

Questions Asked about the Animal Allies Robot Game

The following set of questions were sent to and answered by the South Carolina State Head Referee. The questions have been grouped together if they are on a common topic, or if the coach kept asking more questions.

Question 1

Q1: M04-Feeding. When delivering the food, will a penalty be assessed if the animal is knocked slightly out of its square? They understand the food needs to be completely in the circle but they were not able to find any information about the animal itself.

A1: There should not be any penalty for slightly moving the animal. If they do some damage to the animals, then that would be a different issue.

Q1-1: M04 – if more than 1 food is placed in feeding zone, does it have to match? What is the penalty if doesn't match?

A1-1: If more than one food piece is in a single feeding zone, it needs to match in color with the other food piece in that feeding zone. There is not a "penalty" but the non-matching food doesn't count.

Q1-2: During our challenge academy last weekend I had a team drop off food into the different locations. The rules say that only one color per circle so 2 reds in 1 circle would be 20 points. Their delivery system was inaccurate and on the first run 3 food blocks were dropped, 2 red and 1 white. One of the red blocks tumbled out of the circle leaving 1 of each color in the circle. Do they get 10 points for 1 food block or nothing because they weren't the same color. On the next run they had 2 blue and 1 red block in the circle. Is that 20 points for the 2 blocks of the same color or nothing since there was another block in the circle?

A1-2: Circles that have more than a single color of food do not score. It doesn't matter if there is also a pair of another color - no score.

Question 2

Q2: Regarding M01 – after the robot places the shark tank in the box, can the robot release the tank, back up a few inches, stop and the kids retrieve the robot to bring back to base without penalties?

A2: No, there will be a penalty for retrieving the robot. See R14. The mission that is completed will score (as long as it meets the other rules - like being IN the target).

Q2-1: For the shark tank mission are they allowed to turn the tank upside down and put the shark on top? We've read the rules carefully and the written rule seems to allow this, but the photo shows the shark inside the tank. I think it is only the written rules that matter, but there

was a photo of the pig that was illustrating what prosthesis fitted meant, so I'm not sure if the shark tank photo carries weight or not. Putting the shark on top of the upside down tank is cool because you don't have to worry about it hitting the walls if something bumps or goes wrong. Pretty cool idea that one of the kids learned from another team at regionals. I never heard if Tim allowed it or not at the ICAR tournament and I don't know which team wanted to do it.

A2-1: There is nothing in the rules to prohibit the shark tank from being transported upside down. As long as the shark is on the tank floor, not touching the walls, nothing else touching it besides the floor, and not affixed (gravity rule), then you should be fine.

Q2-2: Secondary question....they are trying to create a cart to transport it. They want to know if it's legal and they would get points if the shark and tank are on a cart in the target area.

A2-2: ... "completely in" refers to the past definition that includes the area above. The mission did NOT state "touching the mat."

Question 3

Q3: Are the kids allowed to handle/place/work with mission components inside safety zone at the same time the robot is performing tasks on the board?

A3: Yes, the two technicians can be working on attachments or mission models (such as the Pink Pet) while the robot is doing other missions on the field.

Question 4

Q4: M11 Prosthesis – If the robot brings the animal back into base, can the kids add the prosthesis manually using their hands? Then, can the kids place the animal with prosthesis anywhere in base before delivering it to the farm?

A4: Yes and Yes, to include loading the Pink Pet onto the robot -- as long as both are within the confines of base.

Question 5

Q5: If the robot deploys a ramp from within base that after deploying extends to the training and research area on one end with the other end still in base, can the robot pilots drop single composts onto the end in base, one at a time (without touching the ramp or robot) or is it required that the robot must release each compost with no intervention by the robot pilots?

A5: I invite your attention to rule D09 - Interruption. Dropping compost onto a ramp that is attached to the robot is "interaction" and therefore an interruption. Which then invokes rule R14 - Interrupting. Since by your description, the robot's attached equipment is stretching outside of base, then it would require both a re-launch and a penalty.

Q5-1: As long as the robot is in contact with the ramp structure, is the ramp safe from being assumed to be stranded by the referees? Once the robot disengages from the ramp, will the referees then assume the ramp is stranded and remove it? Are the robot pilots allowed to remove it for the referees?

A5-1: Part of it is answered above. The second part: once the robot disengages with the ramp. The ramp is not "stranded" per rule R15 as the ramp is not a transported object as described in rule D10. Would you clarify if the ramp is still partly in base when the robot disengages from it?

Q5-2: 1) Robot deploys a ramp that extends so one end is in base and one end is out of base. Robot is separate from ramp/structure. Student robot pilot drops manure into ramp without touching anything. Manure rolls into training area and stops, pilot then drops the next manure and so on. Concern - R10, 2nd bullet. Theory is equipment is causing manure to move across base line, not pilot, pilot is dropping manure straight down from within base.

2) Same as above except at launch, robot has 1 manure, robot loads manure into ramp, pilot then loads a 2nd manure after 1st manure comes to a stop, robot loads it, repeat. (Concern: Ramp is lying across the baseline, is that legal? What happens to the ramp and structure - can it just stay there and what happens if a pilot actually touches it.

3) Same as above except robot extends ramp and pushes it entirely out of base. Robot loads 1st manure into ramp, returns completely into base, pilot loads 2nd manure, relaunch, etc.

Team thinks #3 is definitely legal, #1 and #2 not sure. Team likes #1 because it could be very fast.

A5-2: Your team is smart. There is no junk penalty this year, so leaving an object fully outside of base appears to be fine (R15 and D10). That said, have the team keep an eye on Challenge Updates throughout the season.

