



International Youth Robot Competition (IYRC) 2024 KOREA

RULES & REGULATIONS

Version 1



Overview

1. Date: 2nd & 3rd August 2024
2. Venue: Daejeon, Korea
3. Organizer: International Youth Robotics Committee (IYRA)
4. Co-organizer:
4. Participants: More than 2,000 participants from 30 countries around the world.

Competition Categories



Kinder (5-8 years old) – by birth year 2016

1. Robot Bowling (Kinder Skill)
2. Safari Adventure (Kinder Skill)

Junior (8-13 years old) – by birth year 2011

1. Galaxy Plunder (Junior Skill)
2. Animal Kingdom (Junior Coding)
3. Math Challenge (Junior Skill)
4. Robot Soccer (Junior Skill)
5. Push-push (Junior Skill)

Senior (13-18 years old) – by birth year 2006

1. Save the forest (Senior Coding)
2. Robot Volleyball (Senior Skill)
3. Push-push (Senior Skill)

Compulsory (Junior + Senior)

1. Creative Robot Design

Open

1. Humanoid Robot Mission
2. Autonomous IR Soccer
3. Cocomon Go
4. Game Maker Kit Game Challenge

Online

1. Robot Dream Design



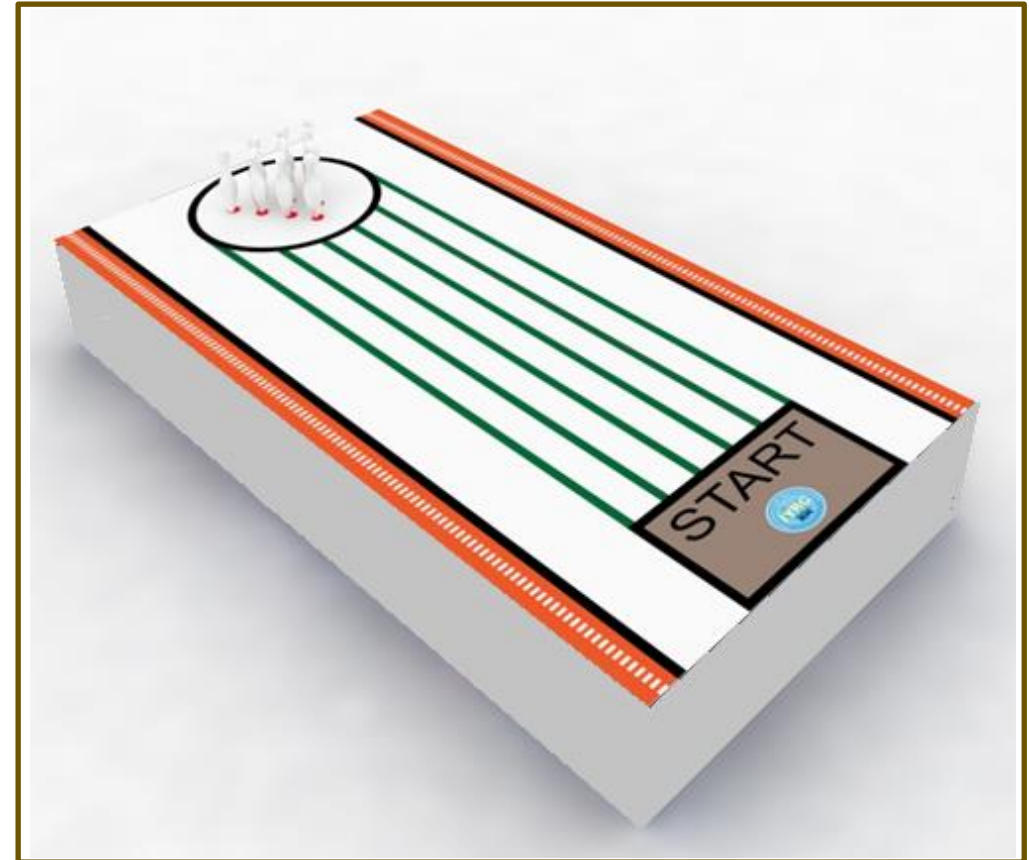
KINDER CATEGORY

Robot Bowling

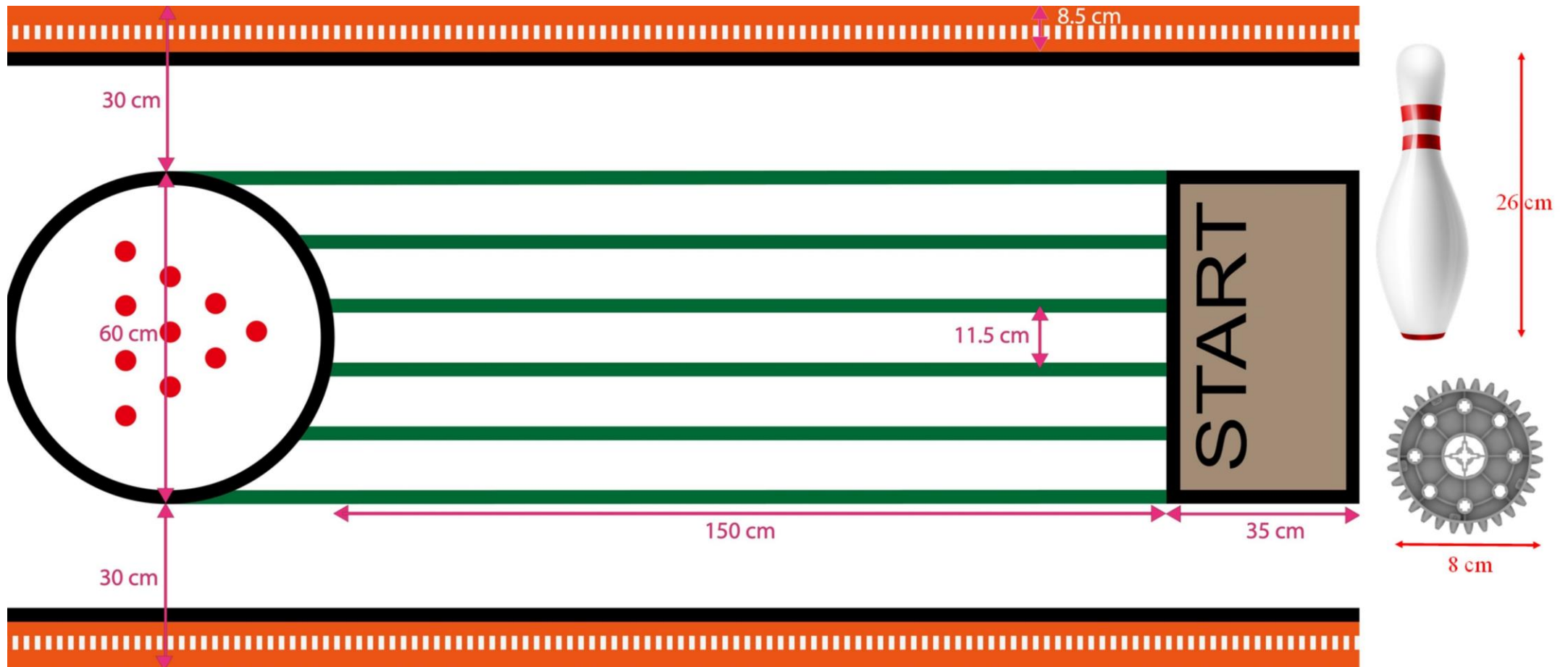
Safari Adventure

KINDER : ROBOT BOWLING

Age	5-8
Category	Individual Mission
Robot Kits Allowed	GOMA & BRAIN
Mission	Throw ball to knock down pins from start box
Robot Building	Pre-build & on the spot Card Programming



ROBOT BOWLING GAME FIELD





ROBOT BOWLING GAME RULES

Dimensions & Restrictions

- Initial size shall not exceed 35cm (H) X 35cm (W) X 35cm (L).
- Robots are allowed to expand to any size after the game starts
- Robots are **Strictly NOT ALLOWED** to have any foreign parts (including rubber band, black tape or scotch tapes) other than the parts in GOMA & BRAIN
- Robots are not allowed to have any power supply above 6V DC (Volt of Direct Current).

Game Duration

- 3 minutes is given from the point of receiving programming cards and reader from referee
- 2 rounds whereby each round will have 3 attempts to shoot, (total of 6 attempts)
- Time taken to replace the pins will not be counted within the 3 minutes given

ROBOT BOWLING GAME RULES

Scoring

- Programming : If participants are able to program the robot by themselves (10 marks)
- Programming : If participants request referee's help to program the robot (0 marks)
- Shooting : 1 point for each pin knocked down
- Reset of pins : Reset of pins only during the first attempt of each round, or when a Strike or a Spare occurs during previous attempts.
- Strike : When all 10 pins are knocked down in one attempt
- Spare : When balance of pins are knocked down in 2nd attempt



ROBOT BOWLING GAME RULES

Game Play Details

- Programming cards & card readers will be provided by organizer.
- The participant will be disqualified if batteries used does not have original voltage label indicating the battery voltage.
- Participant's Robot must always stay within the start box throughout the mission. If the robot moves out of the start box when shooting, it is a foul and no points will be given to the participant for that attempt.

Win/Lose Criteria

- Participant with the highest score will be the winner.
- If same points occur, the higher points from the first attempt will be compared to determine the winner, if the points are the same the second attempt would then be compared, so on and so fourth until the last attempt.
- In the case whereby all points are the same, the date of birth of the participant would be compared. The younger participant would be the winner.

ROBOT BOWLING SCORE EXAMPLE

Child	1st	2nd	3rd	4th	5th	6 th	Programming	Total	Ranking
A (6yo)	10	10	10	10	10	10	10	70	1
B (7yo)	10	10	10	10	10	10	10	70	2
C	10	8	2	10	7	3	0	40	3
D	8	2	10	5	3	2	10	40	4
E	4	3	1	10	5	2	10	35	5
F	4	3	1	10	4	3	10	35	6

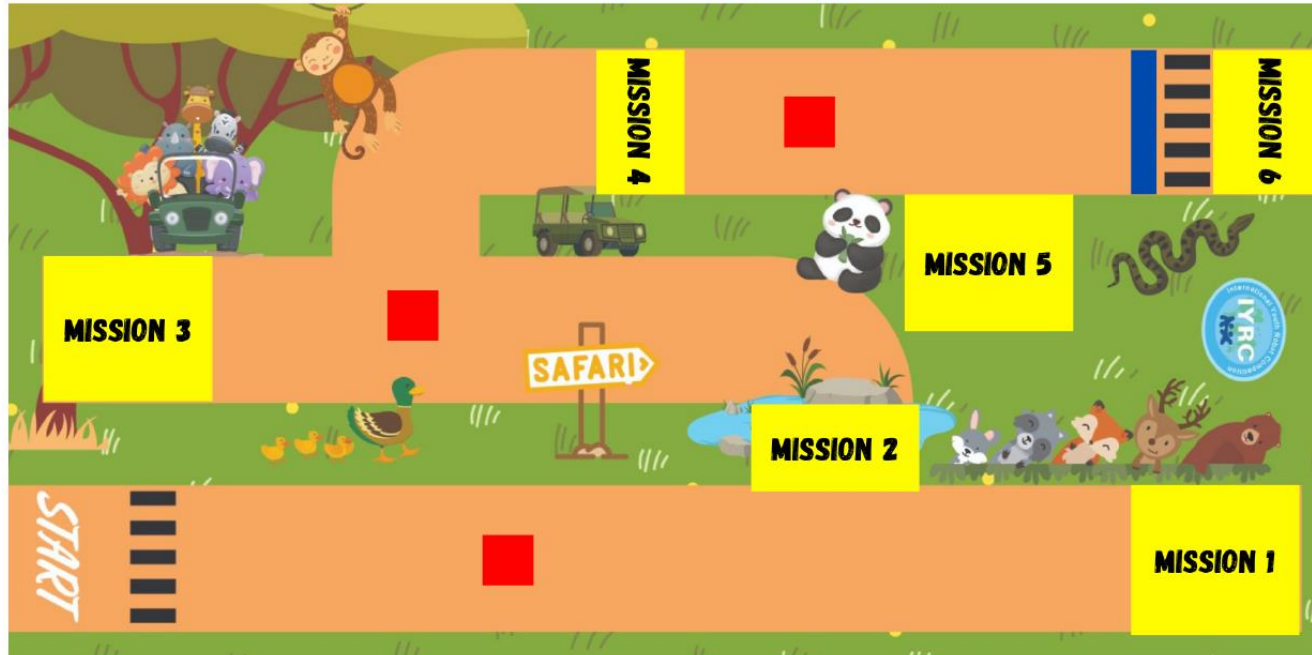
KINDER : SAFARI ADVENTURE

Age	5-8
Category	Individual Timed Mission
Robot Kits Allowed	NEW KICKY & BRAIN
Mission	Control robot to accomplish missions
Robot Building	Pre-build remote control robot



SAFARI ADVENTURE GAME FIELD

- The dimension of the game field is 8ft (L) x 4ft (W).
- The starting position of the robot is placed before the zebra crossing at the start zone.
- The robot must stop after the zebra crossing at the ending zone.
- Red box indicates the position of the dice.
- Blue lines indicate the position of the door that will only be opened when the participants completed mission 5.



