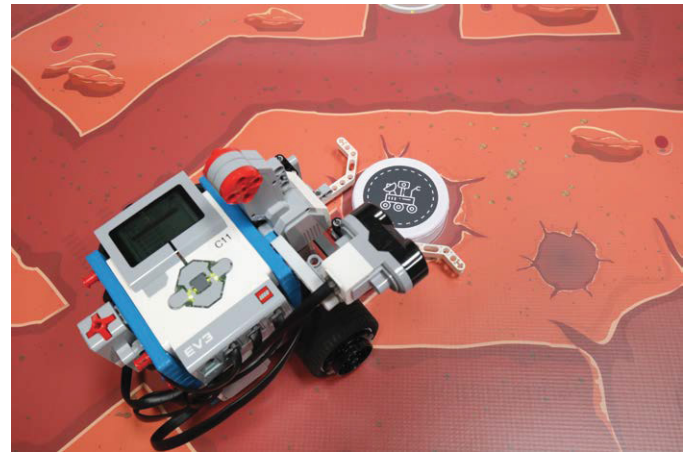
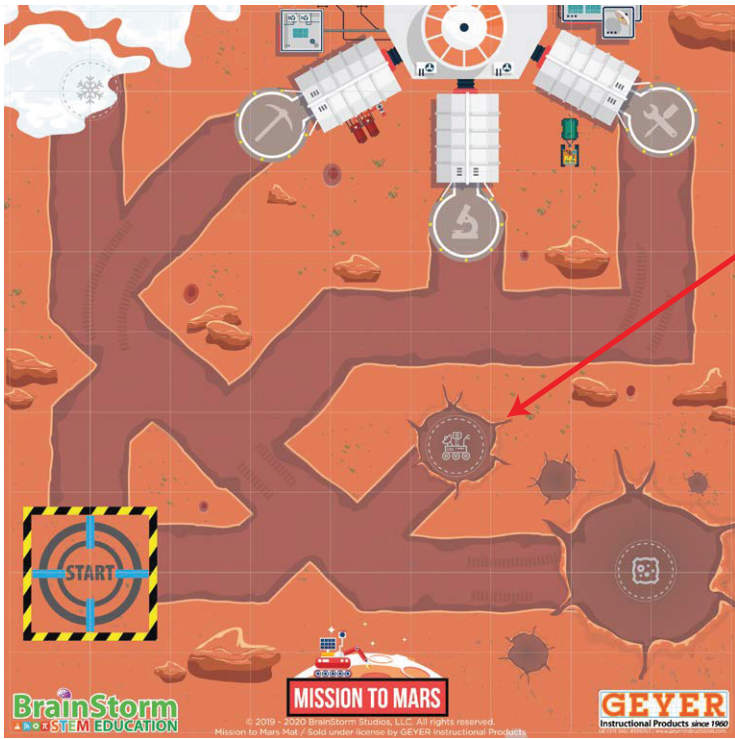


Thanks to you, the ice sample has been delivered, and researchers have begun their investigation for water on Mars.

### Mission 2 : Rover Repair

#### Help repair the rover

Engineers need to repair the Rover so it can scout new locations on Mars. Can you collect the Rover and deliver it to the loading zone?



#### How To Use:

Place your robot on the starting square. Place the Rover game piece on top of the designated area. Without going out of bounds, program your robot to navigate collect the game piece and return it to the designated delivery zone.

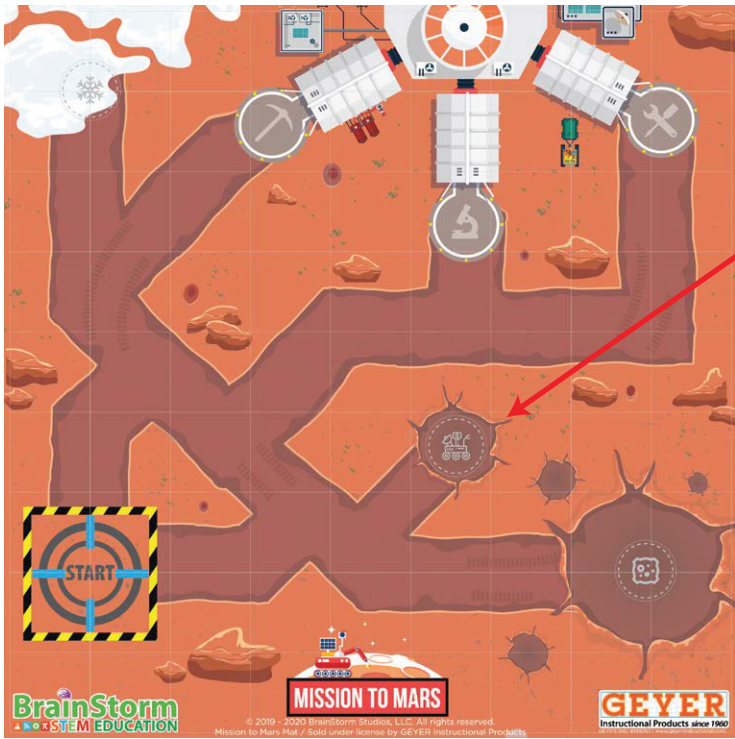


Thanks to you, the Rover has been delivered, and Engineers have begun repairing the Rover for its next adventure.

### Mission 3 : Meteorite Sample

#### Geology ROCKS!

Rock samples are needed for Geologists to find signs of life on Mars. Can you collect the rock sample and deliver it to the loading zone?



#### How To Use:

Place your robot on the starting square. Place the Meteorite game piece on top of the snow. Without going out of bounds, program your robot to navigate collect the game piece and return it to the designated delivery zone.



Thanks to you, the Rock Sample has been delivered, and scientists are researching possible signs of life on Mars.