

MR. ROGERS ROBOTICS COMPETITION

MAY MADNESS 2008

GENERAL RULES

1. A match is composed of three rounds. Each round lasts 2-1/2 minutes.
2. All lines will be in the team's favor. This means that the line surrounding Base will be considered part of the Base area for the purpose of starting a mission as well as returning from a mission.
3. "Starting Position" means the entire robot, including all attachments, is completely within the Base area boundary line. Base is an imaginary hollow shape formed by the vertical walls that form from the perimeter of the Base's footprint and by an invisible ceiling 12" high. Base is three dimensional: it is a VOLUME – not an area.
4. Robots may NOT grow taller after leaving base.
5. "Deliverables" listed below, are located in Base and may be loaded on the robot prior to a mission:
 - a. Fish for the Aquarium
 - b. Prince Tuesday
 - c. King Friday's Crown
 - d. Tree for Queen Sara's Garden
 - e. Letter for Mr. McFeely to deliver (speedily)
6. Robots must leave Base, perform missions and, if necessary, return to Base with only their programming to control them.
7. If a team member (or Referee, at the request of a team member) touches the Robot while it is COMPLETELY outside of Base, a Robot Touching Penalty of -1 point will be assessed and the robot must be returned to base.
8. Regardless of the number of times that a Robot is touched the maximum number of 'Robot Touching Penalties' shall not exceed -5 points.

9. If a 'Robot Touching' occurs (regardless of whether Robot Touching Penalty Points are assessed) while an object is being brought back to base for points or later deployment, no points are awarded and the items are reset in their original position.
10. If the Robot is 'Touched While in Contact' with a Deliverable, the team gets the Deliverable back in Base for another try.
11. 'Touched While in Contact' shall mean that when the Robot is picked up, the Deliverable MUST come with it.
12. If the Robot is picked up and the Deliverable remains on the playing surface, it is not considered 'In Contact' and shall remain on the playing surface where it was left.
13. Any object at Base which could get in the way of the Robot's preparations or motion may be kept 'near' Base as long as they do not cause any changes in the field.
14. A successful 'Robot Return' is noted whenever ANY part of the Robot crosses over any part of the Base line.
15. While the Robot is in Base, team members may repair it, reposition it, load it or unload it, change the program, add or remove parts or sub-assemblies or change the batteries. However, the clock continues to run.
16. Robots may be programmed using Robolab (any version), NXT-G or RobotC software.
17. One team's download can erase another team's programs and ruin their performance. Therefore downloading is only allowed in the pit area.
18. RCX Robots and IR Towers MUST be shielded when downloading a program.
19. Objects functioning as remote controls are not allowed anywhere, including the pit areas. There are no restrictions on the quantity or the source of non-electric LEGO pieces.

20. Teams using the NXT platform must have Bluetooth turned off. Sound and ultrasonic sensors are not permitted.
21. Teams may use up to TWO robots during each round. Both Robots, IN EACH ROUND, must use the same platform. Teams may not use both an RCX and an NXT in the same round. However, teams may change the platform for each round.
22. Regardless of how they are used, the following component maximums, per Robot, will be enforced:

RCX	NXT
1 – RCX	1 – NXT
3 – Rotational Sensors	Rotational Sensors: 3-The Number of Motors
2 – Light Sensors	2 – Light Sensors
3 – Motors	3 – Motors
2 – Touch Sensors	2 – Touch Sensors
1 – Lamp	1 – Lamp
3 rd Light or Touch Sensor	

23. Gameboard objects that are knocked over or displaced during the competition will remain as the Robot leaves them and will not be reset during the game.
24. The Robots, their attachments and accessories must be made entirely of LEGO elements in their original factory condition (the exception being string, which may be cut to size). Teams may only have one Robot on the Gameboard at a time.
25. Robots may only be removed from the board, without penalty, when they are in Base
26. Teams may modify the ‘Inactive’ Robot without penalty while the active Robot is on the board. However, these modifications must be made by one of the team members at the table.
27. The score is determined at the end of each round, by the condition of the field at that time, only. That means that if you move an object into a

- scoring zone (such as King Friday's crown) other than Base, and then subsequently move it out before the round is completed, the team will not receive points for that object.
28. Missions may be tried in parts, in any order, more than one at a time or skipped. There is no obligation to complete every mission.
 29. A team is composed of students whose age may not exceed 14 years old on the date of the competition. Unlike FIRST LEGO League Competitions, there is no limit to the size of the team, but consider that students tend to feel left out on very large teams.
 30. Only three members of a team may be at the table at one time, although team members may rotate through at any time.
 31. In situations that are too close to call, such as when a split second is a factor, and in situations that can be soundly argued to two opposite conclusions, the team will be given the benefit of the doubt.
 32. Any Stray Object caused by a Robot to be in the way of its performance can be moved by the Referee upon team request, unless doing so would have a direct effect upon scoring or the object is part of a larger mission model or prop.
 33. At any time during the match, the team can recover robot parts that come off as a result of obviously unintentional damage. The team can do this by hand or request help from the Referees. No Robot Touching Penalty will be assessed for picking up these pieces.
 34. Alignment Devices may be used to line up Robots in Base, but must be removed from the Gameboard prior to starting a Mission. Alignment Devices must be made entirely of LEGO pieces.
 35. The Referee will only return a Robot or Robot parts to a contestant at the contestant's request.
 36. The team members may not INTENTIONALLY touch an item on the Gameboard other than their Robot or the Sweater. Intentionally touching a Gameboard item will result in a warning from the Referee. Subsequent touches will result in disqualification from that round, only.

37. For official answers to questions about the May Madness Challenge, including rulings on special strategies or situations, e-mail Norm Kerman at nkerman@rec.ri.cmu.edu or call 412/681-8673. When e-mailing, be sure to put “Challenge” in the subject line.
38. Since individual victory need not come at the expense of collective excellence, all official answers given to teams through the Challenge Support Process are subject to being e-mailed to all other coaches, including answers about allowable strategies. Keep in mind that if a strategy is questionable to you, chances are that it will be questionable to the Referees also, and guarding it until the tournament is risky.
39. If a question does come up right before the tournament, your last chance to ask it is at the “Coaches Meeting” on the morning of the tournament. There, the Tournament Directors, Referees and Coaches meet to identify and settle any differences BEFORE the matches start.
40. At the end of each match, the Referee needs time to record the condition of the field, so team members are not allowed to touch anything, including their robots and attachments. One of the team members and the Referee look at the field together and come to an agreement about what points were scored or missed and why, and to assure that no one is walking away with any of the parts.
41. Every effort will be made to ensure that all fields are correct and identical, but some variability is to be expected.