SAFARI ADVENTURE MISSION 1

MISSION 1

**Robot to push the square
(sponge dice) towards the
station. Green LED will light up
indicate success**



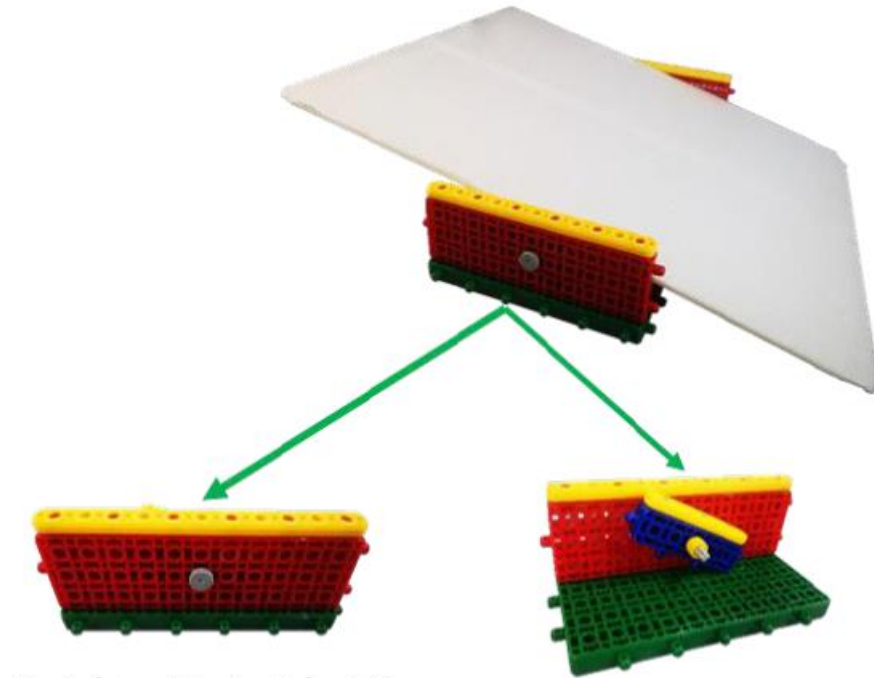
The size of the dice is 6cm x 6cm x 6cm

SAFARI ADVENTURE MISSION 2

MISSION 2

SIZE : 32cm(W) x 40cm(L)

Robot must move across the bridge.



Bridge Outside View

Bridge Inside View

SAFARI ADVENTURE MISSION 3

MISSION 3

**Push the square (sponge dice)
towards the station. Green LED
light up indicate success**



The size of the dice is 6cm x 6cm x 6cm

SAFARI ADVENTURE MISSION 4

MISSION 4

Turn on the generator



Generator:
L:20cm (16 yellow bushes in middle), H:7cm

SAFARI ADVENTURE MISSION 5

MISSION 5

**Push the square (sponge dice)
towards the station. Green LED
will light up indicate success
and the door at the ending
zone will open.**



The size of the dice is 6cm x 6cm x 6cm



Closing state of the door



Opening state of the door

SAFARI ADVENTURE MISSION 6

MISSION 6

Robot passes through the opened door completely and stops at the ending zone (after the zebra crossing)



All the pictures for the items shown here are just for reference purposes. Any update will be informed later.

SAFARI ADVENTURE GAME RULES

Dimensions & Restrictions

- The initial size of the robot at the starting box shall not exceed 20cm (H) x 20cm (W) x 20cm (L).
- Robots are NOT ALLOWED to expand to any size after the game starts.
- The robot must not have any foreign parts (including rubber band, black tapes and scotch tapes). The player would be IMMEDIATELY disqualified if found guilty.

Game Rules

- Robot must be placed before the starting line. Once the starting whistle is blown, counting time will start and participants only can control the robot to complete all the missions with a controller provided from the organizer.
- Each of the participants is given only 5 minutes to complete all the missions and stop at the end zone. Game may end before 5 minutes if:
 - -Robot passed through the END line earlier.
 - -Robots remain at the same position for 10 seconds.
 - -When the referee judges that the continuation of the match is impossible (e.g wheel falls out from robot and unable to proceed with the mission).
 - -Robot cannot be controlled and is away from the game field.

SAFARY ADVENTURE GAME RULES

- Scoring (Points system)
- **Mission 1:** From the starting position(before the zebra crossing) , a buggy car starts to move and pushes the bush (sponge dice) in the middle of the road to the first station, waiting until the LED lights up. (10 points)
- **Mission 2:** The buggy car will need to cross over a bridge which have seesaw geometry (10 points)
- **Mission 3:** The buggy car pushes the rock (sponge dice) in the middle of the road to the second station, waiting until the LED lights up.(10 points)
- **Mission 4:** The buggy car will need to turn on the generator. (10 points)
- **Mission 5:** The buggy car pushes the wooden box (sponge dice) in the middle of the road to the third station, waits for the LED to light up and the door at the ending zone will open. (10 points)
- **Mission 6:** Robot passes through the opened door completely and stops at the ending zone (after the zebra crossing)



SAFARY ADVENTURE GAME RULES

- Points will be deducted if foul is made as below:
- Robot moves before the referee blows the whistle (5 points will be deducted).
- Total points will be calculated (total points given to participants – total points from making foul) and the participant with the highest point becomes the winner.
- In case of the same total points and the same amount of points is earned. Time taken to complete the game will be taken into consideration to determine the winner, the lowest time recorded to finish the game is the winner.
- In case of the same total points, the same amount of points is earned and the same time taken to complete the game, the date of birth of participants will be considered to determine the winner. (Younger participants will become the winner).
- Priority the mission score, then follow up by time and age.

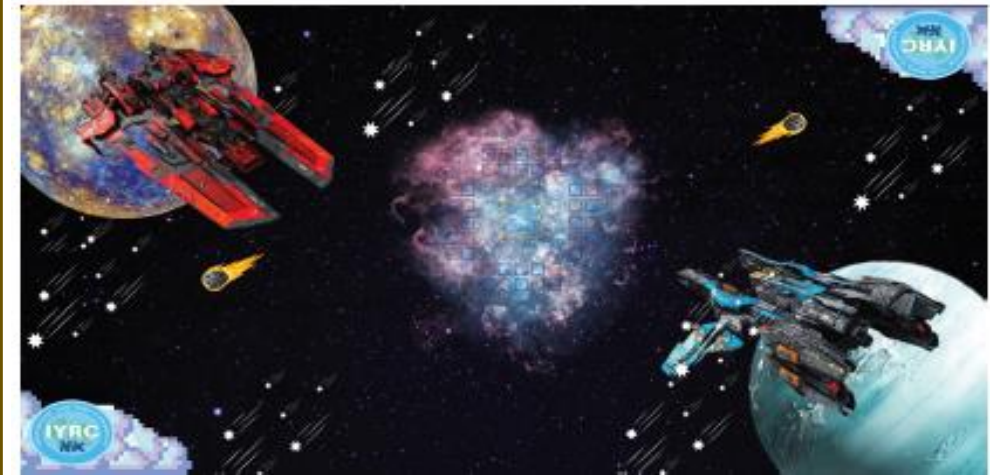


JUNIOR CATEGORY

Galaxy Plunder
Animal Kingdom
Math Challenge
Robot Soccer
Push Push

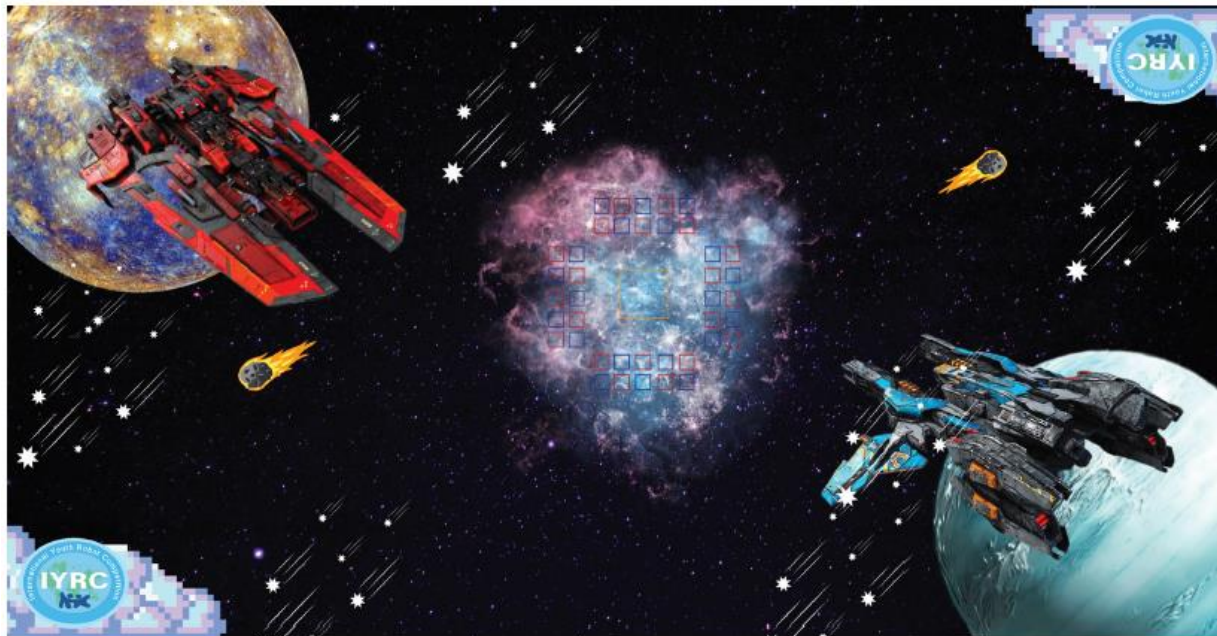
JUNIOR : GALAXY PLUNDER

Age	8-13
Category	Team of 2 Timed Mission
Robot Kits Allowed	MRT Series & HUNA educational robot kit
Mission	Remote control robot to collect gems
Robot Building	Pre-build remote control robot

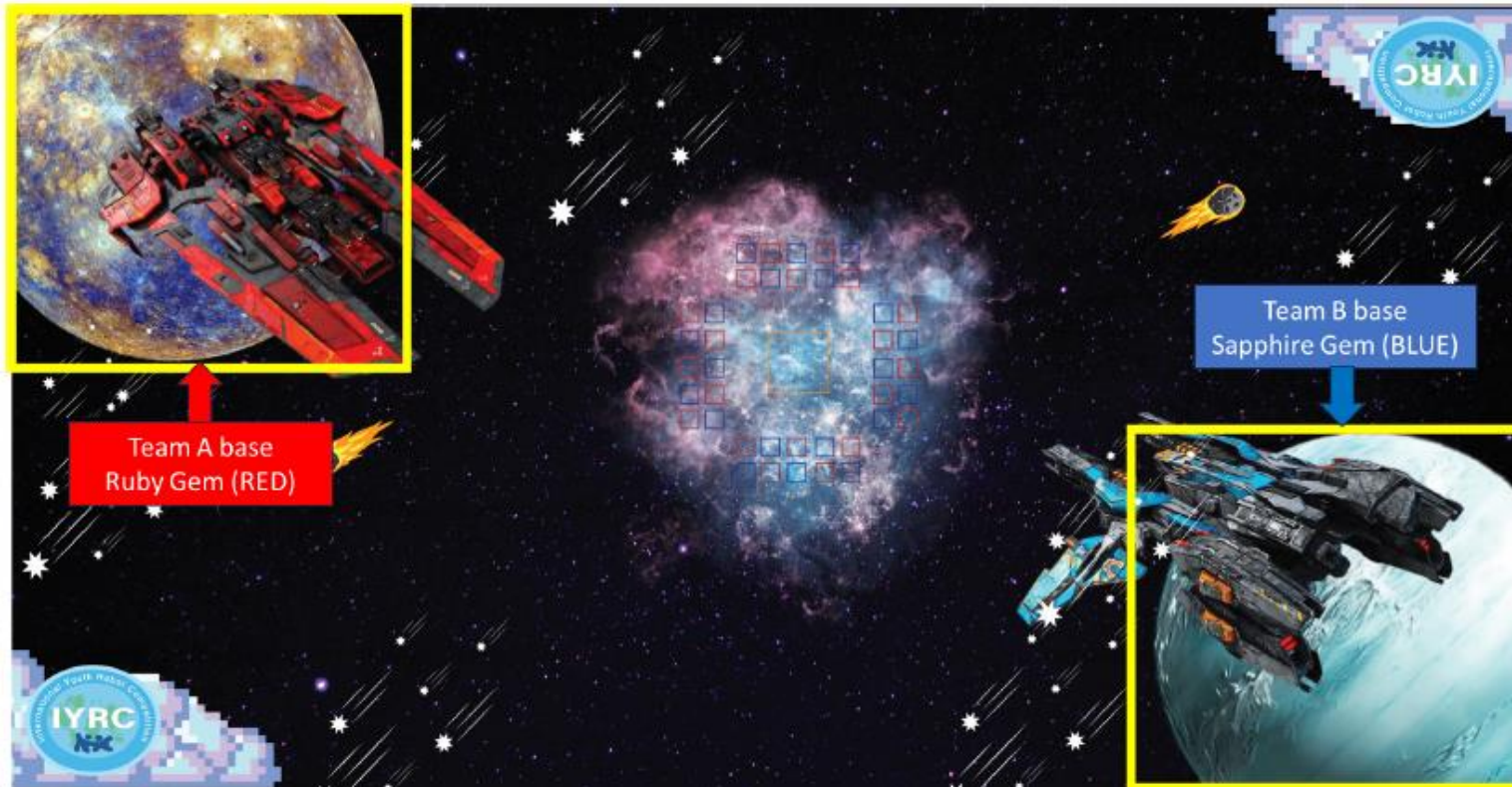




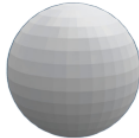

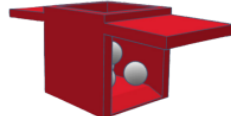
GALAXY PLUNDER GAME FIELD

- The dimension of the game field is 8ft (L) x 4ft (W).
- Sapphire Gem x20 (blue) and Ruby Gem x20 (red) will be placed in the middle of the game field for every starting of the new game (blue and red box).
- The Platinum Sphere x5 will be located in a box where the box will be located at the middle of the game field (orange color border)
- The starting position of the robot will be located in its own base (Inside the planet).



