# Robot Design

Our underlying design goal was to keep the robot small and simple because it is more efficient. The relatively small body is nice because it allows us to easily move between the mission models on the table and have less chance to run into them. We have one single moving part, besides the wheels, which is a simple arm with various attachments for different sets of missions. Some of our missions do not even require an attachment.

# Sensors

* Color – The Color Sensor is used to find lines that provide us with our position.
* Gyro – The Gyro Sensor is used extensively to keep us perfectly straight.
* Ultrasonic – The Ultrasonic Sensor is used as the positioning device in Solar Panel Array and Space Travel. It also just looks cool!
* Infrared – The Infrared Sensor is not a part of our robot but was used as a testing device to remotely control the robot for realistic testing.

# Attachments and What They Do

* Weight
  + Escape Velocity
  + Observatory
  + Food Production
  + Satellite Orbits
  + Solar Panel Array
* Forklift
  + Space Travel
* Extractor
  + Extraction
* Sample-holder
  + 3D Printing
* 90° Angular Beam
  + Crater Crossing