



The AgRobotics contest is a robotics competition where teams design, build, and program a Lego robot to complete challenges autonomously and score points in a 5-minute match. The theme and challenges change each year, but all are focused on some aspect of agriculture.

Each team will decide on their challenge strategy and will launch their robot from a designated home base. The robot will be programmed to move outside of that base and attempt to complete challenges within the given timeframe.

CONTEST FORMAT AND SCORING

Each year, a new agricultural theme for this contest series is released in January. The contest will consist of a set of known and unknown challenges that the robot must be programmed to complete autonomously. This adds an element of unpredictability that mimics real-world conditions, where farmers and agricultural technologists must often adapt to unexpected circumstances.

The design of the game and designated number of challenges will be released in January each year. There will be approximately 5-8 known challenges and 1-4 unknown challenges. Known challenges will be released in January, and the unknowns will be released on the day of the contest. Unknowns may be different from contest to contest; however, knowns will remain the same throughout the year.

Teams must build and program their robot for known challenges prior to the contest. On contest day, the unknown challenges will be revealed, and teams will be given 60 minutes to build, program, and test the robot for known and unknown challenges.

Any updates and rule clarifications will be posted on the same website. Teams are encouraged to check the website prior to each contest. Modifications or clarifications will be highlighted and dated.



Below is an example of a typical contest schedule:

- Team check-in
- Orientation (30 min)
- Coach Time (10 min)
- Build Time (60 min)
- Match Play
- Announcement of Finalists
- Finals
- Awards

On the day of the contest, teams will practice and compete on the same game table. If a team has to be relocated for finals or some other reason, time will be given to the team to test their robot on the new table.

Point values for each game challenge will vary depending on the level of difficulty. Penalties will also depend upon challenge design, but examples may include: knocking over pieces, restricted human interaction with robot or game pieces, excessive retrievals, etc.

Teams will have two preliminary matches, and points from both will be added together. Additionally, teamwork score(s) will be assessed by judges and the team interview score will be added to the match total to form the total score.

The preliminary team score will be carried over to the finals where teams will compete in two additional matches. Those 2 match scores will be added to form the final team score. The top five teams in each age division will advance to the final match. If there are fewer than five teams in an age division, no finals will take place. Places 6 and beyond are determined by the total preliminary team scores. Each contest host (stock show) determines the number and types of awards given.

After each match, the team captain must review the scoresheet. If it is accurate, the captain initials to confirm the points awarded. Once signed, the score is final and cannot be appealed. Arguments or confrontational behavior with the judge or contest officials during this review are not permitted. The scoresheet is then submitted to the contest tabulator, who will review, total, correct (mathematical inaccuracies only), and record the official match score. Video review from any source is not allowed.

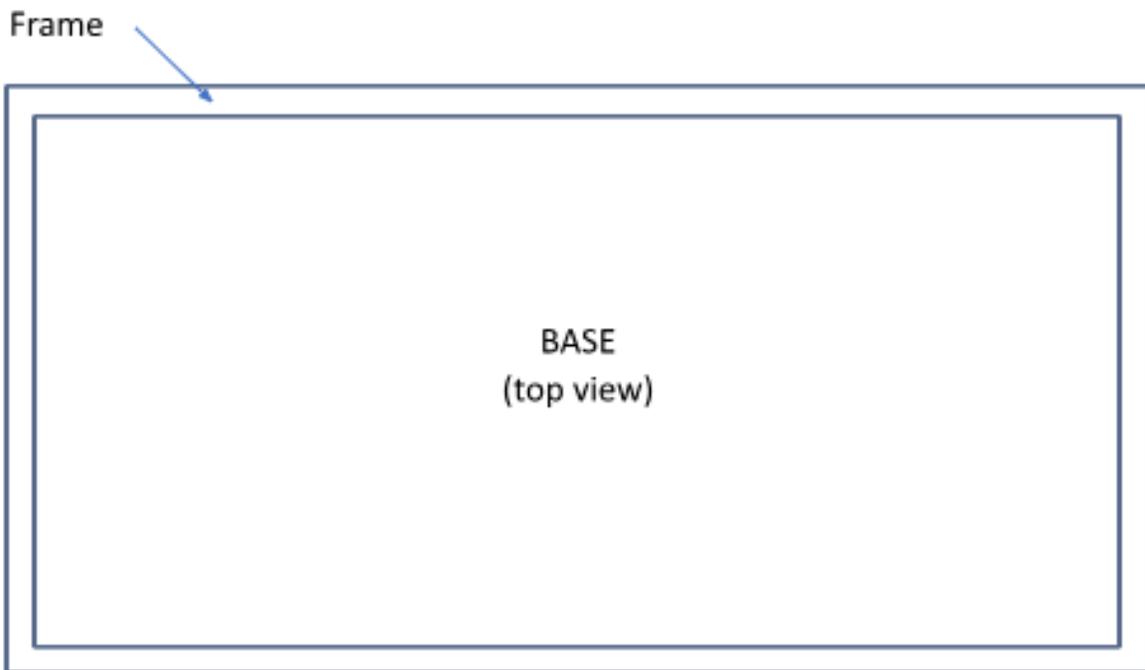
The contest results, as announced, will be final.