GALAXY PLUNDER GAME FIELD



	<p>Ruby Gem (Red): 3D printed materials (PLA) Dimension: 3cm x 3cm x 3cm</p>
	<p>Sapphire Gem (Blue): 3D printed materials (PLA) Dimension: 3cm x 3cm x 3cm</p>
	<p>Platinum sphere (White Ping-Pong ball) : Diameter 2.5 cm</p> <p>The sphere will be located in a square box with dimensions of 10cm x 10 cm x 10cm. The box will be open automatically at the last one minute.</p> <div data-bbox="1946 1033 2074 1162">  <p>Closing state</p> </div> <div data-bbox="2201 1048 2430 1162">  <p>Opening state (the ping pong ball will roll out automatically)</p> </div>

GALAXY PLUNDER GAME RULES

Dimensions & Restrictions

- Initial size shall not exceed 25cm (H) X 25cm (W) X 25cm (L).
- Robots are **NOT allowed** to expand to any size after the game starts
- Maximum **4 DC motors and 1 mainboard** are allowed

Game Rules

- Robots get ready at their BASE indicated in the game field.
- Whistle by the referee as a sign of start and participants have to move their robots from BASE to push and collect its resources back to the base within 3 minutes.
- During the game, the robots are not allowed to enter the opponents base.
- There will be 3 kinds of resources (Sapphire Blue Gem x 20, Ruby Red Gem x 20, and Platinum Sphere x 5). One team has to collect its own resource (Sapphire or Ruby) into their base while Platinum sphere is commonly shared hence both of the team can collect them into their base.
- If collected opponents gems in their own base, marks will be deducted.
- During the game, if robot unable to move or out of control, participants can request referee to restart the robot (turn on and off only).
- If robot cannot move for more than 10 seconds due to its own mechanical structure, referee will take the robot out from the game field.

GALAXY PLUNDER GAME RULES

- The platinum sphere will be located in a box and located in the middle of the game field. After 2minutes, the box will be opened and the platinum sphere will be rolled out. Participants can now collect the platinum sphere into their base within 1 minute.
- After 3 minutes the game end, gems that is fully inside the base will be considered as collected.

Scoring

- 1 gem I mark.
- 1 opponent gem, transfer 1 mark to opponent
- 1 Platinum sphere 2 marks
- If draw match, highest number of platinum spheres will win else additional 30 seconds for the match.

GALAXY PLUNDER SCORE EXAMPLE

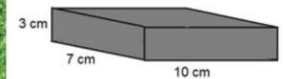
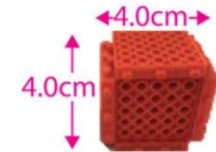
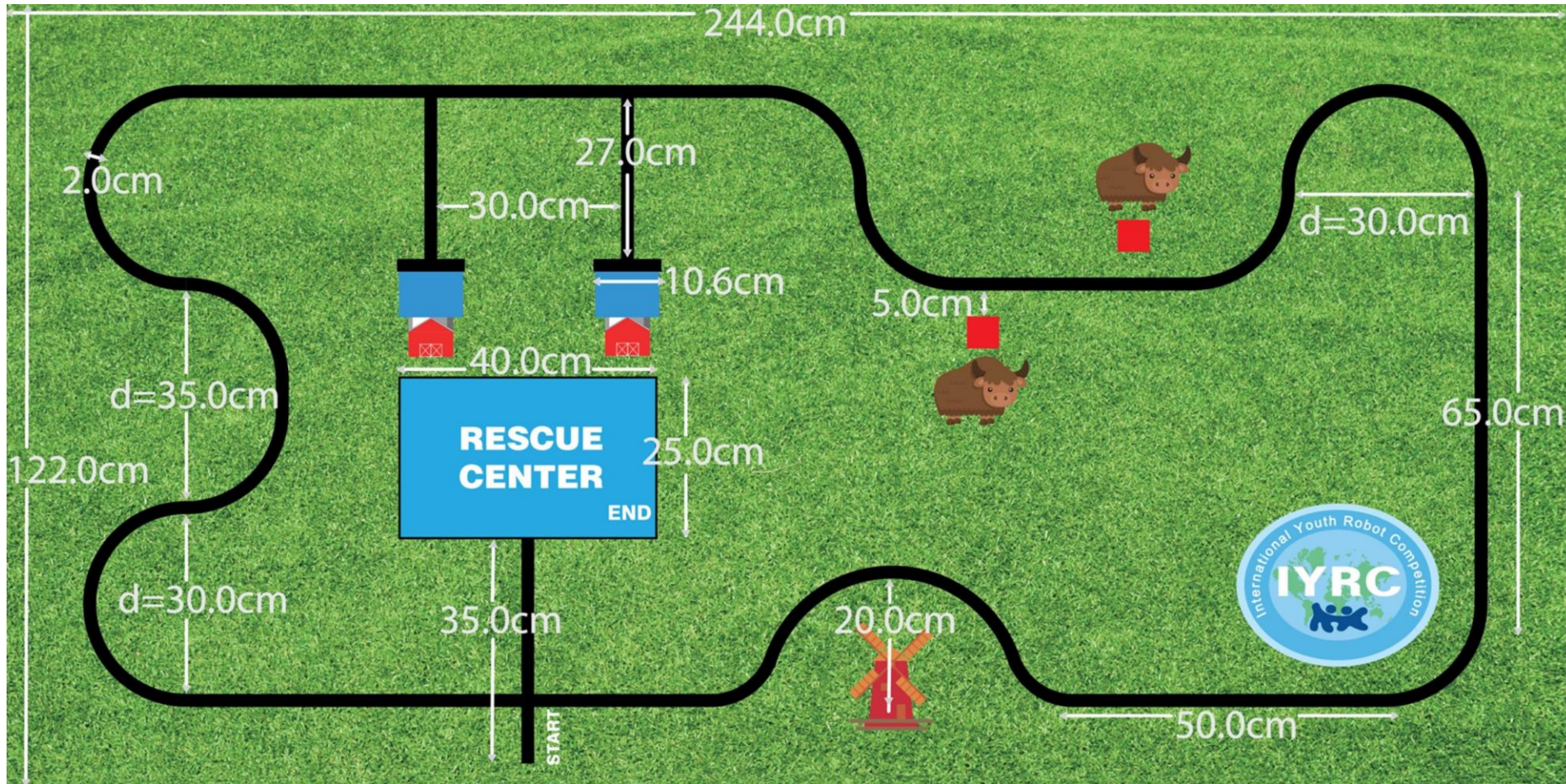
Team	Gem	Platinum	Opponent gem	Total Points	Rank
A (9yo)	20	3	1	22	4
B (7yo)	20	3	1	22	3
C	18	2	1	19	6
D	17	2	2	17	5
E	16	1	2	15	1
F	15	1	2	14	2

JUNIOR : ANIMAL KINGDOM

Age	8-13
Category	Individual Timed Mission
Robot Kits Allowed	MRT Series & HUNA educational robot kit
Mission	Program robot to trace line and complete the missions
Robot Building	Pre-build & pre-programmed



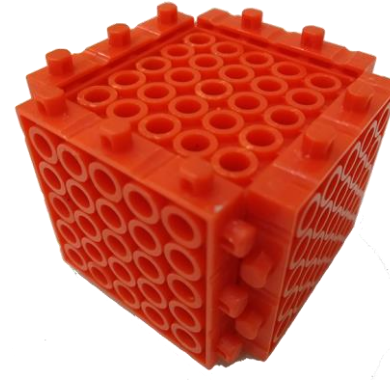
ANIMAL KINGDOM GAME FIELD



INJURED ANIMAL & FOOD

For injured animals and food, it is as picture on right it assembled with 6 pcs of 5*5 blocks.

Food will be placed on a stage of 3cm(H) x 5cm(W) x 10cm(L) like picture on the right



ANIMAL BARN & FOOD

Horse & Cow barn :

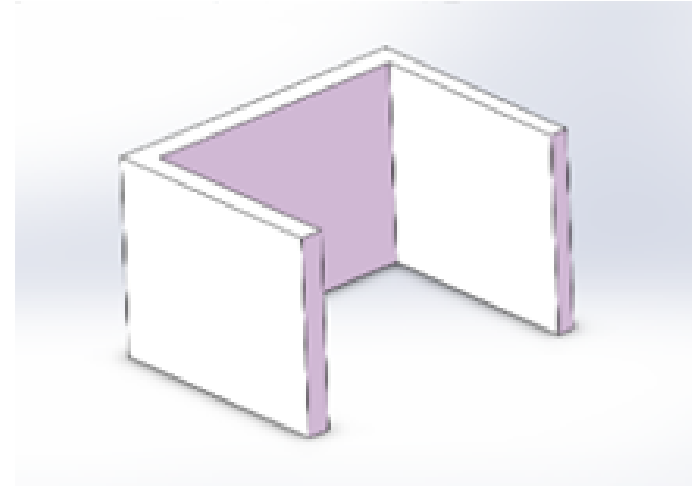
L : 8cm, H : 8cm , W:8cm

Power Generator Switch:

L: 20cm, H : 7cm ,

Cube:

L : 7cm, H : 5cm , W:7cm





ANIMAL KINGDOM GAME RULES

Dimensions and Restriction

- Initial size shall not exceed 20cm (H) X 20cm (W) X 20cm (L).
- Robots are **NOT allowed** to expand to any size after the game starts.
- Maximum 4 DC motors, 5 IR sensors, 2 servo motors, 1 tracer sensor block and 1 mainboard.

Game Duration

- Each match is stipulated for 2 rounds with a total duration for a maximum 3 minutes.
- Game may end before 3 minutes when :
 - Completion of 2 rounds
 - Disqualification of a participant
 - When referee judges that the continuation of the match is impossible

Scoring

- Robot successfully pushes food into barn shed. (15 points each)
- Collect injured animals at the road side. (5 points each for removing them from the injured area)
- Switch the generator on by spinning the long stick at the semi-circle. (20 points)
- Successfully bringing the injured animals back to the Rescue Center. (10 points for each animal)
- Robot stops at the Rescue Center. (20 points)

ANIMAL KINGDOM GAME RULES

Game Play Details

- Robot should stay behind the starting line (distance from starting line to the Robot IR sensors not exceed 5cm) and facing west (R&R map position as the reference). Timer starts when the robot's IR sensors cross the starting line.
- Once the match has begun, the robot must move by its own to complete the following task:
 - Task 1 : Push the food into horse and cow barn.
 - Task 2 : Carry the two injured animals away from their initial location.
 - Task 3 : Switch on the power generator by passing through the semi-circle following the line and pushing the long stick, robot that does not follow the line and move to the next checkpoint would not be awarded points.
 - Task 4 : Make sure all injured animals carried by robot is placed into the Rescue Center. No points awarded if any part of the injured animals is out of the Rescue Center's black box.
 - Task 5 : Robot stops at the Rescue Center with any part of the robot's body stays inside the Rescue Center area.

Win/Lose Criteria

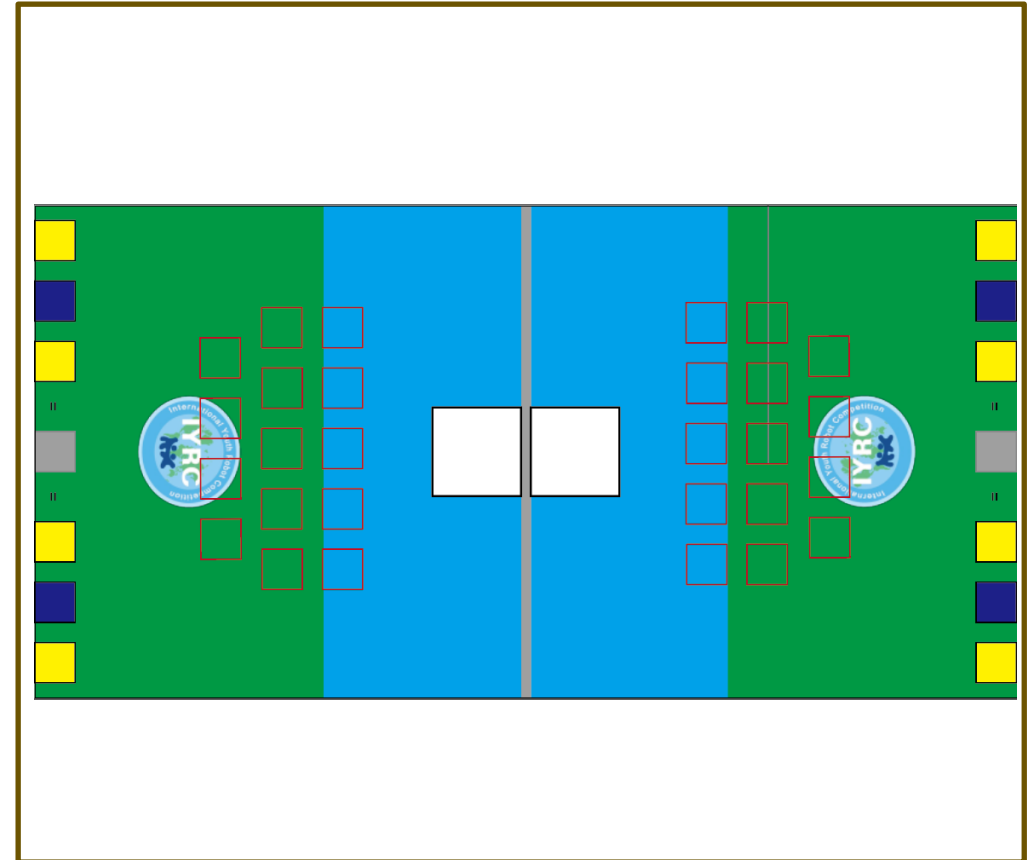
- Highest score of the two attempts will be used for ranking of winners.
- Participant with the highest score is the winner. If there are two or more participants with the same score, the lowest time recorded to finish the mission is the winner.
- If both points and time of participants are the same, the participant who is younger would be the winner.

