

## The Game:

Recycle Rescue, a robotics competition for students in 6<sup>th</sup> grade and younger, is played on the field shown above which is approximately 8' x 8'. Alliances, made up of four randomly paired teams, collaborate to score as many points as possible. Matches are 1:30 (one minute and thirty seconds) in length. The controller of the robot must be passed from one driver to the other between thirty (30) and sixty (60) seconds within a match.

The object of the competition is to attain a higher combined score than all the other teams. Points are scored by moving trash to the landfill, putting recyclables in the recycle staging area and recycle bins. Bonus points are awarded for completely cleaning the park (green space), lakes (blue spaces), for using as little of the landfill as possible, and for exiting the field of play before time expires.

## The Details:

There are a total of twenty(20) pieces of trash (black objects), and twenty-four(24) pieces of recyclables. Each piece of trash moved to the landfill scores 1 point. Each piece of recyclable moved to the recyclable staging area also scores 1 point. For each piece of recyclable placed in the recycle bins, 3 points are earned. Twenty-five(25) bonus points are earned for completely cleaning the park, including getting all trash and recyclables out of the tree. Five(5) bonus points are awarded for completely cleaning up one of the two lakes. An additional fifteen(15) bonus points are awarded for completely cleaning up the second lake. Up to twenty(20) bonus points can be earned by using as little of the landfill as possible. Up to forty(40) bonus points may be earned if all four robots exit the playing field prior to the end of the match.

Robots are placed in each corner of the field to start the match.

Each robot (no larger than 14" x 14" x 14" to start) will collaborate within its Alliance in order to maximize its score. The breakdown of the scoring can be seen below.

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Object	Goal	Max Score
Trash	In Landfill	1
Recyclable	In Recycle Staging	1
Recyclable	In Recycle Bin	3
Park	Cleaned	25
Lake (s)	Cleaned	5-1 <sup>st</sup> lake 15-2 <sup>nd</sup> lake
Landfill	Usage	5-2 tiles used 15-1 tile used
Robots	Exit Before End of Match	5-1 <sup>st</sup> robot 5-2 <sup>nd</sup> robot 10-3 <sup>rd</sup> robot 20-4 <sup>th</sup> robot

Scoring