GAME TABLE

The game table consists of two parts:

- Base – made of 4'x8' sheet of plywood or comparable material.
- Rectangular Frame – made of 2"x4" (actual dimensions are 1.5" x 3.5") lumber attached on top of the base. The inner dimensions of the frame are 45" x 93".



(not to scale)

One or more resource trays will be located outside and next to the game table. The trays will hold additional game pieces used during the match. Contestants can pick up or place game items into the resource tray once the match begins. Teams may place those game pieces onto their robot or in the Player Zone (see definition below) as allowed. Neither the tray(s) nor the game pieces it holds are part of the playing field.



GAME MAT

A vinyl game mat will be placed flat inside the frame of the game table. The game mat will be approximately 45" x 93". It will generally consist of the following areas:

- Player Zone – the area where the robot must launch from. There is typically only one player zone, but there may be more depending on the game design. This is an area where game pieces may be collected from and/or placed upon the robot for retrieval/delivery.
- Robot Zone – the area outside of the player zone where the robot performs its tasks autonomously. Players are not allowed to touch game pieces.

THE ROBOT EQUIPMENT

1. Each team must supply their own equipment. Each team may only bring the items and respective maximum quantity listed in the table below. Any extra equipment or item that does not meet specifications will be returned to the team coach. No infrared beacons (remote) or sensors allowed.
2. All Lego® Mindstorm pieces must be in their original factory condition.
3. No 3D printed pieces are allowed.
4. Teams may use any software that facilitates autonomous movement of the robot, so long as the robot is solely controlled by the programs stored on the HUB or microSD card.
5. No remote controllers of any type are allowed.
6. **No computers or tablets may be brought up to the game tables during Build Time or Match Play. Programming must take place at their individually assigned team "pit" table.**
7. Note paper may only be used for note-taking purposes only. Teams may bring notes to the game table during matches. The paper is not allowed to be used for any other purpose (used on the robot for example).
8. **Teams are not allowed to bring their own game mat and/or pieces to the competition. *Teams can use their own during practice time, outside of the official competition location. Official game mats and pieces will be provided by the State 4-H Office for team use at the competitions.**



ITEM	MAXIMUM QUANTITY
<ul style="list-style-type: none"> • Lego® Mindstorm® EV3, Spike Prime, or Inventor brick/hub • Portable, battery powered AC power station (must fit under table work station) • 3-pronged extension cord up to 25' (venue will not guarantee power access at any contest) • Plastic container or cardboard box for transporting robot and attachments to and from game area 	1 each
<ul style="list-style-type: none"> • Laptop computer or tablet with programming software (Lego® or non- Lego® is acceptable) 	2
<p>Lego® Mindstorm® EV3, Spike Prime, or Inventor:</p> <ul style="list-style-type: none"> • Building pieces (excludes brick/hub) • Battery • Motors • Ultrasonic sensor • Touch sensor • Light/color sensor • Gyro sensor 	Unlimited
<ul style="list-style-type: none"> • USB cable • Build Plans (paper or digital) • Backup laptop battery • Ruler or tape measure • Pencil/pen and notepad for design and note-taking purposes • Digital or printed game rules (study guides may not be used during match play) 	Unlimited



BLUETOOTH AND INTERNET CONNECTIVITY

1. Bluetooth connections can be made and utilized during Build Time. It is not allowed during the Match Play or Finals while the robot is on the playing field.
2. No internet connectivity will be provided.
3. Teams should have all programs stored locally on their device(s).
4. Teams are HIGHLY encouraged to ensure their computers' operating system, software/app, and robot firmware are up to date prior to the contest.
5. When teams check-in and are assigned to their "pit", members and their coach should test and resolve any connectivity/pairing issues.
6. Contestants should be well-trained on how to resolve Bluetooth or USB connection issues.
7. Teams are encouraged to create a unique name for their hub so that pairing is less confusing and will minimize any mistaken pairings with other robots/computers.
8. Any team that intentionally connects to another team's robot is subject to disqualification.