ANIMAL KINGDOM SCORE EXAMPLE

Child	Task 1	Task 2	Task 3	Task 4	Task 5	Total Points	Time Taken	Rank
A (9yo)	30	10	20	20	20	100	150	3
B (7yo)	30	10	20	20	20	100	150	2
C	30	10	20	20	20	100	130	1
D	30	10	20	20	0	80	120	4

JUNIOR : MATH CHALLENGE

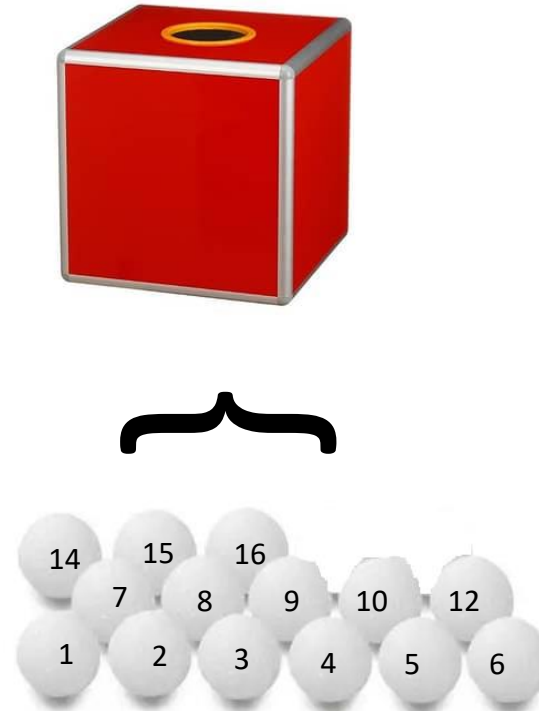
Age	8-13
Category	1 vs 1 Tournament
Robot Kits Allowed	MRT Series & HUNA educational robot kit
Mission	Push blocks to form equation
Robot Building	Pre-build remote control robot





Random Pick Number

14 table tennis ball label with numbers put inside a lucky draw box.





MATH CHALLENGE GAME RULES

Dimensions and Restriction

- Initial size shall not exceed 20cm (H) X 20cm (W) X 20cm (L).
- Robots are **NOT allowed** to expand to any size after the game starts.
- Maximum 4 DC motors and 1 mainboard.

Game Duration

- Round 1 : 2 minutes. All participants will take turn to complete the match challenge in 2 minutes time in order to proceed to Round 2.
- Round 2 : 90 sec. Compete with opponent to complete the match challenge in 90 sec in order to proceed to final round.
- Final Round : Rank according to math completion with shorter time.

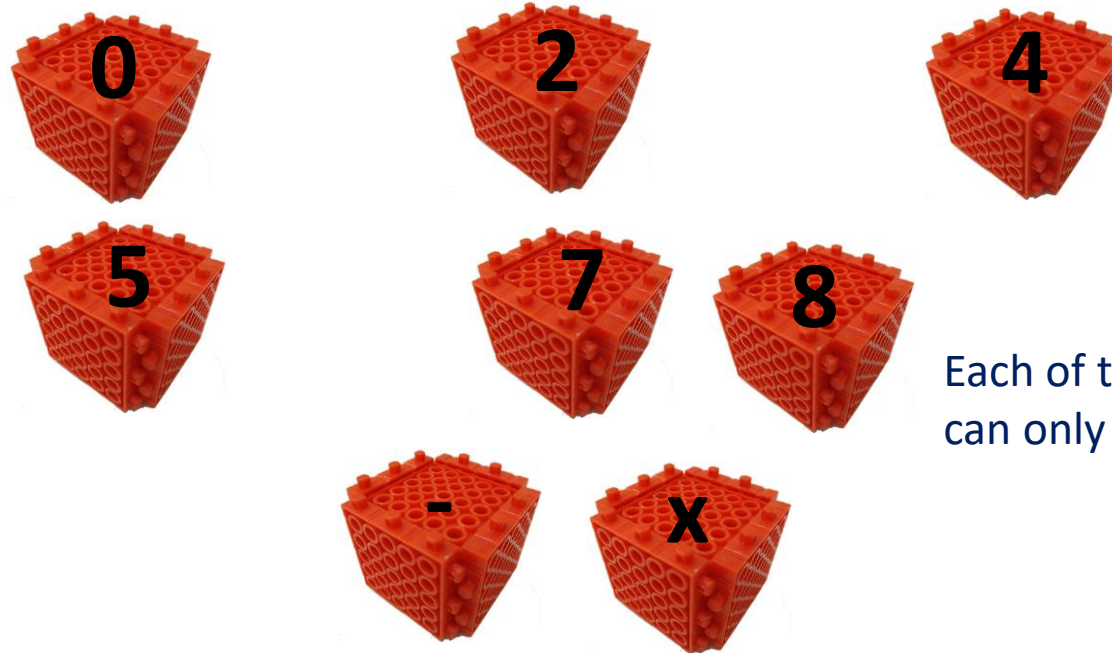


MATH CHALLENGE GAME RULES

Game Play Details

- Robot should stay inside the white square and wait for referee's instruction.
- Participants will pick a number from the lucky draw box for themselves. The number will be placed on the wood block of their field.
- Once the match has begun, the robot must move and push the desired number block and operator block into the yellow and blue square.
- After the equation is formed, both robots must return to its start box (white square) in order to declare the completion of the game.

MATH CHALLENGE GAME EXAMPLE



Each of these square box (numbers and operators) can only use once to form the equation.

$$\boxed{6} \boxed{+} \boxed{3} = \boxed{9} = \boxed{9} \boxed{/} \boxed{1}$$

JUNIOR : ROBOT SOCCER

Age	8-13
Category	3 vs 3 Tournament
Robot Kits Allowed	MRT Series & HUNA educational robot kit
Mission	Soccer match using remote control
Robot Building	Pre-build remote control robot





Starting position for each team



ROBOT SOCCER GAME RULES

Dimensions and Restrictions

- Initial size shall not exceed 25cm (H) X 25cm (W) X 25cm (L).
- Robots are **NOT allowed** to expand to any size after the game starts.
- Maximum up to 2 DC motors, 2 servo motors and 1 mainboard are allowed.
- Robot cannot be designed with a closed structure to handle the ball. The judge will check the robot structure before the competition starts.

Game Duration

- Each game is stipulated for 3 minutes.
- Each match is stipulated for 2 rounds with each round's duration for a maximum of 1.5 minute. After the end of each round the players are to switch to the opposite side of the game field. (Only apply to Semi-final and Final game)
- Extension of rounds is only when both sides have the same score. The extension round would be for a maximum of 1 minute. At the event of the same score after the extension round penalty shoot out will commence until a winner is found.

Starting Position

- Each team will place their robot's in front of starting position as indicated in Soccer Game Field diagram before the match/round begins.

ROBOT SOCCER GAME RULES

Game Play Details

- Team variants (participants have to declare to referee which variant they choose before each match, these roles cannot be changed during the match):
 - 1 Defender & 2 Strikers
 - 2 Defender & 1 Strikers
- Defender
 - cannot leave own area (own half of the field), therefore cannot enter opponents area.
 - allowed to enter own penalty area with non-stop movement to protect the goal, but is **Not Allowed** more than 10 continuous seconds inside the penalty area or being stationary (not moving) inside penalty area.
- Striker
 - Allowed to enter both own and opponent's area
 - Allowed to enter opponent's penalty area to score goal, but not more than 10 continuous seconds inside opponent's penalty area.
 - Not allowed to enter own penalty area.

ROBOT SOCCER GAME RULES

Game Play Details

- Fouls:
 - Any offender will be issued a yellow card. Upon receiving 2 yellow cards within a match, the player will be removed from play for 1 minute. After 1 minute the offender can re-enter the game field upon referee's approval. If an offender receives it's 4th yellow card within a match they are removed from play for the rest of the match.
 - When a goal is scored but at the same time or immediately before a foul is made by the same team who scored the goal, the goal would not be valid. (eg: when defender enters opponent's area when goal is scored)
- Type of fouls:
 - A robot that purposely block the ball against the side of the field and does not move.
 - A Defender that enters the opponent area
 - A Striker that enters own penalty area
 - A Defender or Striker that stays inside the penalty area for more than 10 continuous seconds
 - A Defender that purposely not moving in own penalty area to block the goal post
 - A participant who ignores the instruction of the referee
- Dead Ball:
 - When the ball is held by a robot and not able to move (stalemate) for more than 5 seconds.
 - Referee will blow the whistle and all robots must stop. Referee will place the ball accordingly to the situation and the game will resume with referee's instruction.
 - If this happens more than 3 consecutive times, the ball will be placed at the middle and all robots are to return to their starting position.



ROBOT SOCCER GAME RULES

Game Play Details

- Penalty shoot-out in the event of a draw (each participant has to take turn for penalty shoot-out):
 - Ball will be placed on the white dot.
 - Robot which is making the penalty shot should start its movement in the mid field circle to hit/push the ball into the goal without any part of the robot's body crossing the white line.
 - 3 attempts will be given for each team to score as many goals possible.
 - If both teams has the same score after the 3 attempts a Sudden Death will occur.
- Sudden Death:
 - Each team will send 1 representative for the sudden death round. The representative has 1 chance for a penalty shoot-out. If one team manages to score while the other did not, the scoring team will be the winner. In the event that both teams scores or misses a 1v1 match will begin.
 - The first team to score in the 1v1 match will be the winner.

Scoring

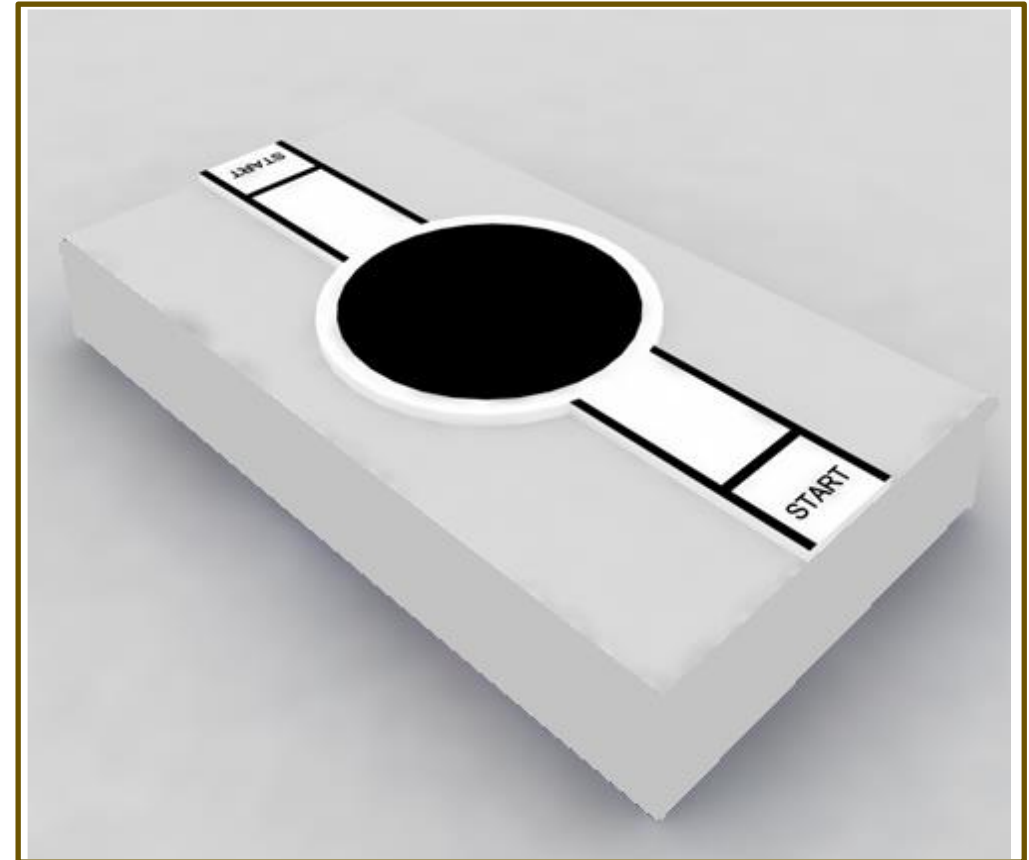
- Each goal is 1 point awarded to the scoring team.
- A goal occurs when the ball is being pushed/hit/rolled into the goal post passing the line.

