

# Engineering And Robotics Learned Young

## ◆ EARLY ◆

### Fall 2007 & Spring 2008

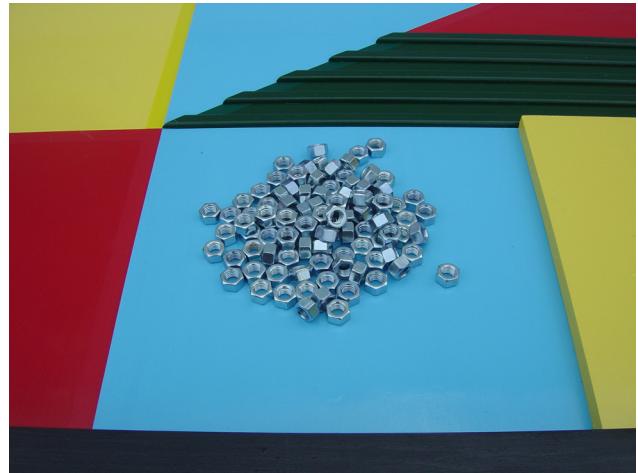
### Mission Object Details

The Fall 2007 & Spring 2008 EARLY Robotics Competition mission objects are 99,  $\frac{1}{2}$ " nuts that represent **Reef Robots**. The following information is provided for acquiring the **Reef Robots**.

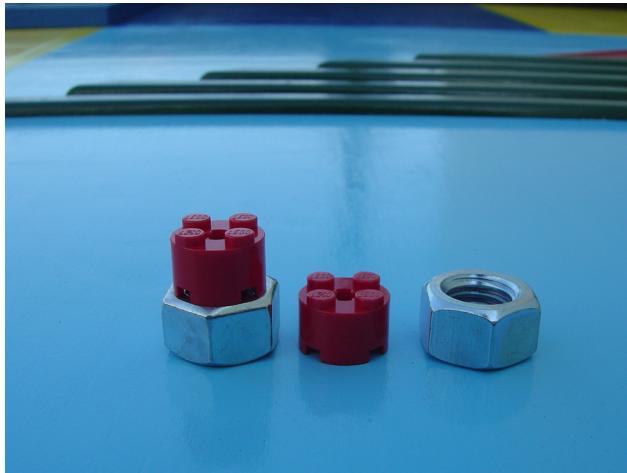
## Reef Robots



A **Reef Robot** is represented by a  $\frac{1}{2}$ " nut.



Ninety-nine nuts are used for the mission.



The nut is a little larger than the 2x2 round brick and is approximately the same height as the round brick.



The nuts can be purchased from hardware stores and come in a variety of packaged quantities.

- The mission object is a  $\frac{1}{2}$ " x 13 threads per inch (coarse thread), zinc plated, steel nut.
- The distance between flats on the nut is approximately  $\frac{3}{4}$ ".
- The height of the nut is approximately 7/16".
- The mission object is referred to as a *Reef Robot*.
- There are 99 *Reef Robots* required for the challenge.
- The nuts can be purchased individually, in packs of 25, or in boxes of 50 and 100 from a variety of hardware stores such as Home Depot, Lowe's, Ace Hardware, Sears Hardware, etc. or from online suppliers such as McMaster Carr ([www.McMaster.com](http://www.McMaster.com) - 100 pack is item # 95462A033) or Bolt Depot ([www.BoltDepot.com](http://www.BoltDepot.com) - 50 pack is item #2652). If you ask for the, "half inch by thirteen nuts," at any hardware store, the attendants will be able to easily help you. Avoid stainless steel nuts, these can be very costly.
- The cost of 100 nuts is approximately twelve dollars.

Please visit the EARLY Neighborhood Forums at [www.EARLYrobotics.org](http://www.EARLYrobotics.org) or contact [Mission.Control@EARLYrobotics.org](mailto:Mission.Control@EARLYrobotics.org) with any questions or comments.

Thank you for maintaining the spirit of the game!