MATCH SETUP AND INSPECTION

1. Before the match begins, the robot and all its attachments must be placed and fit into the boundary of the Player Zone for inspection by a contest official.
2. The Player Zone is 11"x17"x12" (length/width/height).
3. To pass inspection, the robot and ALL attachments may not break the plane of the Player Zone boundary nor be taller than 12 inches from the surface of the game mat.
4. Once the official inspects and approves the size of the robot, team members may set up their robot to prepare for the match.
5. At all times during the match, the robot (including attachments) must not exceed the 11"x17"x12" (length/width/height).
6. No game pieces found in the Resource Tray may be touched until the match begins. The tray may not be used by the robot nor placed on the game table for any reason.
7. Contest officials reserve the right to remeasure the robot after a match. Any robot deemed to exceed the dimensions will forfeit the match.

TIP: Build designs that use fewer parts can not only save you space for maneuvering but may also save you time and present fewer mechanical/programming problems.



RULES OF PLAY	
1.	The robot must be programmed to perform all challenges autonomously.
2.	All parts of the robot, attachments (see Match Setup rule 5), and game pieces must completely fit within the Player Zone each time the robot is launched from the Player Zone. The zone's boundary is the outer edge of the colored line.
3.	Teams must pre-build and program a robot prior to the competition.
4.	Teams will report to the designated location and time for check-in and submit their robot and additional pieces/equipment for initial inspection.
5.	After check-in, each team will be directed to a team pit (table and chairs) where they can work on their robot and programming. In some cases, teams may have to share a table with another team.
6.	In some contests, electricity may be available but not guaranteed. Teams should bring a portable battery powered AC power station.
7.	An orientation will be provided for all participants where superintendents will review the challenges, rules, and scoring.
8.	After orientation, each team will have 90 minutes of Build Time for additional designing, building, programming and testing of their robot.
9.	Teams will practice and compete on the same game table. <ol style="list-style-type: none"> a. In the case where a team has to move tables (example: for finals), teams will be given a designated amount of time to practice on the new table.



RULES OF PLAY (continued)	
10.	If time permits, teams are allowed to make alterations to their robot design and/or program between matches.
11.	When match play begins, teams must report immediately to the game table when called. The robot must be powered up and ready for inspection when they arrive at the game table. Failure to report to the game table and/or get the robot and game table/pieces to a ready-state in a timely manner may result in the team forfeiting the match. See steps to ready-state on page 25.
12.	Contestants may retrieve their robot at any time during the match without penalty. When retrieved, the robot must be returned to the PLAYER ZONE. (see rule 14 below regarding proper retrieval)
13.	Contest officials will not assist with any retrievals.
14.	When the contestant is retrieving the robot, he/she may do so any time during the match in order to start/re-attempt challenges, but must not manipulate, interfere, or intercept game pieces on the board during retrieval *unless game piece is in robot's possession - see Rules of Play #15-18. If contestants physically alter where game pieces sit or land on the game board during retrieval, they may be subject to penalties or disqualification from the match.
15.	Possession is defined as a game piece that is not touching the playing surface and is under the control of the robot. Items in possession of a robot may be retrieved once any part/piece of the robot has broken the plane of the PLAYER ZONE boundary.
16.	If the robot is in possession of a game piece in the GAME ZONE, and the robot is retrieved by the player, the game official will return the game piece(s) to its original location/state.