Win/Lose Criteria

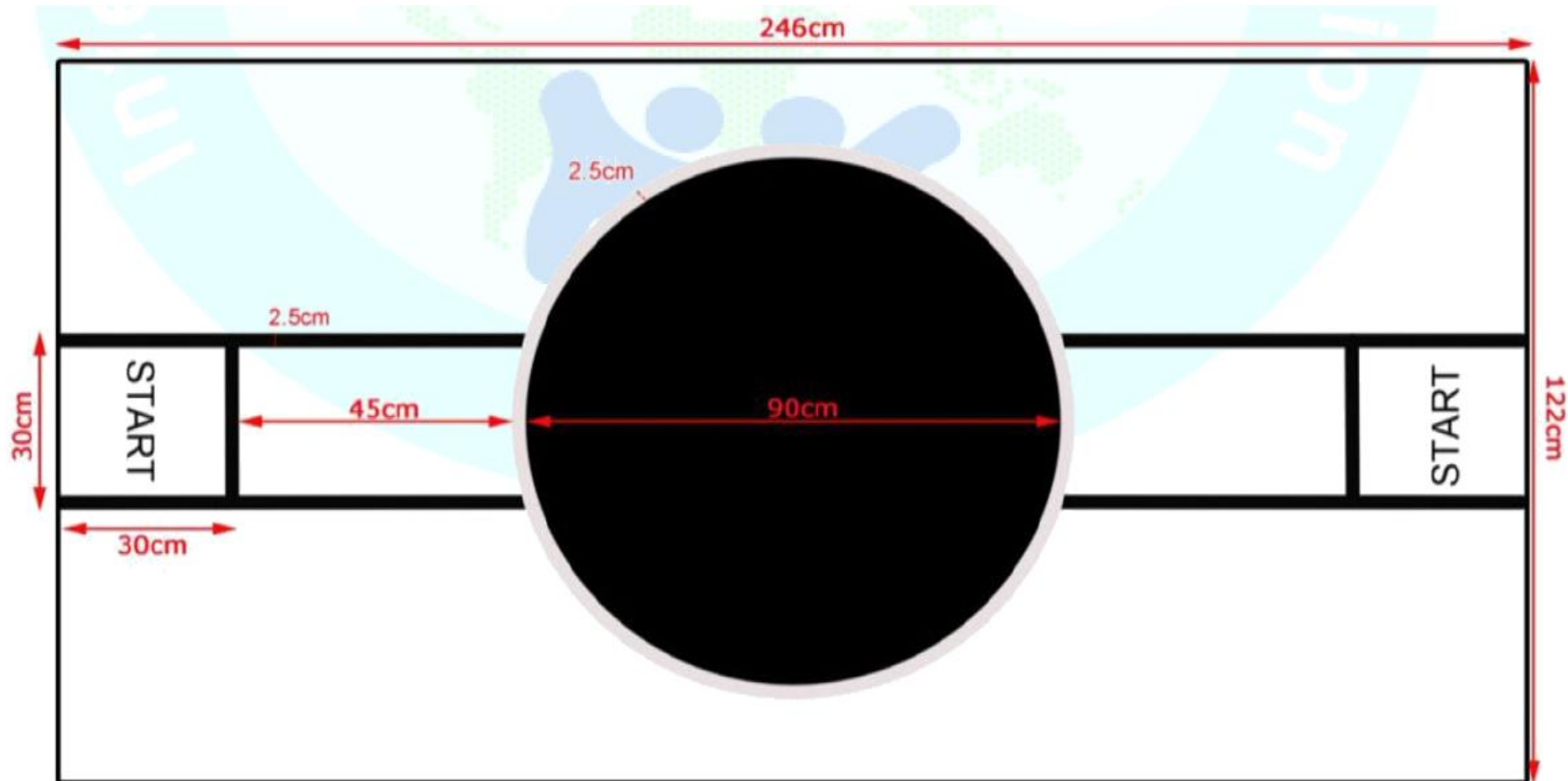
- The team with the most goals wins.

JUNIOR : PUSH-PUSH

Age	8-13
Category	1 vs 1 Tournament
Robot Kits Allowed	MRT Series & HUNA educational robot kit (Exclude Kicky and Brain kit)
Mission	Remote control robot to pass through the runway and push opponent outside of the black ring
Robot Building	Pre-build remote control robot



PUSH-PUSH Jr GAME FIELD



PUSH-PUSH GAME RULES

Dimensions, Weight and Restrictions

- Initial size shall not exceed 20cm (H) X 20cm (W) X 20cm (L). However, robots are allowed to expand to any size after the game starts
- The maximum weight of the robot is 800 grams (Including batteries)
- Maximum up to 2 DC motors, 2 servo motors and 1 mainboard are allowed

Game Duration

- Each match is stipulated for 3 rounds with each round's duration for a maximum of 1 minute.

Scoring

- Draw : Both robots still moving and are within the play field both. (1 mark each)
- Draw : Both robots fall off the play field at the same time. (0 mark for both)
- Win : Pushes at least half of the opponent robot out from the play field or opponent's robot not able to move back into the play field. (2 marks for winner, 0 marks for loser)

PUSH-PUSH GAME RULES

Game Play Details

- First whistle
 - Robots MUST be placed behind the start line on the runway before the First whistle.
 - Robots are to remain stationary until the First whistle has been blown.
 - Robot must pass through the runway and stop at the black ring waiting area.
- Second whistle
 - Robot starts to engage the opponent and attempt to push them off the game field.

Win/Lose Criteria

- If the robot drops from the runway before reaching the black ring, the participant will lose the round.
- If within 10 seconds the robot still unable to enter the black ring waiting area, the participant will lose the round.
- Within 1 minute, the robot that pushes the opponent's robot off the playfield (black colour ring) first is considered the winner for the round. If both robots falls off from the playfield at the same time it is a draw.
- If more than half of the robot's body being push out of the ring onto the runway (Based on referee's decision), or the robot is unable to go back into the ring, it is considered lost for the round.
- If draw after 3 rounds then participant who has a lighter robot will be the winner.

PUSH-PUSH GAME RULES

Rules Clarification

- The referee's decision is considered as final during game play.
- Mentors must not be involved in any rules discussion for the game.
- Video evidence will not be accepted.
- Once the Head Referee and the game referees have come to a decision, no more discussion will be accepted.



SENIOR CATEGORY

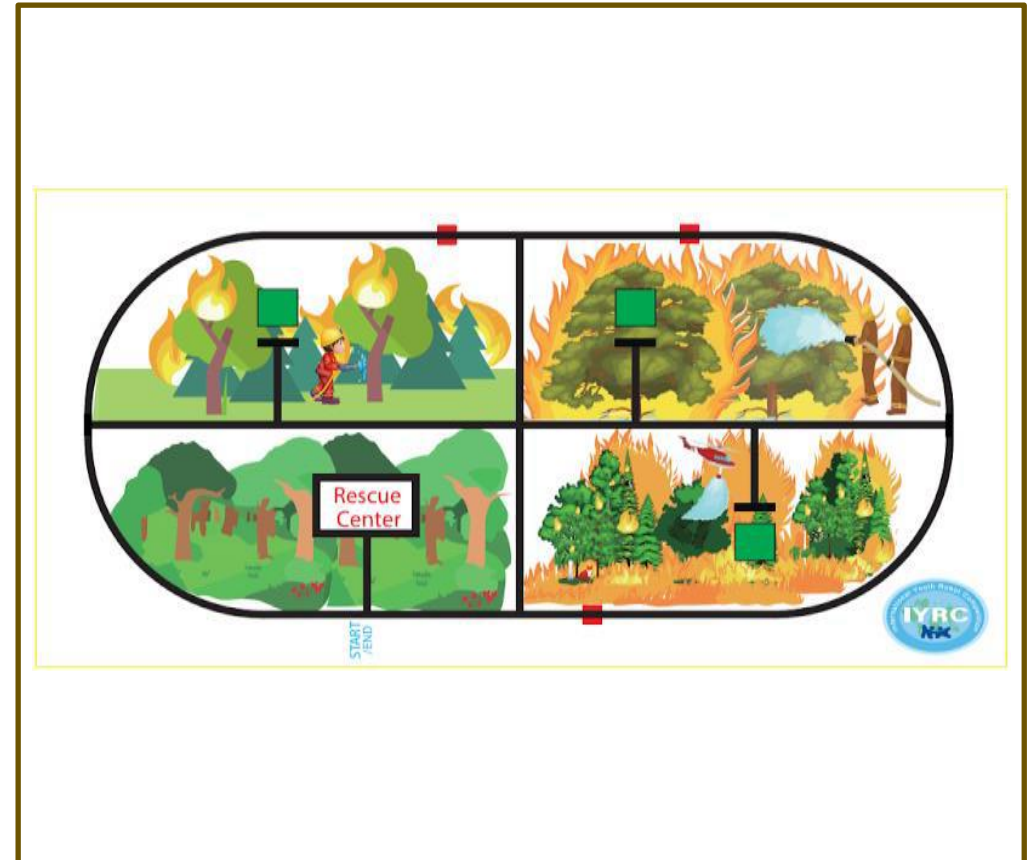
Save the Forest

Robot Volleyball

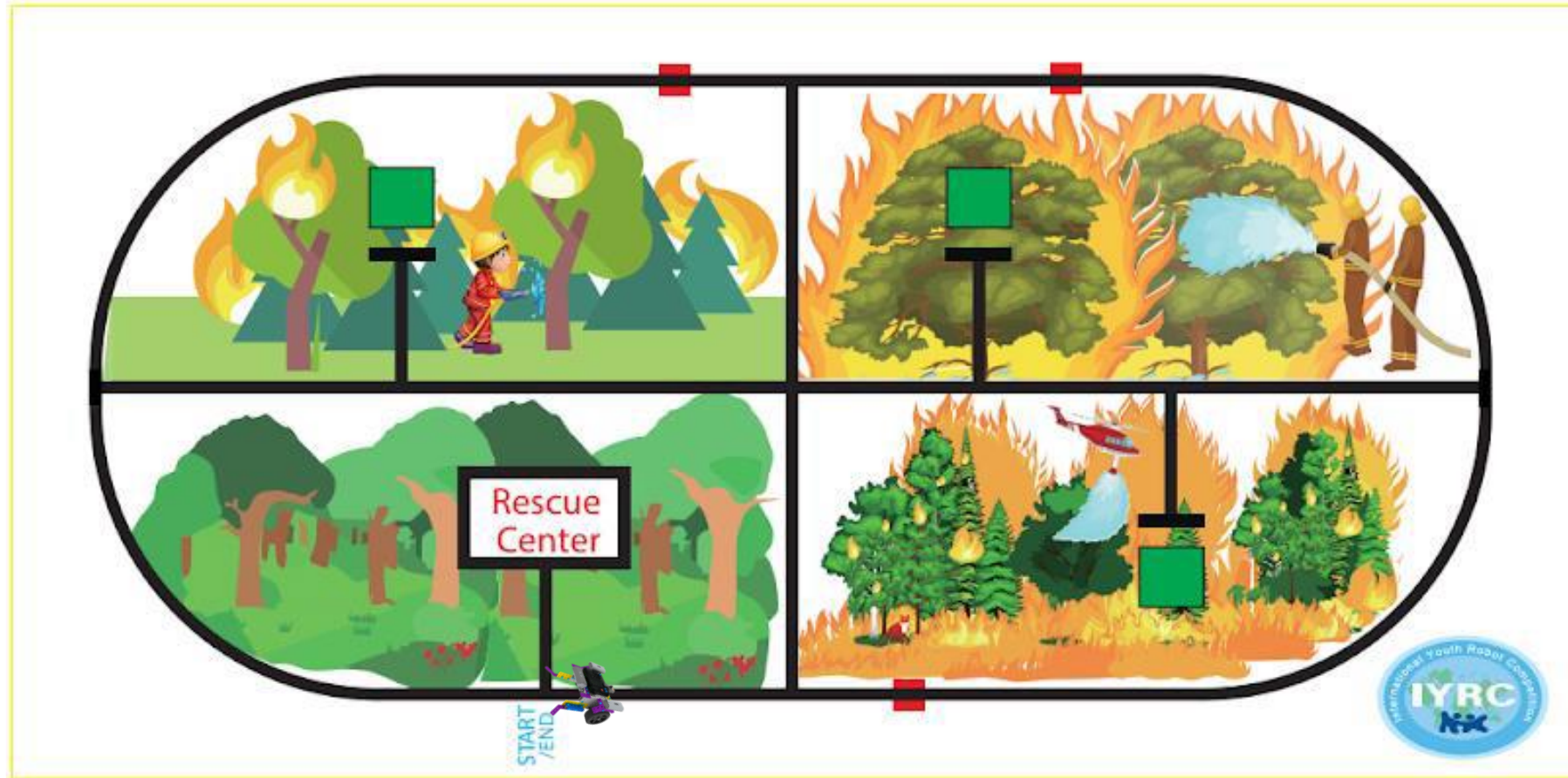
Push Push

SENIOR : SAVE THE FOREST

Age	13-18
Category	Individual Timed Mission
Robot Kits Allowed	MRT Series
Mission	Robot runs automatically to trace the black line to complete missions
Robot Building	Pre-build & on-site programming



SAVE THE FOREST GAME FIELD



Note: Maze wall height is 12cm

SURVIVORS

Survivor to be placed on red spots and need to carry by robot to the rescue center.



PUT OUT FIRE TRIGGER

Height of IR sensor from ground : 5.5 cm

Place on green spots. Initially Red LED on,
after triggered, Green LED will be turned on.



SAVE THE FOREST GAME RULES

Dimensions and Restriction

- Initial size shall not exceed 20cm (H) X 20cm (W) X 20cm (L).
- Robots are **Not allowed** to expand to any size after the game starts.
- Maximum 4 DC motors, 5 IR sensors, 2 servo motors, 1 tracer sensor block and 1 mainboard.

Game Duration

- Each participant is given a maximum of 3 hours to perform the coding and testing of the robot
- Each match is stipulated for 2 rounds with a total duration for a maximum 3 minutes.
- Game may end before 3 minutes when :
 - Completion of 2 rounds
 - Disqualification of a participant
 - When referee judges that the continuation of the match is impossible

SAVE THE FOREST GAME RULES

Quarantine

- During the 3 hours given to perform the coding and testing, all participants are quarantine for said period of time.
- Participants are allowed to do testing and modify the robot during the 3 hours given.
- Once participant is satisfied with the performance of the robot, they may hand over the robot to the referee before the 3 hours is up.
- No more programming or modification is allowed once the 3 hours is up or if the participant hands over the robot to the referee earlier.
- Participants would then wait for their turn to be called for the match.

