

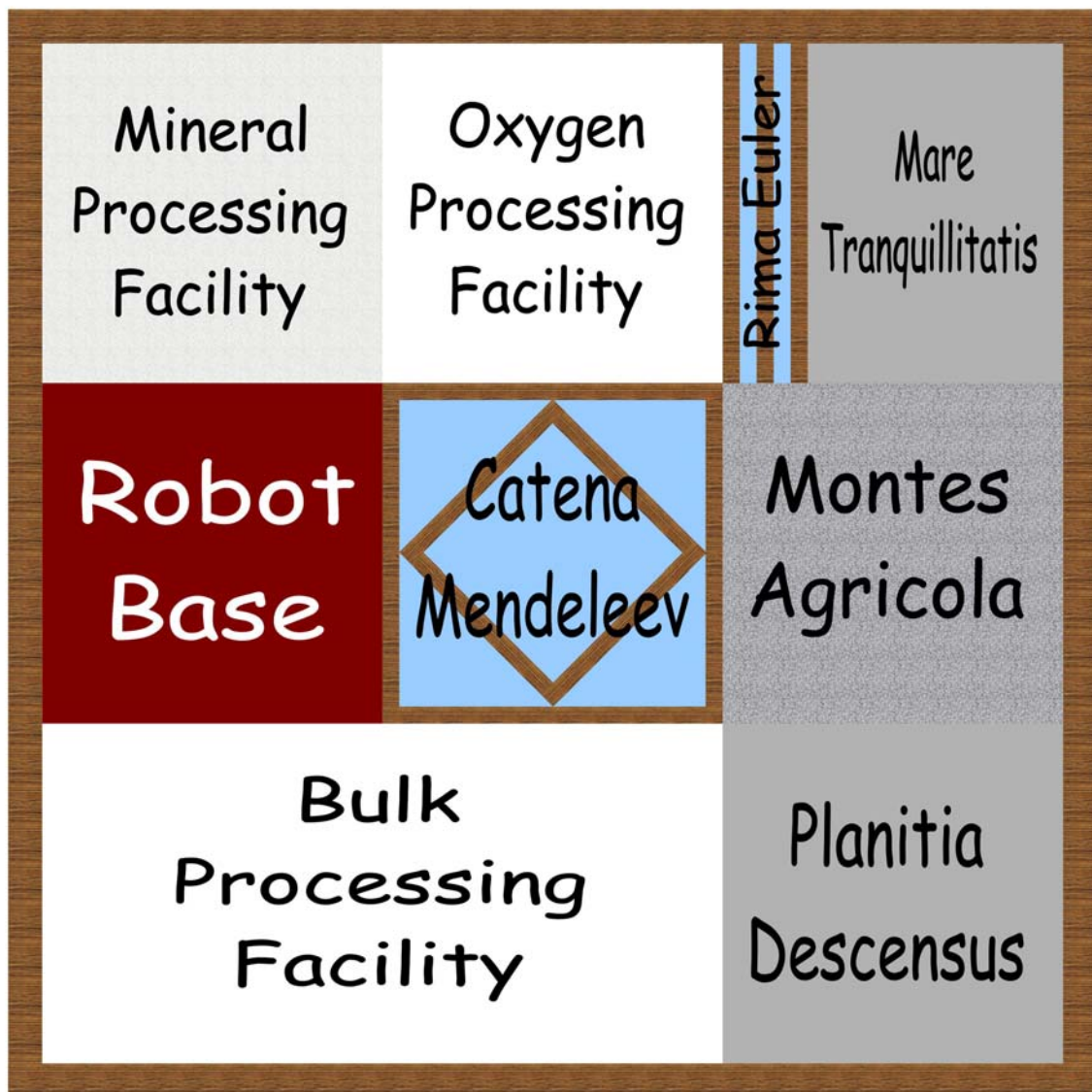
Engineering And Robotics Learned Young

◆ EARLY ◆

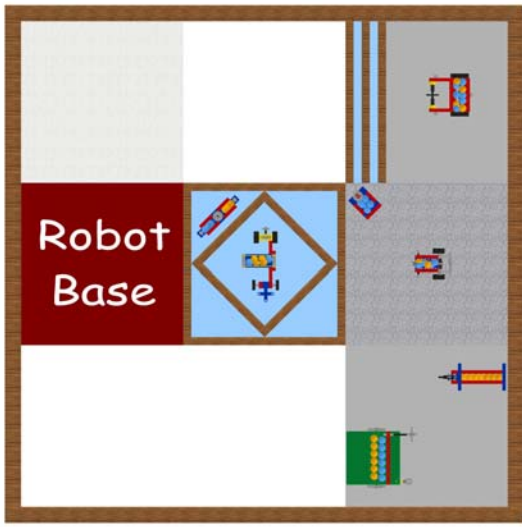
Fall 2005 Robotics Competition Playing Field Details