RULES OF PLAY (continued)	
17.	A robot that has possession of a game piece may be retrieved during the match. A robot that loses possession of a game piece during the match (ie - robot drops piece outside of the player zone) the piece can no longer be retrieved by contestants.
18.	A player is not allowed to touch any game piece except when the piece is completely inside the PLAYER ZONE boundary, OR if the robot is deemed in the PLAYER ZONE AND in full possession of a game piece(s). Once the piece is deemed inside the PLAYER ZONE, contestants may remove the game piece from the game table/robot and store it in the RESOURCE TRAY.
19.	If a contestant intentionally touches a game piece in the GAME ZONE, the team will be given a 100-point penalty per occurrence and piece. In such cases, the piece will be returned to its original starting position by contest officials as quickly as possible. All game pieces must be in place at the beginning of the match.
20.	All competing team members are allowed around the game table during competition, and any member may touch the robot when necessary.
21.	Teams not competing must remain at their tables or staging area.
22.	Good sportsmanship is always expected. This is crucial during practice times. Practice time on the game table may be limited as build time progresses.
23.	<p>Only registered contestants and designated contest officials will be allowed in the robot Challenge pit areas.</p> <ul style="list-style-type: none"> a. Due to space limitations, parents and other spectators must remain outside the designated contest area. b. Spectators may be allowed to enter the contest area during finals.



RULES OF PLAY (continued)	
24.	Teams that experience equipment malfunction(s) may not replace the equipment with supplies outside the contest area (from leaders, volunteers, CEA, AST, or contest officials). Instead, team members must work together and be creative in completing preparations without the malfunctioning/missing equipment or visit with other teams to borrow the needed part.
25.	Depending on the challenges, contest officials may allow or require teams to use non-lego items in the design of the robot. In such cases, details will be outlined in the game release and/or orientation.
26.	Coaches will be permitted to meet with their team for a 10-minute time period prior to build time and following orientation. This time should be used to help team members develop a plan and foster positive youth development and to ensure proper Bluetooth/USB connections.
27.	No cell phones or other types of communication devices are allowed in the pit or contest areas. Exceptions include medical devices.
28.	During Build Time and Match Play, contestants are not allowed to communicate with anyone outside of the contest (coaches, parents, siblings, etc.). Exceptions include medical emergencies. Contestants are welcome to ask questions to contest officials or other contestants. Any spectator or contestant in violation is subject to being removed from the contest or spectator area.
29.	A match will be 5 minutes in length. The official timekeeper and announcer will have a countdown to start and stop. Any activities performed by the robot after time has been called will not count for points.
30.	Any game pieces or structures built by the team cannot be placed onto the ROBOT ZONE by human players but may be permitted to be placed by the robot so long as it is done autonomously and is permitted by challenge rules.



RULES OF PLAY (continued)	
31.	<p>Tie-breaker procedures/order will be as follows:</p> <ul style="list-style-type: none"> a. Highest total teamwork score b. Highest total preliminary match scores (does not include teamwork) c. Highest individual preliminary match score d. Contest officials will determine additional measures if a tie persists.
32.	<p>Any contestant, coach, or spectator that becomes disruptive or does not exhibit sportsmanship, may be removed from the contest area at the sole discretion of contest officials and/or show (host) management.</p>
33.	<p>Teams must clean up their pit areas prior to the awards ceremony. Teams not advancing to finals are free to leave once their pit area has been cleaned and are dismissed by contest officials.</p>
34.	<p>Final rankings will be shared with the contest host for them to post or distribute following the contest.</p>
35.	<p>A match can only be re-run due to a game piece malfunction/breakage. It is the responsibility of the team to ensure the game table and its pieces are ready for match. If a game piece was out of place or missing at the time of team-ready status, no re-run will be awarded. If a re-run is awarded by contest officials, the team will forfeit all points awarded in the match in question.</p>

Coach’s Pre-Contest Checklist

- Does your team have all the parts to their kit/laptop/tablet? (cables, chargers, batteries, etc.)?
- Does their robot connect to the computer/tablet via Bluetooth or USB?
- Can your team download programs onto their robot?
- Does anything need charging?



2026 THEME: Farm to Table

Introduction

Get ready for an exciting adventure with "Farm to Table"! Dive into the dynamic journey of food, tracing its path from cultivation to consumption, where you tackle real-world challenges using cutting-edge robotics. From mastering efficient harvesting and precise packaging to strategic transportation of goods across the game table's diverse agricultural landscape, each task is designed to spark your creativity and test your tech skills. This thrilling theme not only connects you with the critical process of our global food supply but also empowers you to innovate for a sustainable future. Gear up, young innovators—you made innovation central to the journey from farm to plate!

