

## Planet Exploration

Level  
Junior / Senior

Team  
1-2 persons

Building  
Pre-Made

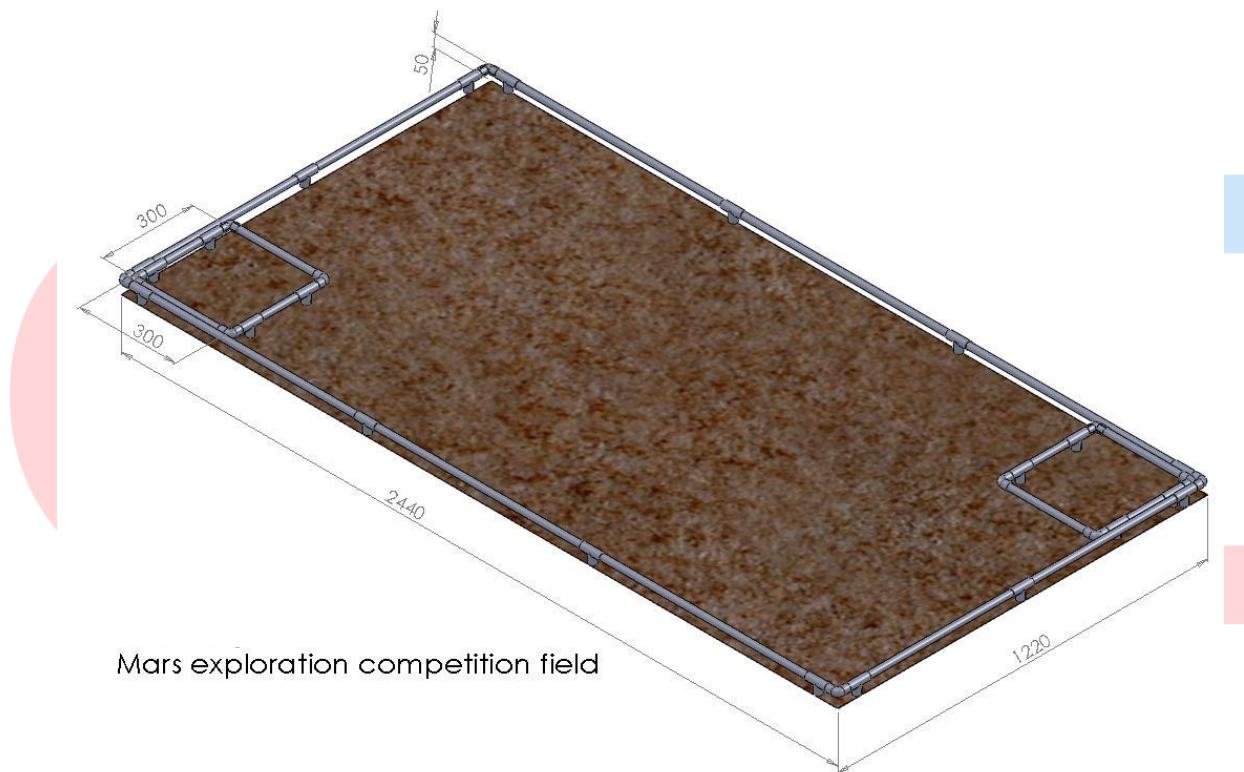
Students are encouraged to design flexible gripper to explore the planet but not a mining tool. Robots have to pick up stones (ping pong) and deliver them to a designated storing area. They should pick the 'useful' stones (white ping pong) and avoid the 'harmful' stones (orange ping pong).

### Robot Specification

1. The robot, with its arm contracted, must not exceed a length of 300mm, a width of 200mm, and a height of 240mm (length, width and height dimensions are not inter-changeable) nor overall weighs more than 1.5kg.
2. The robot may employ up to five sets of gear boxes. It must move in walking mode. There is no limit to the number of stones for each pick as long as gripper or hand-folding action is used. Spade or sweep actions are not allowed.
3. The robot is controlled by wired or wireless manual controller which must only be supplied by not more than 9 volts such as 6 pcs. 1.5V AA size batteries. Rechargeable battery or 18650 battery can be used except Li-Po battery. (update 22 September 2024)

### Game Field Specification

1. This game uses a universal playing field.
2. The area of playing field is 2238mm × 1019mm with 100mm tall fencing surrounding the four sides.
3. A base tank for storing stones with length of 300mm, a width of 300mm, a height of 50mm is located at both ends of the universal playing field.





## Game Rules

1. Each robot is controlled by one member.
2. The robot attempts to pick as many stones (ping pong) as possible within the 2 minutes game time. Different color stones score different points. The team has the stones in the base tank with the highest accumulated point is the winner. If the points are same, the team with more orange colored stones wins.
3. Points represented by respective colored stones are as follows:

Color	Points
White	-50
Orange	+10

4. A robot may not damage or obstruct other competing robots. The judge would serve warning to the offending player. The player would be disqualified after two warnings and asked to leave the playing field immediately.
5. During the competition, a robot may receive repair off the field. The judge then places it back to where it left and continues the game. No extra time would be given to the robot.