The 2005-2006 EARLY Robotics Competition playing field, The Moon, is a 4' x 4' field with a 2" x 4" border with various terrain features. The following information is provided for constructing the playing field. If you have any questions or comments, please email EARLY at Mission.Control@EARLYrobotics.org or visit the EARLY Neighborhood Forums at www.EARLYrobotics.org.

The Moon



2005-2006 EARLY Playing Field



Fall 2005 Model Positions



Playing field

Field
48" x 48" x 3/8"
plywood

Field Perimeter
2" x 4" boards

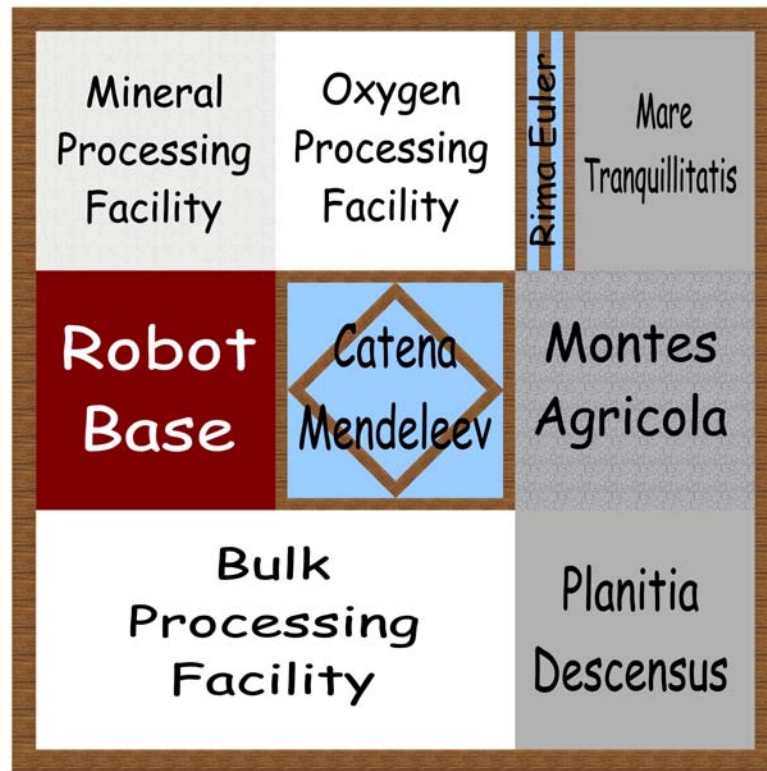
Mineral Processing Facility
15" x 15"
3/4" plywood

Oxygen Processing Facility
15" x 15"

Robot Base
15" x 15"

Catena Mendeleev
15" x 15"
3/4" x 1/4" molding
perimeter &
inscribed square
rotated 45 degrees

Bulk Processing Facility
30" x 15"



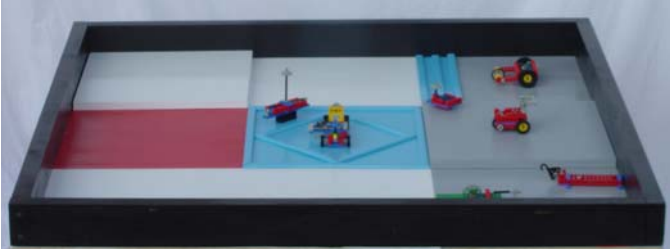
Rima Euler
3 3/4" x 15"
3/4" x 1/4" molding
equally spaced

Mare Tranquillitatis
11 1/4" x 15"