Known Objectives

1. Rooting for Victory!
2. A-Maize-ing Haul
3. Harvest Haul
4. Bee to Bottle
5. Delivery Dash
6. Ration Relay
7. Precision Injection



Game Mat Design/Layout



The game mat image shown above is available for teams to download ([PDF](#)) and printed at a source of your choosing. It will also be available to order at Geyer Instructional Products (search "AgRobotics"). Direct link to Geyer's Farm to Table game mat: [LINK](#)

The Player Zone for this game is the area with the red barn. Everything outside of that black boundary is the Robot Zone, which consists of the following areas:

- Cattle, Sheep, and Open Pastures
- Cotton, Vegetable, and Plowed Fields
- Fruit Orchard, Apiary, Hen House, Hay Storage, and Corn Containment
- Two Tractors
- Fruit, Honey, Vegetable, Fiber, Meat, Dairy, and Egg Processors
- Hatchery
- Delivery Trucks 1 & 2
- Plant Nursery and Corn Weight Station
- Vaccination Zone
- Homes, Hospital, Grocery Store, Fabric Store, Feed Store, School, Retail Store, and Farmers Market



Known Objective 1: Rooting for Victory!

The farmer has just plowed a field so that new grass can be planted to create a new hay and grazing field. The farmer will use a planting process called sprigging, which uses harvested plant material (typically hay) to establish new grass. Sprigging is a planting method where sections of grass stems, stolons, or rhizomes are placed directly into prepared soil to establish new turf or pasture. Collect bales from the Hay Bale Storage and deliver to Plowed Field to be used as sprigs.

Setup:

4 plastic hay bales will be randomly placed and stacked (as shown on page 22) within the Hay Bale Storage Area at the beginning of the match. No bales will be placed directly against the game table wall. Bales will be stacked in sets of 2.

Scoring Rules:

The robot must gather and deliver game pieces from the Hay Storage to the Plowed Field. When placed in the Plowed Field, the game pieces must be completely inside the black boundary (must not break the plane of the line). No Lego containers/structures may be left behind in this challenge. Pieces may be placed individually, or stacked for bonus points. A valid stack is a single, free-standing, unsupported column that remains standing at the end of the match. Bales can be stacked end-to-end or side-to-side as shown in the graphic below. In addition, the robot must autonomously and completely exit the Plowed Field zone).

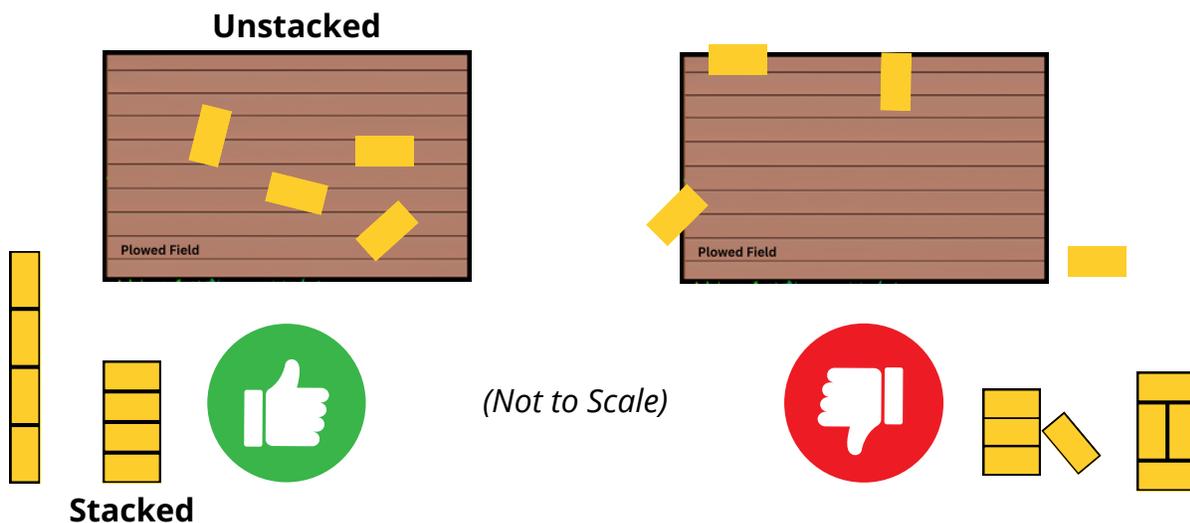
Points:

Each delivered bale = 100 points

All 4 bales delivered in a single stack = 1,000 points (includes a 600-point bonus)

Not completed or attempted = 0 points

Points will be awarded at the end of the match (stack must remain standing at the time of scoring and the robot must have exited the Plowed Field zone)





Known Objective 2: A-Maize-ing Haul

The corn (also known as maize) has been harvested from the field and placed into a temporary containment area. Send your robot to collect the loose corn and deliver it back home to be put into a container. In order for the farmer to get paid, the corn-filled container will need to be weighed. Deliver the corn container to the weigh station.