Game Play Details

- Robot should stay behind the starting line (distance from starting line to the Robot IR sensors not exceed 5cm) and facing west (R&R map position as the reference). Timer starts when the robot's IR sensors cross the starting line.
- Whistle will be blown as a sign of start of the match.
- Participant is allowed to start (switch on) the robot using single switch operation.

SAVE THE FOREST GAME RULES

Scoring

- Carry all 3 survivors to the rescue center – fully inside the rescue center box. (Each survivor 10 points)
- Put out fire means Green LED on. (Each 10 points)
- Stop at the Start/End line at the end of the game play. (20 points)

Disqualify

- Participant touch the robot or items on the game field during the game play.
- Stalemate of more than 5 sec.
- Not tracing the line for more than 5 sec.

Win/Lose Criteria

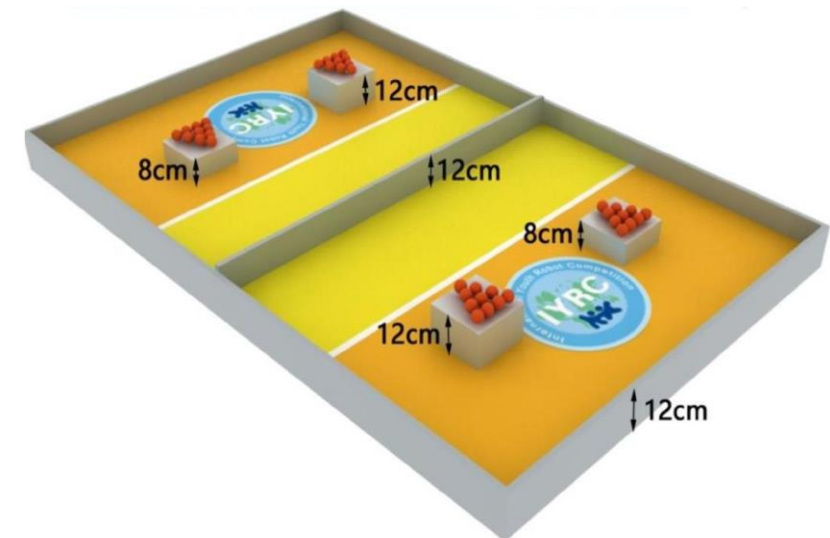
- Highest score of the two attempts will be used for ranking of winners.
- Participant with the highest score is the winner. If there are two or more participants with the same score, the lowest time recorded to finish the mission is the winner.
- If the points and time of both participants are the same, the participant who is younger would be the winner.

SAVE THE FOREST SCORE EXAMPLE

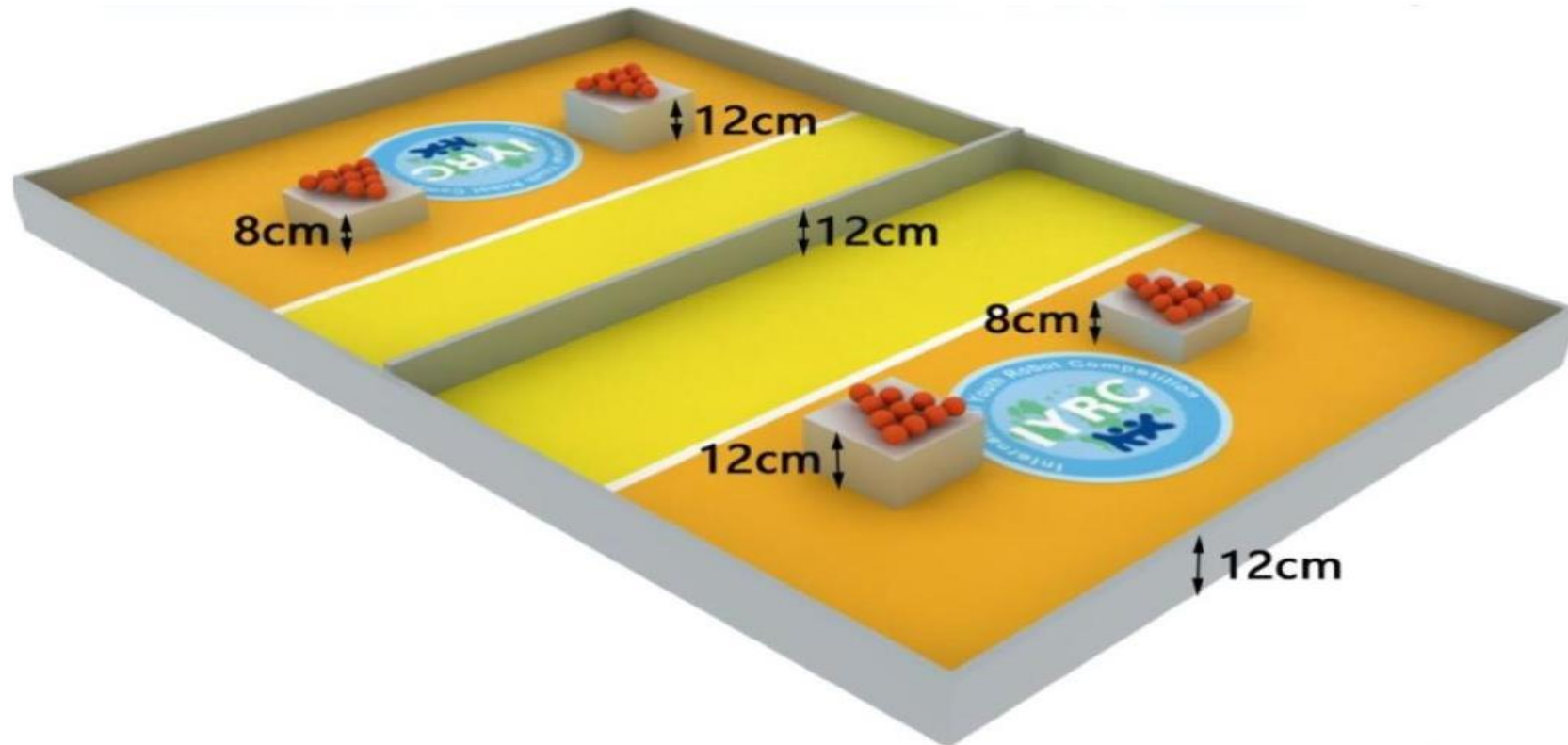
Child	Survivor rescued	Put out fire	Stop at Start/End line	Total Points	Time Taken	Rank
A (15yo)	30	20	20	70	160	2
B (13yo)	30	20	20	70	160	1
C	20	20	20	60	170	3
D	20	10	20	50	140	4

SENIOR : ROBOT VOLLEYBALL

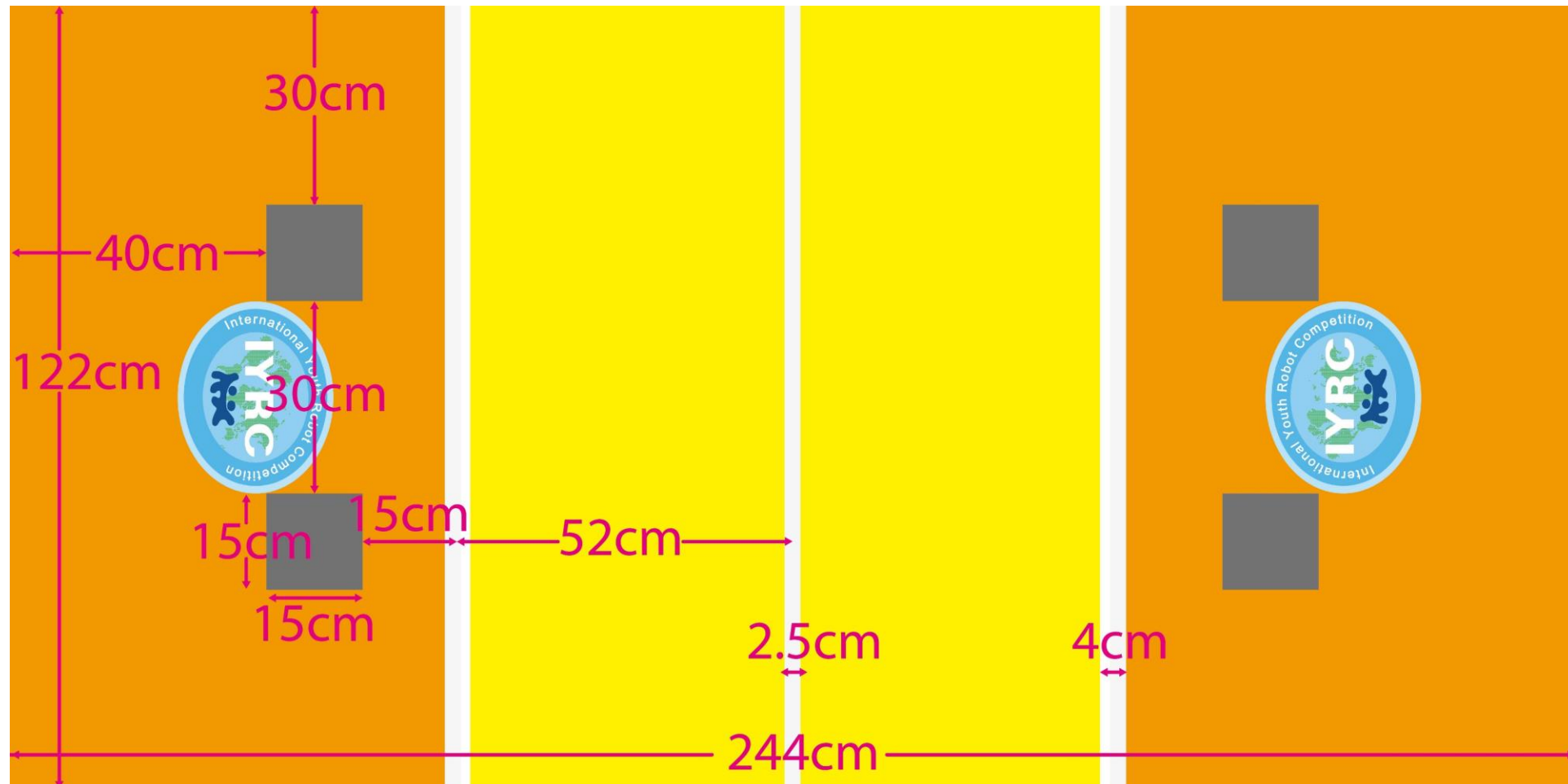
Age	13-18
Category	2 vs 2 Tournament
Robot Kits Allowed	MRT Series & HUNA educational robot kit
Mission	Remote control robot to transfer table tennis balls into opponent's field
Robot Building	Pre-build remote control robot



ROBOT VOLLEYBALL GAME FIELD



ROBOT VOLLEYBALL GAME FIELD





ROBOT VOLLEYBALL GAME RULES

Dimensions and Restrictions

- Initial size shall not exceed 25cm (H) X 25cm (W) X 25cm (L). However, robots are allowed to expand to any size after the game starts
- Maximum up to 2 DC motors, 2 servo motors and 1 mainboard are allowed

Game Duration

- Each match is stipulated for 1 round with a duration for a maximum of 3 minutes.
- Extension of rounds is only when both sides have the same score. Each round extension would be for a maximum of 30 seconds and 1 robot from each team will be chosen to compete in the current state of the game field to determine the final winning team.
- Game may end before 3 minutes when :
 - One team manages to throw all balls into opponent field
 - Disqualification of both participants from the same team

ROBOT VOLLEYBALL GAME RULES

Game Play Details

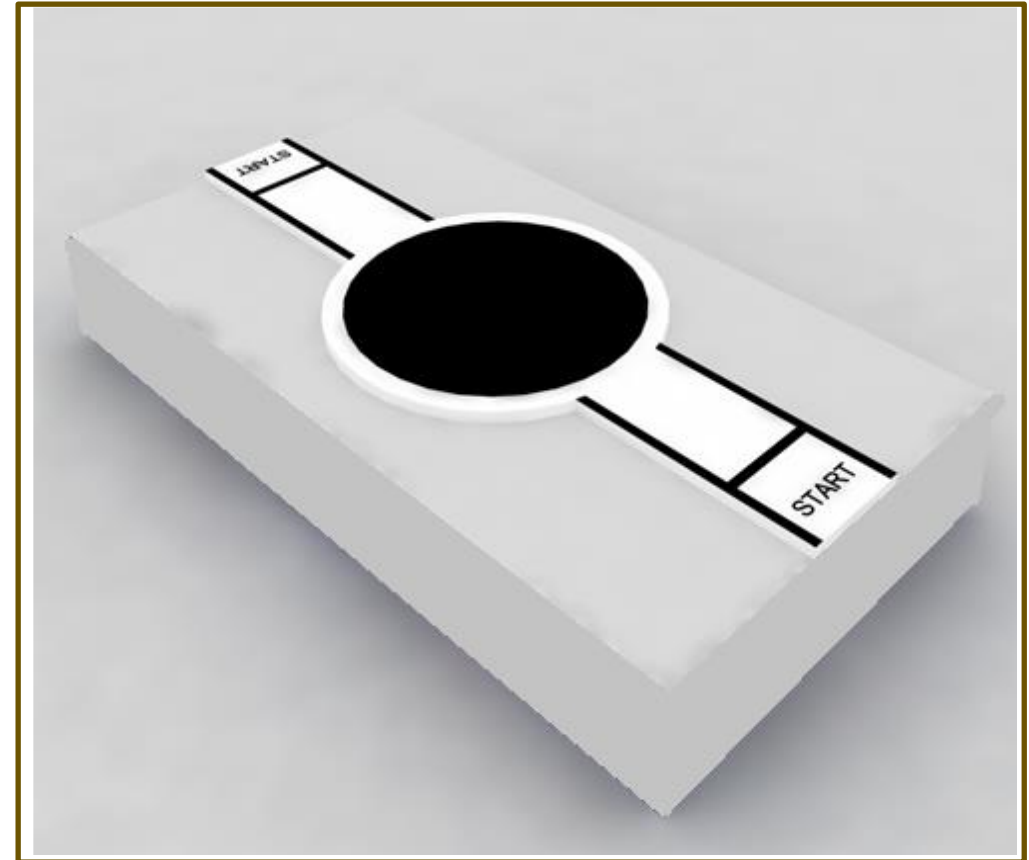
- Each team will have 20 table tennis balls placed on top of two different height towers in their own field.
- Each team can deploy any tactics or manoeuvres to grab or collect the table tennis balls from the tower and transfer them into the opponents' field.
- If the table tennis ball is thrown outside the field, the ball will be put back to the side where the ball was thrown out from by the referee.