Q5-3: They now have this massive "cart" that the robot pushes out of base carrying the pig, dog/trainer, and one manure. When it stops the pig is above and inside the farm lines (but not touching the mat), the dog/trainer and single manure is above and inside the observation area, but not touching the mat. Everyone wants me to check and make sure the mission models don't have to touch the mat to score (I'm pretty confident this is OK, but fulfilling a promise....)

Then, after returning to base, they load a single manure onto a catapult and launch it into the cart and most of the time the manure comes to rest on the cart inside the observation area but not touching the mat. They need to do this as fast as possible so we would like to know if they can start loading the next manure and fire their next shot before the other manure comes to rest. We think this is ok because once the manure leaves the catapult, the robot is no longer transporting it (D10). Keeping my fingers crossed this is OK as it is super fun to watch and I hope this makes it into their final program. Also, if a flying manure hits another manure and moves it, will that also count against us for moving more than one manure at a time? Again we don't think so, but want to be sure.

A5-3: To the best of my knowledge, your kids have appropriately interpreted the rules. I doubt that any State Ref will consider the manure hitting the other manure as moving more than one at a time.

Question 6

Q6: For creating animal pairs, is a robot allowed to reach into the other team's playing area to knock off an animal from the turntable and have it fall onto the other team's playing surface? If that fallen animal then interferes with the other team's ability to score points does the team that

A6: Carefully read rule R16 and GP1. Ask the team members how they would feel if the other team did that to them? Then with that info, rephrase/re-ask the question.

Q6-1: Is it both legal and within the spirit of the rules for the robot to knock animals on the other teams' side of the field off the turntable onto the other team's field after a legal rotation, especially if there is an effort to knock the animal to the sides to minimize chance of interference with the other team's robot?

A6-1: In order to keep Gracious Professionalism at the forefront, I suggest that your team consider talking to the team opposite of them before the match begins about the strategy for matching pairs of animals. Some less experienced teams may be thrilled to have your team's robot knock an animal onto their playing field -- as they get points for pairing animals, too.

Q6-2: They also tried, and failed all three attempts, to spin the animal pairs mission models (with one side having frogs to get the 60 points) using the yellow lever. They have now abandoned that since it was so unreliable and now "swat" the turntable to spin it (the red lever stops it). Everyone is pretty comfortable that this is legal, except that every once in a while (maybe 1 in 10 tries) one of the animal models will fall off into the other side of the table just before the red lever stops the turntable. Would that animal model score if it falls into the other teams table just prior to hitting the red lever?

A6-2: As for the Animal Conservation Mission, the Challenge Guide has these things to say:

- "During the Match, participating Robots make the trays switch places. A switch is officially successful when the red axle causes the system to stop" and
- "More: Each pair must be created through rotation of the Animal Conservation Mission Model:"

So, I would be careful to make sure that your team satisfies all of the criteria for a successful switch.

Question 7

Q7: Under R10 the exception which states "You may move/handle/store things off the field, any time." We are wanting to clarify that "off" reads as moving things already off the field, not move things off the table to the stand or something like that?

A7: You can move stuff into and out of base from off the field. Sometimes there is a little TV-tray size table that teams are allowed to store stuff on during the match. Some tournaments allow a third team member to serve as a table (holding a box of attachments). So the idea behind the rule is that the two drivers (or "technicians" can handle stuff that is stored on the little table. And the two technicians can move stuff between base and the little table. The playing field is otherwise off-limits.

Question 8

Q8: Under R10 the next exception which states, “If something accidentally crosses the Base line, just calmly take it back – no problem.” Could you give an example of what that means? Accidentally as though the robot moves it accidentally? How would this happen?

A8: There are times during a match when a team will be attempting a launch and they'll have a mis-start (for example, the drivers will realize that it wasn't properly lined up, or that they forgot to add a mission model, and they'll grab it back). As long as it hasn't totally crossed out of base, then there's no penalty, but it must be completely restarted. In terms of your question about something accidentally crossing out of the base, there are times when part of the robot or the cargo it is carrying will "slip" out of base. Again, no penalty. This rule also means that you cannot launch anything by hand other than the robot (humans are not allowed to pitch manure across the game field).

Question 9

Q9: Under R11 the bullet that reads, “If you combine a mission model with something (including the Robot), the combination must be loose enough that if asked to do so, you could pick the mission model up and nothing else would come with it.” Does this mean a combination that takes place in advance of competition or is it suggesting a combination that takes place during the competition as the robot moves things?

A9: R11 is the old "gravity rule" In previous years, teams would attach mission models to other LEGO brick elements to make them easier to transport. And there were times when they would put mission models inside of LEGO brick cage that they had built prior to the match - again, to make the mission models easier to transport. The concept behind this rule is that the mission model must not be fully constrained -- the mission model must be free to drop out if you were to lift the robot or the cage or whatever.

Question 10

Q10: Our robot fully rests within the base area. The robot has an appendage that extends beyond the arc of the base. The appendage does not touch anywhere outside the base. I.e., the robot is physically within the base. The appendage extends beyond the base arc but is not touching any surface.

A10: This is NOT a legal starting position. Rule D07 defines the Base. “Base is the space directly above the Field’s larger quarter-circle region...” Rule R13 defines a legal Launch. “all fitting completely in Base.”

Question 11

Q11: The mission is: M9 Bring the trainer and the dog and/or the zoologist and/or the manure samples into the training & research area.

Our mission is to press go on the robot; the robot goes all the way straight forward from base area to the green ramp; stops at ramp without going up it; the arm extends over the ramp and deposits the trainer; is this legal?

A11: Yes, it is legal, provided that the start was fully in Base (see Q10).