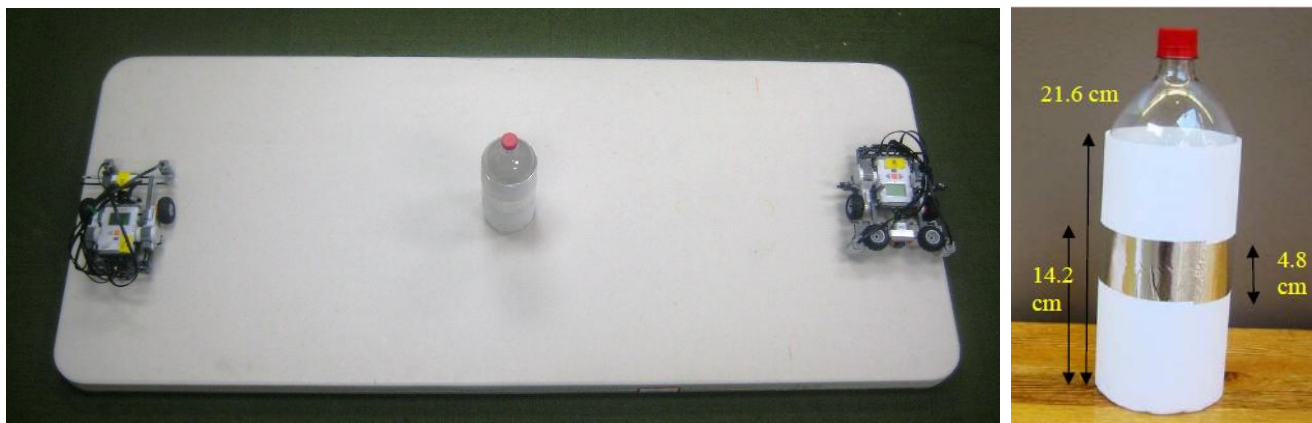# Robofest Jr. RoboSumo for 5-8th grade students (last updated 4-26-11)



The object of the game is to either be the first robot to push a 2 liter bottle (filled with 1 liter of water) off the table OR be the last robot remaining on the table. A robot is considered off the table *when any of its parts are touching the floor*, whether it was pushed off the table by the other robot or it fell off the table on its own.

## Robot Requirements

| | | |
|---|---|---|
| Maximum robot mass | 1 kg | |
| Maximum robot width | 25cm | Robots may expand their dimensions during the game |
| Maximum robot length | 25cm | Robots may expand their dimensions during the game |
| Maximum robot height | 25cm | Robots may expand their dimensions during the game |
| Number of robot controller per robot | One | Each robot must be 100% autonomous. No human control, signal, or remote computer control is allowed. |
| Sensor types | Any | Unless harmful to any people or electronics in the area |
| Number of sensors | Any | |
| Motor types | Any | |
| Number of motors | Any | |
| Robot kit | Any | |
| Material | Any | You may use tape, glue, rubber bands, etc. (However, you cannot glue/tape the robot to the sumo ring floor.) Vacuum or sticky tires are not allowed. |
| Programming language | Any | |

## Sumo Ring
One 30" x 72" plastic folding table (such as those found at http://www.buylifetime.com/Products/BLT/PID-22901.aspx) is used for the ring. The surface is light in color (almond or tan). The table is placed on a dark colored floor with the legs folded under.

## Sumo Match Rules
The first robot to win two games wins the match. At the start of each game, the judge will announce (1) the location of the robots on the table, (2) the orientation of the robots, and (3) the location of the bottle. The bottle will be placed approximately the same distance from each robot. Immediately after the judge gives the signal to start the game, *each robot must wait at least 3 seconds before moving* and everyone must move at least 72" away from the table and may not approach the table until after the end of the game.

A maximum of 2 minutes are given for each game. If there is no winner after two minutes or it is not clear which robot pushed the bottle off the table or which robot fell off the table first, there will be no winner of that game. The Judge has all the discretion in making final decisions for the cases not considered in this rule.