Win/Lose Criteria

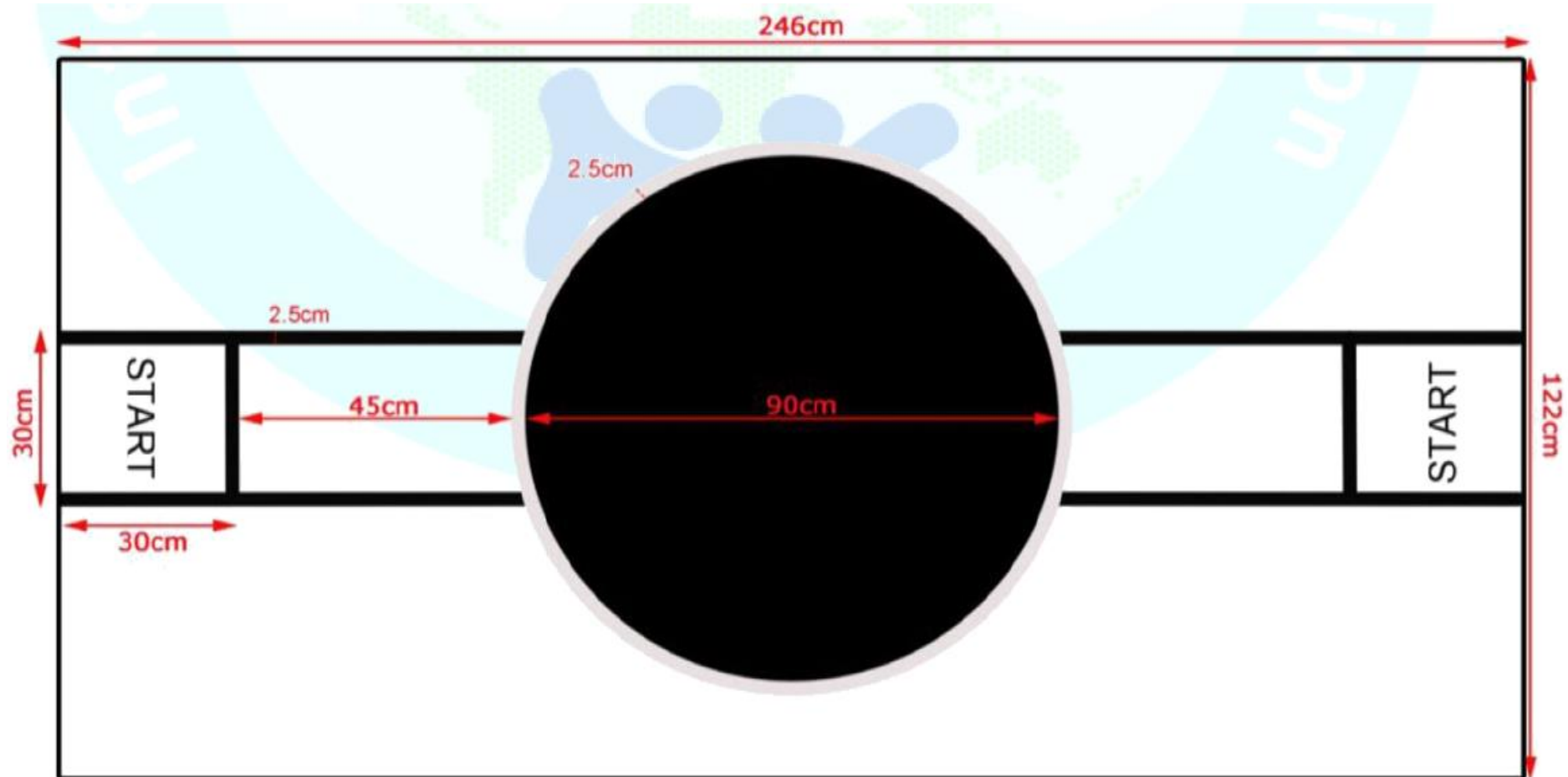
- Draw : Both sides have equal number of balls thrown to the other side.
- Win : Team which has the most number of tennis balls thrown to the opponent's side or have successfully thrown all tennis balls over to the opponent's side before the time ends.
- Lose : Team which has the least number of tennis balls thrown to the opponent's side or have all team members removed from play due to foul or disqualification.

SENIOR : PUSH-PUSH

Age	13-18
Category	1 vs 1 Tournament
Robot Kits Allowed	MRT Series & HUNA educational robot kit (Exclude Kicky & Brain kit)
Mission	Program the robot to pass through the runway automatically and push opponent outside of the black ring using remote control
Robot Building	Pre-build remote control & autonomous robot



PUSH-PUSH Sr GAME FIELD





PUSH-PUSH Sr GAME RULES

Dimensions, Weight and Restrictions

- Initial size shall not exceed 20cm (H) X 20cm (W) X 20cm (L). However, robots are allowed to expand to any size after the game starts
- The maximum weight of the robot is 800 grams (Including batteries)
- Maximum up to 2 DC motors, 2 servo motors and 1 mainboard are allowed

Game Duration

- Each match is stipulated for 3 rounds with each round's duration for a maximum of 1 minute.
- Extension of rounds is only when both sides have the same score. Each round extension would be for a maximum of 1 minute and will be repeated until a winner is found. For extension rounds, robot will be placed back to back at the start of the round.

Scoring

- Draw : Both robots still moving and are within the play field both. (1 mark each)
- Draw : Both robots fall off the play field at the same time. (0 mark for both)
- Win : Pushes at least half of the opponent robot out from the play field or opponent's robot not able to move back into the play field. (2 marks for winner, 0 marks for loser)

PUSH-PUSH Sr GAME RULES

Game Play Details

- First whistle
 - Robots MUST be placed behind the start line on the runway before the First whistle.
 - Robots are to remain stationary until the First whistle has been blown.
 - Robot must pass through the runway autonomously and stop at the black ring waiting area without using remote control.
- Second whistle
 - Robot starts to engage the opponent and attempt to push them off the game field using remote control.

Win/Lose Criteria

- If the robot drops from the runway before reaching the black ring, the participant will lose the round.
- If within 10 seconds the robot still unable to enter the black ring waiting area, the participant will lose the round.
- Within 1 minute, the robot that pushes the opponent's robot off the playfield (black colour ring) first is considered the winner for the round. If both robots falls off from the playfield at the same time it is a draw.
- If more than half of the robot's body being push out of the ring onto the runway (Based on referee's decision), or the robot is unable to go back into the ring, it is considered lost for the round.
- If draw after 3 rounds then participant who has a lighter robot will be the winner.



COMPULSORY

Creative Robot Design (Junior + Senior)

CREATIV ROBOT DESIGN (Compulsory)

Age	Junior & Senior
Category	Team 3-5 students with 1 teacher
Robot Kits Allowed	MRT Series & HUNA educational robot kit
Mission	Create a robot / system expressing the given theme
Robot Building	Pre-build



CREATIVE ROBOT DESIGN

Objective

- To provide a platform for students to showcase their creativity, innovation and programming skills. They are required to work together as a team to design a robot based on the given theme. Furthermore, they need to present and demonstrate their creation well to convince and impress the judges.

Theme: My Robot – Time To Save The Earth

Robot Dimensions and Weight

- The size and weight of the robot is not limited.



CREATIVE ROBOT DESIGN RULES

Restrictions on Robot design

- Only MRT series of products are to be used to build the robot. There is no limitation to the number of blocks used to build the robot. You are allowed to cross use the parts from the above-mentioned systems for the robots.
- Robots shall not damage any part of the field or obstacles deliberately.
- Robots allowed to move or make motion autonomously OR use remote control.
- Other materials can be used to further enhance the model/robot such as camera, paper cups, rings, sticks, bottles, 3D printed models, drone, future board, etc. (keeping in mind that the main component needs to be products from MRT series).
- VAC (Volt of Alternating Current) power supplies are strictly prohibited for safety reasons.
- Robots shall not cause any danger to the arena & surroundings in any way whatsoever.
- Robots will need to protect their sensors, if necessary, from any outside interference.
- Robots RC receivers will need to be protected from any outside interference.

CREATIVE ROBOT DESIGN REQUIREMENTS



Game Rules

- Participants shall build a robot in advance. However, participants are still given 2 hours to prepare their robot / model.
- Each group has a presentation time of 5 minutes to introduce their robots to the referee on the stage. Presentations can be done in English. If they are unable to present in English, they have to prepare their own translator.
- Robots may be displayed in the allocated table assigned to each group. Hence, Participants are required to ensure their models/robots are taken care off during the display time to the public until the judging is completed.
- After registration, a poster(presentation) form will be sent the teams by organizer, and participants need to fill the poster content. Besides, 4 copies of the printed Manual (Presentation File) in English is required for the display and referees review, it needs to include:
 - Robot Name
 - Purpose
 - Team member introduction and task allocation
 - Introduction of the project
 - Specification and features
 - How to program (if needed)
 - Functionality of robot
- **Theme: My Robot, Time to Save the Earth**

CREATIVE ROBOT DESIGN SCORING

Scoring

- Referees will check if the team meets the requirements or not, and evaluate teams' works. Score will be given based on different criteria and weightage respectively:
 - Relevance to theme: 10 score
 - Creativity & Uniqueness: 30 score
 - Robot Functionality: 30 score
 - Team work: 10 score
 - Presentation skill: 20 score
- Additional Points
 - Robots make motion or move autonomously. (+5 points)
- Participants submit how to code or programming code (+5 points)
- Participants use more than two types of main board from MRT products. (+5 points) (E.g. MRT3 Main board + MRT5 Main board + LSM + MRT Coconut + MRT Blacksmith + MRT Duino Main board)
- Participating group with the highest score is the winner. If there are two or more groups with the same score, the lowest average younger participating group is the winner.