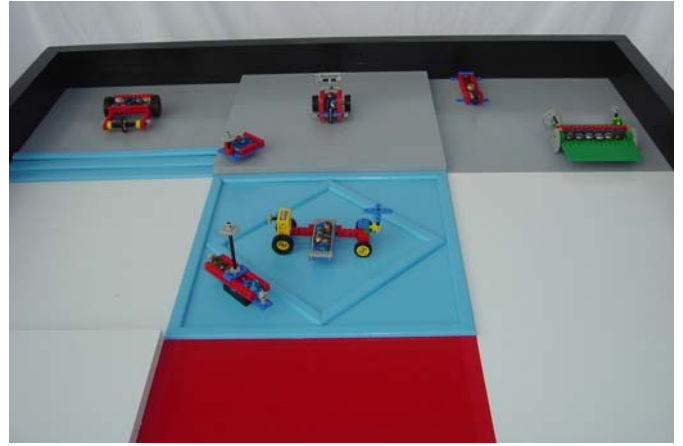
Montes Agricola
15" x 15"
3/4" plywood

Planitia Descensus
15" x 15"

Playing Field Dimensions



View from Bulk Processing Facility



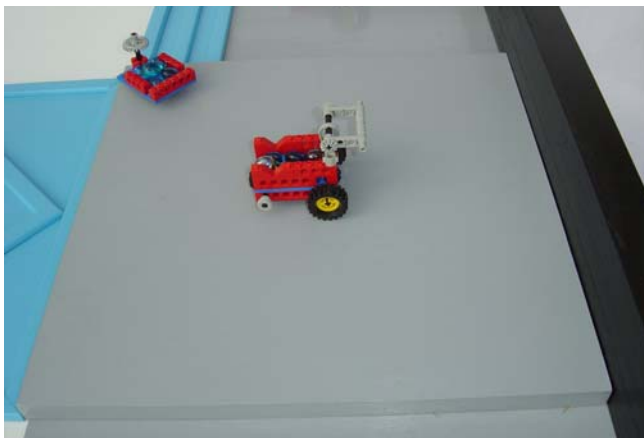
View from Robot Base



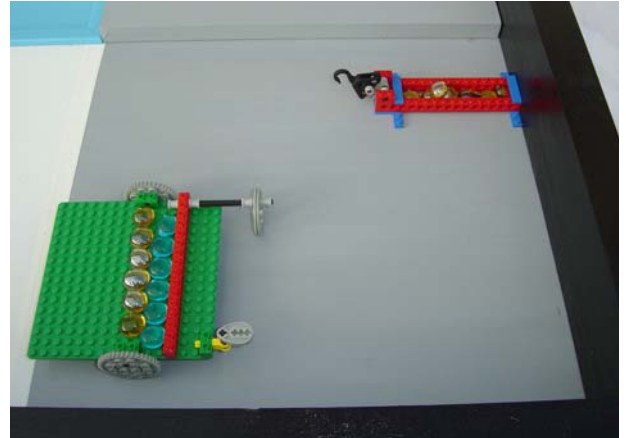
Rima Euler & Mare Tranquillitatis



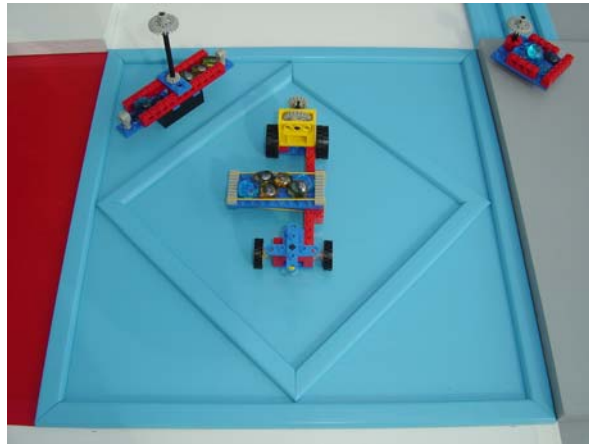
Rima Euler, Montes Agricola, Catena Mendeleev, and Oxygen Processing Facility interface



