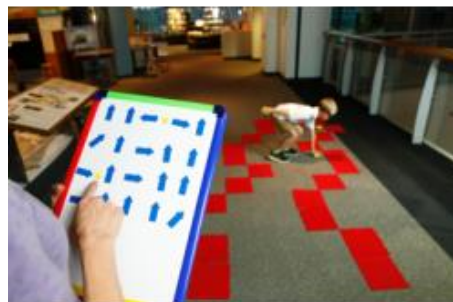# Mars Rovers – NISEnet

Materials:

- Mission Control magnetic program board
- Blue arrow "Advance" command magnets
- Yellow star "Rock Retrieval" command magnets
- Star shaped sample props
- 30 Mars landscape obstacle felt sheets
- Mars Rover Map
- Blindfold (optional)
- Design Your Own Mars Rover drawing sheets (optional)
- Pencils
- Activity and facilitator guides
- Information sheets
- Tips for Leading Hands-on Activities

Resources:

http://www.nisenet.org/catalog/exploring-solar-system-mars-rovers-2018 Activity guide, facilitator guide, table sign, info sheets, poster, and training videos.

Learning Goals

• Teams of scientists and engineers use rovers and other robotic vehicles to explore distant worlds.

• Rover missions, like those to Mars, are carefully planned here on Earth.

• NASA missions require large teams of people working together.

Intro (example): Scientists use robotic rovers and other vehicles to explore distant worlds. Working with a team and communicating well with each other is essential to solving problems along the way. When scientists run into trouble with their design they carefully consider what could be altered and then try again. Science is all about experimentation!

Steps:

1. Do this activity with a friend! One person is Mission Control and one is the Rover. You're going to work together to move the Rover through the Mars landscape!
2. First, Mission Control walks through the pretend Mars landscape and uses the program board to create a set of commands for the Rover to follow. Be sure to tell the Rover when to pick up a rock sample and help it avoid all the obstacles. Each blue arrow is one step. Each yellow star means the Rover should stop and sweep his or her hands over the ground to search for a rock sample.
3. Next, the Rover should close his or her eyes or wear a blindfold. Mission Control reads each command to the Rover. The Rover must follow the commands exactly.

Reflection (throughout): After going through the landscape, talk about what was hard or easy. What would you do differently next time?