Setup:

A black plastic organizer will be placed and secured to the wall in the designated area on the game table, forming the containment area. The opening will face home base. Approximately 500 loose plastic beads (corn) will be spread as evenly as possible within the containment area. The weigh station container (plastic bowl) will be placed in the Resource Tray area at beginning of the match. A plastic scoop will be placed in the Resource Tray to assist team members with transferring the beads (corn) into the weigh station container by hand. The scoop can only be used for that purpose (not for use outside of the player zone). Example corn container setup shown on page 22.

Scoring Rules:

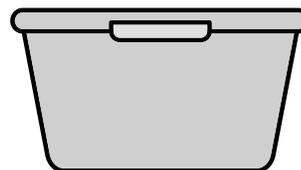
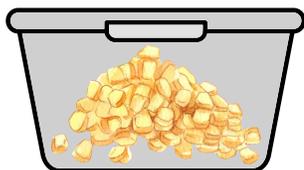
The robot must collect and transport the loose corn to home base (Player Zone). Only the corn that is completely within the boundary of the home base can be collected by hand. While in the Player Zone, corn must be transferred into the weight station container by hand and then delivered to the Corn Weight Station by the robot. The base of the container must not break the black boundary of the scale graphic. Only the delivered corn inside the container will be weighed. Any corn spilled in the robot zone will not be counted nor picked up/moved by hand during the match. After the match, the corn will be transferred to a set of official scales to be weighed (the container will be tared prior to weighing the corn). The container will not be part of the weight.

Points:

20 points per gram will be awarded (Officials will round up from the tenths place to the nearest whole gram)

Not attempted or delivered = 0 points

Points will be awarded at the end of the match.



(Not to Scale)

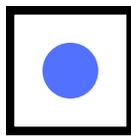


Known Objective 3: Harvest Haul

The vegetables have been picked, put into crates, and are ready to be delivered. Send the robot out to collect the crates of produce and then deliver those to each processing facility and some directly to the Farmers Market. At the processing plants, the fruit and vegetables will be graded and packaged for delivery.

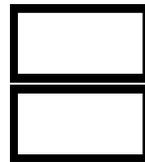
Setup:

Colored coded plastic containers (crates) will be stacked in designated squares within the Vegetable Field and Fruit Orchard at the beginning of the match. In the Vegetable Field, there will be 3 stacks of 2 green crates (6 total) and 3 stacks of 2 red crates (6 total). In the Fruit Orchard, there will be 3 stacks of 2 blue crates (6 total). The containers will be marked with a green, red, or blue colored sticker on the lid.



Top View

(Not to Scale)



Side View

Scoring Rules:

The robot must retrieve and deliver containers to locations as follows:

- Blue containers are to be delivered to the Fruit Processor (blue boundary).
- Red containers are to be delivered to the Farmers Market North (red boundary).
- Green containers are to be delivered to the Vegetable Processor (green boundary).

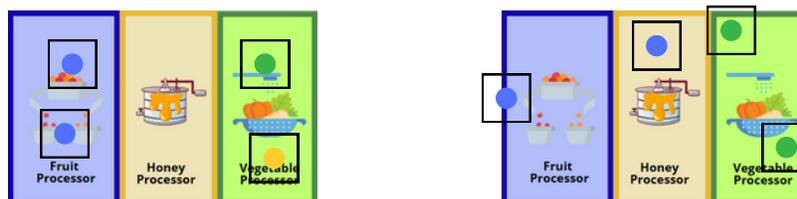
Items must be placed inside the designated zones and once placed, the piece cannot break the plane of the colored boundary. No Lego containers/structures may be left behind in this challenge. When delivered, containers may be placed individually or stacked in any arrangement.

Points:

Correct Crate Delivery = 100 points per crate

Not completed or attempted = 0 points

Points will be awarded when the objective(s) have been successfully completed AND the robot has returned to home base.



