

# The Treasure Hunt Game

## Object:

The objective of this robotic game is to clean debris off a field, while looking out for a treasure.

The robot tries to sweep 25 pieces of debris out of a field. The field surface is white, outlined with a black border. While moving the debris the robot keeps an eye out for the treasure, signals if it finds the treasure, and can try to pick up the treasure for extra points. Time is up at 5 minutes, or when the robot has cleared all the debris and picked up the treasure.

- Each piece of debris swept out of the field is worth 2 points (each piece must completely cross the inside edge of the black border line).
- The robot gets 20 points for finding the treasure and signalling this fact with a noise.
- The robot gets 30 more points if it can pick up the treasure.
- The robot gets 60 points if it completes everything within 30 seconds, 50 points for 1 minute, 40 points for 1 minutes 30 seconds, and so on.

## Playing Surface:

White paper on top of a hard (wood) surface.

Black tape denotes the edges of debris field.

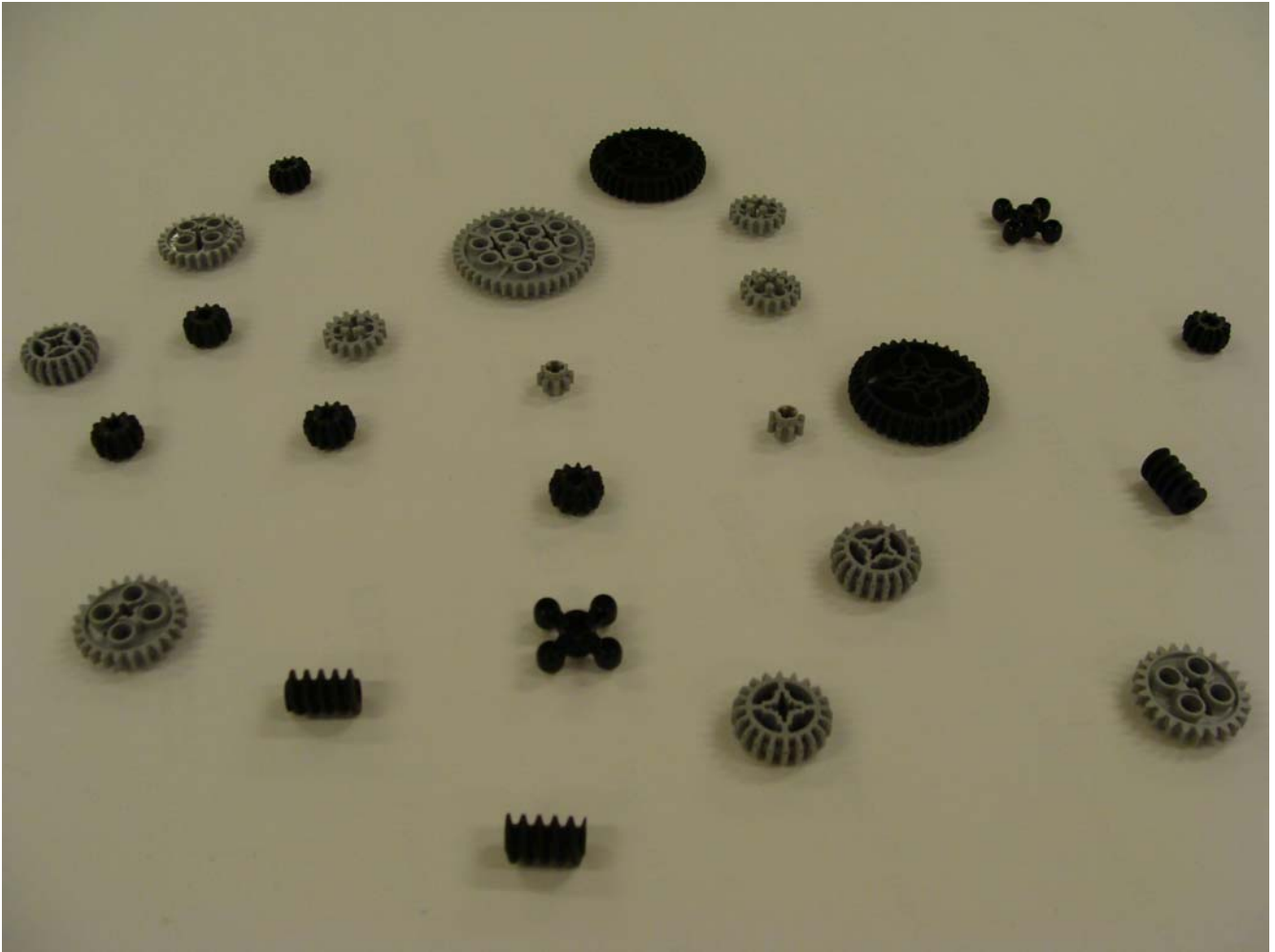
Debris field 92 x 183 cm (3 x 6 feet).

Edges of the playing field cordoned off with 2x4's.

Total field size 122 x 244 cm ( 4 x 8 feet).



Debris:  
25 black & grey gears found in Lego Mindstorms kits.



### Treasure:

A statue composed of Lego girl and three transparent 1x2 bricks (red, yellow, green) and one 1x4 red brick and one 1x6 green brick found in Lego Mindstorms kits as shown below.



### Robot Restrictions:

The robot must be made from parts found in a single Lego Mindstorms kit, but using plastic zip ties is allowed. The robot cannot be larger than 1 foot (30 cm) in any one dimension. The robot must be autonomous, with no remote control, and no interventions by hand allowed.

There will be prizes for 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> places (for points) as well as coolest-looking robot and most creative engineering design.