Welcome to International NodeBots day 2015!

Your challenge is to build a NodeRover to explore the asteroid Hygiea 10.

Here are some ideas for programming your bot:

- Display the temperature on the digit display
- Display the light reading on the digit display
- Use buttons to toggle what is displayed
- Beep when an obstacle is detected using the ultrasonic sensor
- Program your bot to drive around an area autonomously, using the ultrasonic sensor to avoid obstacles

Rover Build instructions:
https://t.co/x3l8m10ddU

Code samples:
https://gist.github.com/AnnaGerber/e5f89767b7456f96da463

Hygiea (10)

Physical characteristics	
Dimensions	530×407×370 ±7 km[2] 431 km (mean)
Surface area	837,080.744 km²(323,198.682 sq mi)
Mass	(8.67 ±0.15)×10¹⁹kg[3]
Mean density	2.08 ± 0.10 g/cm³[3]
Surface gravity	0.091 m/s²
Escape velocity	0.21 km/s
Rotation period	27.623 h (1.15 d)[1]
Albedo	0.0717 (geometric)[1]
Temperature	≈164 K *max:* 247 K (–26°C) [4]
Spectral type	C-type asteroid[1]
Apparent magnitude	9.0[2] to 11.97
Absolute magnitude *(H)*	5.43[1]
Angular diameter	0.321″ to 0.133″

10 Hygiea is the fourth largest asteroid in the Solar System by volume and mass, and it is located in the asteroid belt. With somewhat oblong diameters of 350–500 km and a mass estimated to be 2.9% of the total mass of the belt, it is the largest of the class of dark C-type asteroids with a carbonaceous surface. Despite its size, it appears very dim when observed from Earth. This is due to its dark surface and larger-than-average distance from the Sun.

Based on spectral evidence, Hygiea's surface is thought to consist of primitive carbonaceous materials similar to those found in carbonaceous chondrite meteorites. Aqueous alteration products have been detected on its surface, which could indicate the presence of water ice in the past which was heated sufficiently to melt. The primitive present surface composition would indicate that Hygiea had not been melted during the early period of Solar System formation, in contrast to other large planetesimals like 4 Vesta.