(Not to Scale)





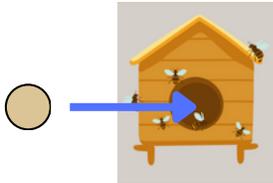
Known Objective 4: Bee to Bottle

The beekeeper has collected honey, placed it into pots, and got it ready to be picked up and processed. Send your robot to the Apiary to collect and deliver the honey pots to the Honey Processor.

Setup:

4 wood honey pots will be placed and centered on each of the openings (holes) of the hives. The four pots will be placed on the four outer most hives (leaving the two center ones empty). See photo on page 22.

Placement detail:



Scoring Rules:

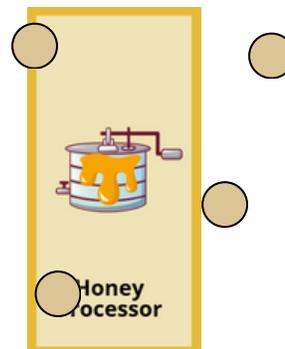
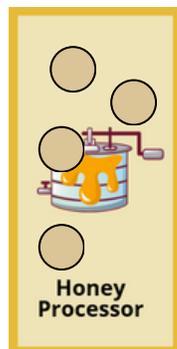
The robot must retrieve honey pots and deliver to the Honey Processor. Items must be placed inside the designated zone and once placed, the piece cannot break the plane of the colored boundary. No Lego containers/structures may be left behind in this challenge.

Points:

Correct Delivery = 100 points per honey pot

Not completed or attempted = 0 points

Points will be awarded when the objective has been successfully completed (any number of pots) AND the robot has returned to home base.



(Not to Scale)



Known Objective 5: Delivery Dash

The fruit, vegetables, and honey have been graded and packaged and are now ready to be shipped to their final destination.

Setup: Any number of containers from Objectives 3 and 4 must have been successfully delivered prior to attempting this challenge. Only containers remaining within its respective Processor can be collected and used in this objective.

Scoring Rules:

The robot must retrieve the game piece(s) from the Processor and deliver the items to the following locations:

- A maximum of 2 Fruit (blue) container(s) must be retrieved and delivered to the Grocery Store (blue boundary).
- A maximum of 2 Vegetable (green) container(s) must be retrieved and delivered to the School (green boundary).
- A maximum of 2 Honey Pots must be retrieved and delivered to Farmers Market South (yellow boundary).

Items must be placed inside the designated area noted above and once placed, the piece cannot break the plane of the colored boundary. No Lego containers/structures may be left behind in this challenge.

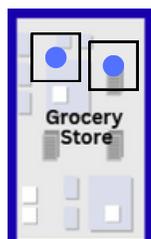
Points:

Each container delivered = 200 points

All containers (6) delivered = 1,500 points (includes 300-point bonus)

Not attempted or delivered = 0 points

Points will be awarded at the end of the match



(Not to Scale)





Known Objective 6: Ration Relay

The farmer has placed an order for feed. Retrieve the feed from the Feed Store and deliver to his cattle and sheep feed troughs.

Setup:

4 burlap feed bags will be randomly placed on the Feed Store at the beginning of the match. Bags may partially extend outside the Feed Store boundary. See photo on page 22. Each bag will contain 5 marbles and the bag opening tied in a knot. A black utility box will be secured by 3M strips to the game mat in the Cattle and Sheep Pastures. The utility box will be centered in the rectangles shown on the game mat.

Scoring Rules:

The robot must retrieve the bags from the Feed Store and deliver a maximum of 2 to the Cattle Pasture and 2 to the Sheep Pasture feed troughs. Feed bags must be placed inside the feed trough and both individual bags must touch the bottom of the box. No Lego containers can be left behind in the delivery of the game pieces.

Points:

Each bag delivered = 200 points

All bags delivered = 1,000 points (includes 200 point bonus)

Not attempted or delivered = 0 points

Points will be awarded at the end of the match



(Not to Scale)





Known Objective 7: Precision Injection

Vaccinations are critical for preventing the spread of diseases that can devastate herds, reduce productivity, and threaten food security. Healthy animals not only protect the livelihood of farmers but also ensure a safe food supply for consumers. By practicing proper vaccination, farms can improve animal welfare, protect public health, and maintain the safety of the agricultural system. This challenge highlights how technology can support biosecurity and animal care on today's farms. For shot types, IM is short for intramuscular (in the muscle) and SubQ is short for subcutaneous (under the skin). Injections are typically measured in cubic centimeters (cc).