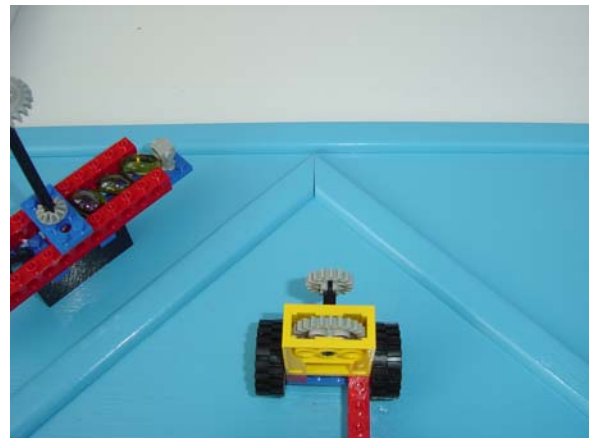
Montes Agricola



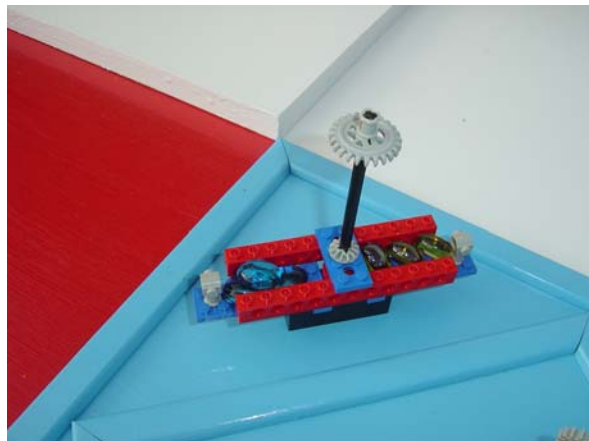
Planitia Descensus



Catena Mendeleev



Catena Mendeleev Molding



Robot Base, Mineral Processing Facility,
Oxygen Processing Facility, and Catena Mendeleev
interface



Catena Mendeleev, Montes Agricola, Planitia Descensus,
and Bulk Processing Facility interface

- The bottom of the playing field is a 4' x 4' sheet of $\frac{3}{8}$ " plywood.
- The outer boundary of the playing field is made of 2" x 4" boards, with the short edge attached to the playing field. The boundary is *black*.
- The **ROBOT BASE** is a 15" by 15" flat area and is *red*.
- The **MINERAL PROCESSING FACILITY** is a 15" by 15" piece of $\frac{3}{4}$ " plywood and is *white*. It is positioned against the playing field boundary corner with the exposed edges adjacent to the **ROBOT BASE** and the **OXYGEN PROCESSING FACILITY**. The plywood is fastened to the field with glue, nails, or screws.
- The **OXYGEN PROCESSING FACILITY** is a 15" by 15" flat area and is *white*.
- The **BULK PROCESSING FACILITY** is a 30" by 15" flat area and is *white*.
- **MARE TRANQUILLITATIS** is an $11\frac{1}{4}$ " by 15" flat area and is *gray*.
- **MONTES AGRICOLA** is a 15" by 15" piece of $\frac{3}{4}$ " plywood and is *gray*. It is positioned against the playing field boundary with the exposed edges adjacent to **MARE TRANQUILLITATIS**, **CATENA MENDELEEV**, and **PLANITIA DESCENSUS**. The plywood is fastened to the field with glue, nails, or screws.
- **PLANITIA DESCENSUS** is a 15" by 15" flat area and is *gray*.
- **RIMA EULER** is a $3\frac{3}{4}$ " by 15" area with 3 strips of equally spaced molding and is *light blue*. The molding is $\frac{1}{4}$ " x $\frac{3}{4}$ " screen molding and is 15" long. The molding can be purchased at Home Depot (part # 927-139) and is the same material used for **CATENA MENDELEEV**. The spacing between the molding strips is approximately $\frac{3}{4}$ " and can be easily obtained by using a temporary strip of molding as a spacing gauge. The molding is fastened to the field with glue, nails, or screws.
- **CATENA MENDELEEV** is a 15" by 15" area with two squares constructed from molding and is *light blue*. The molding is $\frac{1}{4}$ " x $\frac{3}{4}$ " screen molding. One square is positioned on the inside perimeter of **CATENA MENDELEEV**. One square is inscribed within the perimeter square with the corners midway of each side. The molding can be purchased at Home Depot (part # 927-139) and is the same material used for **RIMA EULER**. The molding is fastened to the field with glue, nails, or screws.

Activity Idea: Have team members calculate the length of the inscribed square sides using the Pythagorean Theorem.

- The *gray* color can be obtained by mixing 1 part black paint with 3 parts white paint.
- The *light blue* color can be obtained by mixing 1 part dark blue paint with 3 parts white paint.

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Thank you for maintaining the spirit of the game!