

Asteroid 2012JN4 The Problem



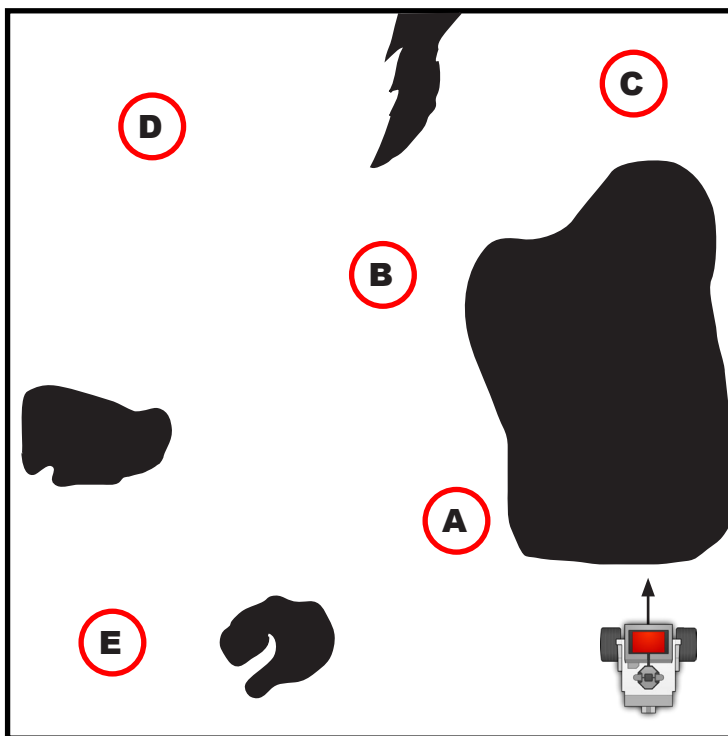
Scientists sent a rover to explore Asteroid 2012JN4, but it crash-landed. The rover's battery was damaged, so it can only run six more times.

The Problem

Because you only have six tries, you can't waste any on guessing. Find a way to make the robot go to the goals without guessing!

Asteroid Map

This is a map of the Asteroid. The robot must reach all five goals within six runs. Watch out for the big rock in front of the robot at the start!



- Obstacle**
Run ends immediately if the robot touches one
- Goals**
You must visit all of these, in any order

Important!

The "Save Point" Rule

Once your robot has reached a goal, it can start there on any run afterward. It can also face any way you want.

Example: *If you reach Goal A on your first run, you can start the robot on top of A and face it toward B for your second run.*

The robot starts facing the rock as shown.

You can score more than one goal in the same run, as long as the robot pauses inside each one.

You can reach the goals in any order. It doesn't have to be A-B-C-D-E.



Background Research

Real rovers have also had to overcome unexpected obstacles throughout history. Use your library and the internet to find one of them. What challenge did that rover face? What caused them? How did engineers overcome them?