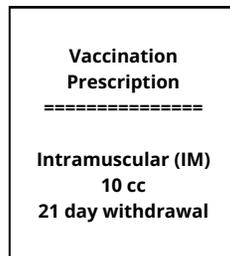
Setup:

Three colored blocks (purple, green, and yellow) will be in the Resource Tray at the beginning of the match. Purple will serve as the token for Withdrawal Days, green for Injection Type, and yellow for Dosage.

Scoring Rules:

A vaccination prescription will be revealed during orientation on the day of the contest. The prescription will include the injection type, withdrawal days, and dosage. The robot must deliver the corresponding colored token (block) to the matching vaccination prescription. Each token must be placed on the game mat and inside the correct boundary (the plane of the black boundary cannot be broken by the game piece). No Lego containers can be left behind in the delivery of the game pieces.

Example Prescription:



Points:

All 3 blocks delivered correctly = 1,000 points
 Not attempted or partial/incorrect delivery = 0 points
 Points will be awarded at the end of the match

Withdrawal Days	0	7	14		28	48	60	90	
Dosage	0	5		15	20	25	25	30	Sub Q

Withdrawal Days	0	7	14	21	28		60	90	
Dosage	0	5	10		20	25	25	30	IM

(using example prescription)



(Not to Scale)





Game Piece Supply List

Teams are welcome to secure exact or comparable game pieces from other vendors for practice and/or economical reasons. Some items are being recycled from prior years, so check your supplies.

Product Description	Number of Pieces Used in the Game	Suggested Purchase Link
1" Foam Blocks (Red, Orange, Green, Blue)	1 of each color	<u>LINK</u>
Black Utility Box (feed troughs)	2	<u>LINK</u>
Plastic square bales	4	<u>LINK</u> or <u>LINK</u>
2.9" x 2.9" x 1" clear plastic container with lid (produce crates)	18	<u>LINK</u>
1.38" x 1.38" x 1.57" wood candle cups (honey pots)	4	<u>LINK</u>
Burlap Bag 2.7" x 3.5" (feed bags)	4	<u>LINK</u>
14 mm Marbles (placed in feed bags)	20 (5 for each burlap bag)	<u>LINK</u>
3M Command Strips	As needed	<u>LINK</u>
Yellow Tri Beads (corn)	1 package of 500	<u>LINK</u>
Rubbermaid 5.2 cup Container (weigh container)	1	<u>LINK</u>
Plastic Organizer (corn container)	1	<u>LINK</u>



Game Table Setup

Below is a picture showing how the game table will be setup with known challenge game pieces prior to each match.

Note: there will be additional game pieces for the unknown challenges on the mat and/or Resource Tray at each contest. For obvious reasons, those are not shown here.





Questions?

If you have a question about a game or challenge rule, you can submit your question at the following link or QR code below: <https://forms.office.com/r/2z8xqSzPGx>



If warranted, questions and answers will be posted below and/or rules may be amended.



Q&A

Q: Do objectives need to be completed in the listed order?

A: No, teams may complete objectives in any order, with the exception of challenges that have a prerequisite.

Q: Could game pieces for unknown objectives be placed in the pathway of a known objective?

A: Yes, it is possible.

Q: Are you aware that the hay bales for Objective 1 will not easily (or at all) stack?

A: Yes, we are aware and observed how teams were able to complete this objective at the State Fair. With some teams being successful with stacking, we will maintain the bonus but have made some clarifications to the definitions and stacking requirements.

Q: Can my robot deploy an attachment once it is outside of home base?

A: Yes, however the robot, including its attachment, must always remain within the size limitation of 11"x17"x12".



Match Play Steps to Ready-State

- Team members place robot with attachments in Player Zone for measuring.
- Team members ensure robot is powered up and ready.
- Team members check the game table to ensure all pieces are accounted for and in their correct positions.
- No game pieces may be pre-loaded prior to the match.
- Team members give the judge(s) a thumbs up to indicate ready-state.
- Judge gives thumbs up to timekeeper/announcer signifying the team and playing field is ready.
- Timekeeper/announcer will announce "3, 2, 1, begin" to start the match.