OPEN CATEGORY

Humanoid Robot Mission

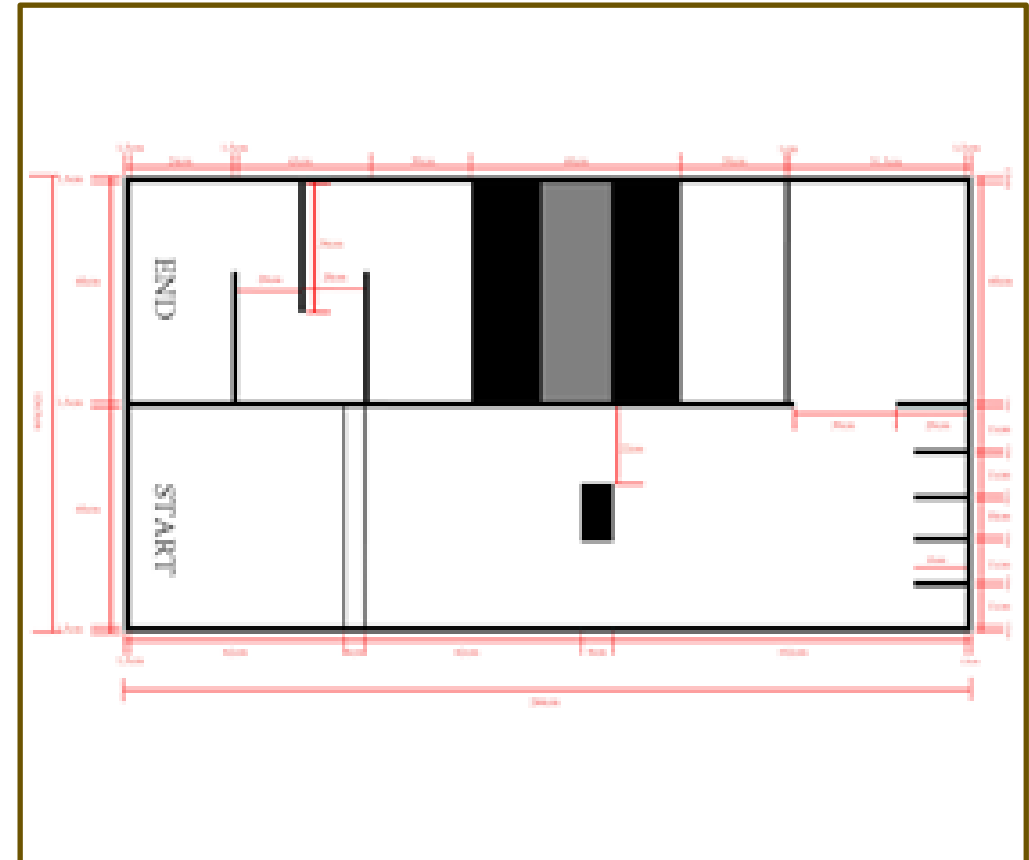
Autonomous IR Soccer

Cocomon Go

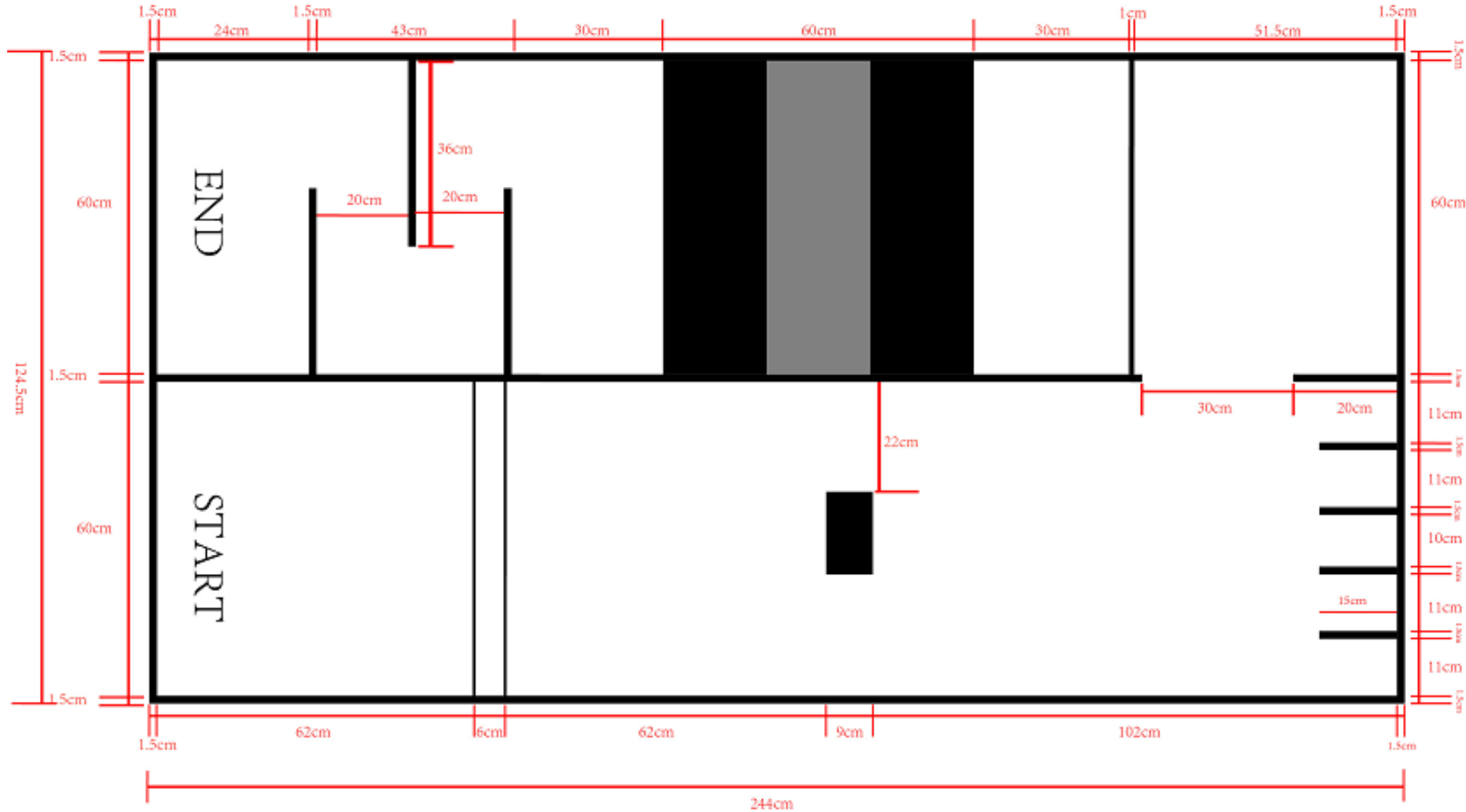
Game Maker Kit Game Design Challenge

OPEN : HUMANOID ROBOT MISSION

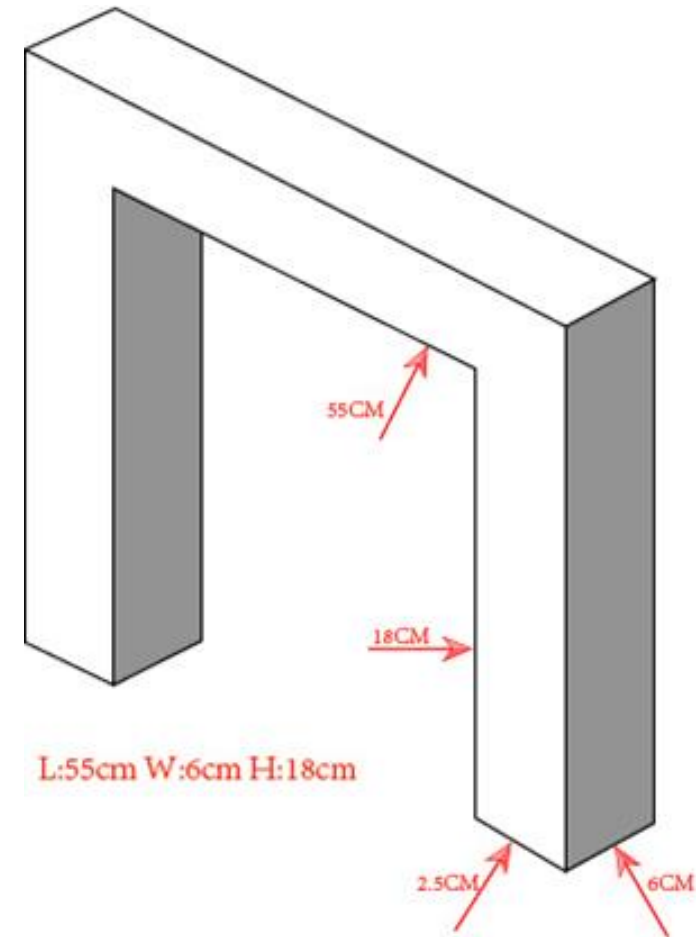
Age	All
Category	Individual Timed Mission
Robot Kits Allowed	MRT LINE Core Humanoid
Mission	Control the humanoid to complete missions
Robot Building	Pre-programmed LINE Core Humanoid



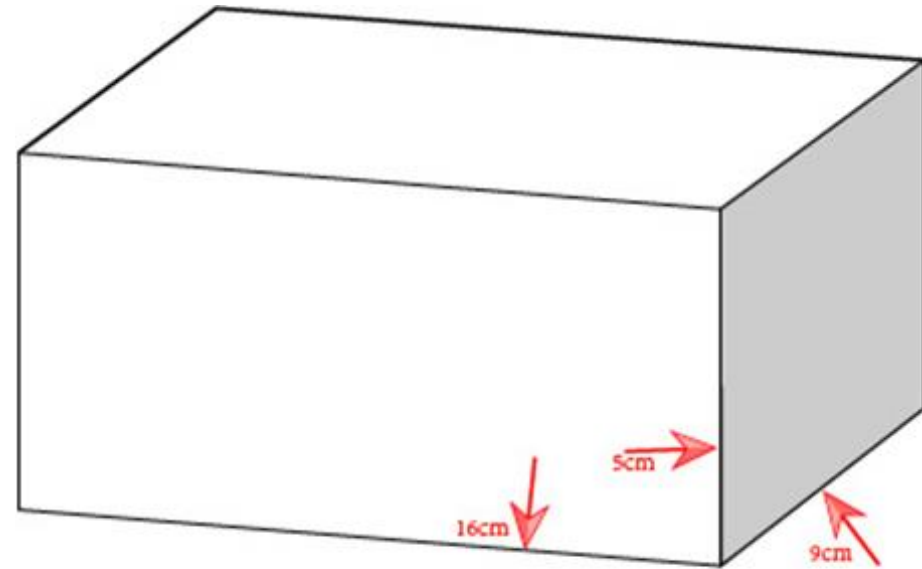
HUMANOID ROBOT MISSION GAME FIELD



MISSION 1

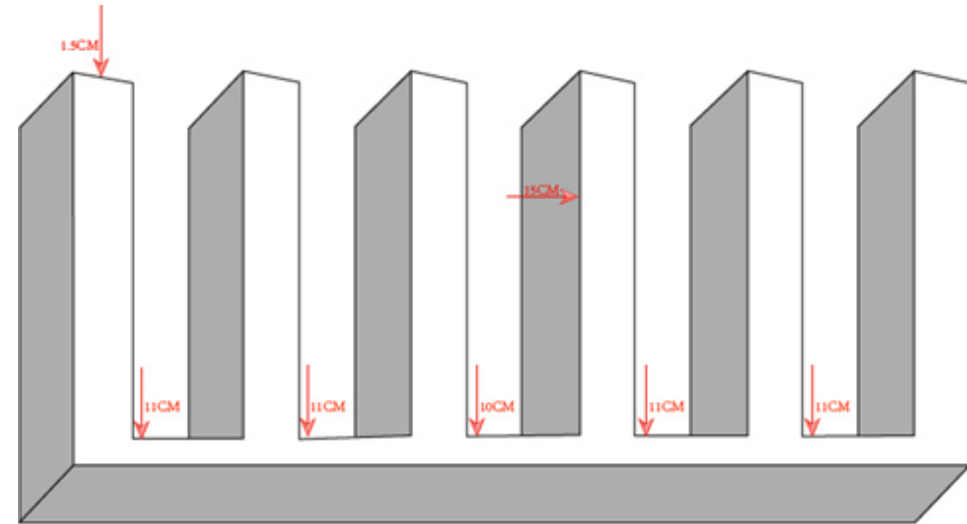


MISSION 2

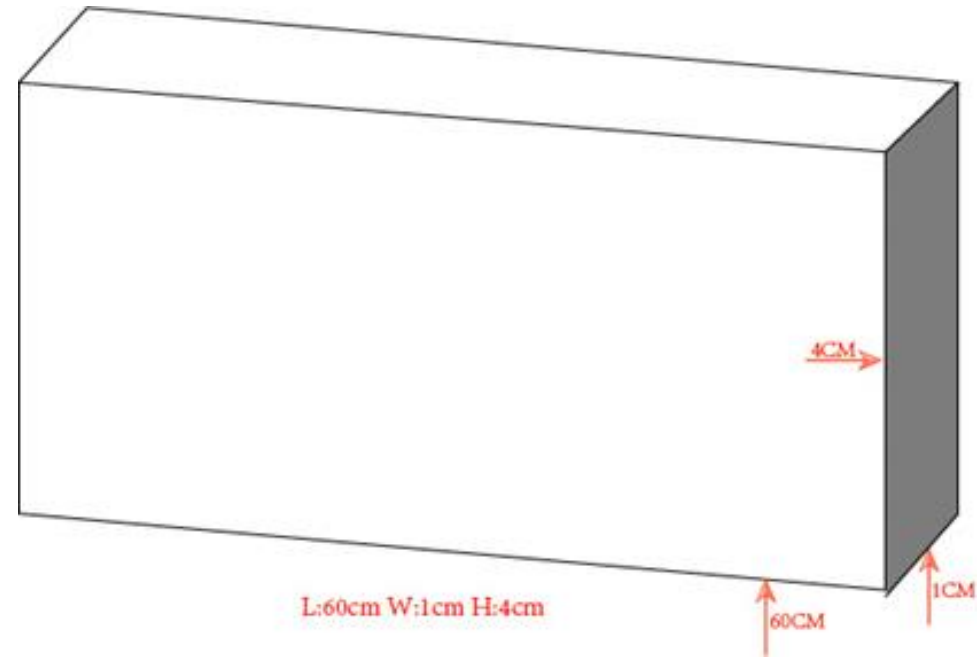


Rectangle: L:16cm W:9cm H:5cm

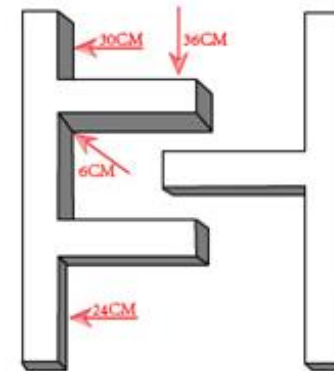
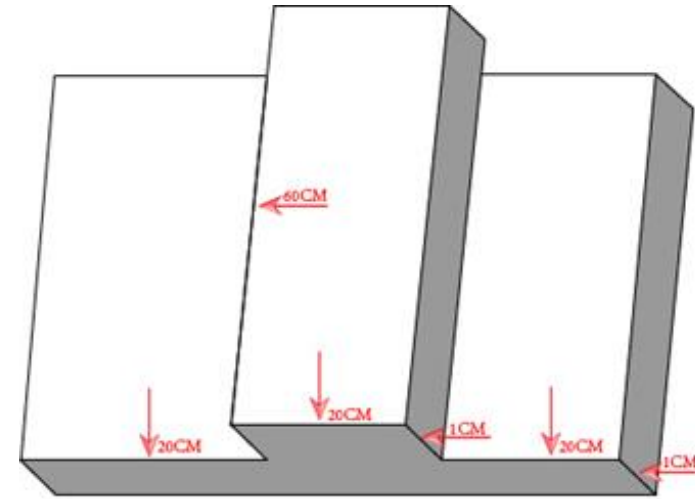
MISSION 3



MISSION 4



MISSION 5





HUMANOID ROBOT MISSION GAME RULES

Dimensions and Restrictions

- Only MRT LINE Core Humanoid and its parts are allowed to use.
- The battery specification, length of robot leg and arm should strictly adhere to the instruction manual (LINE Core Humanoid).

Game Duration

- Each match is stipulated for 1 round with a duration for a maximum of 5 minutes.
- Game may end before 5 minutes when :
 - Robot reached the end line.
 - Disqualification of a participant
 - When referee judges that the continuation of the match is impossible



HUMANOID ROBOT MISSION GAME RULES

Game Play Details

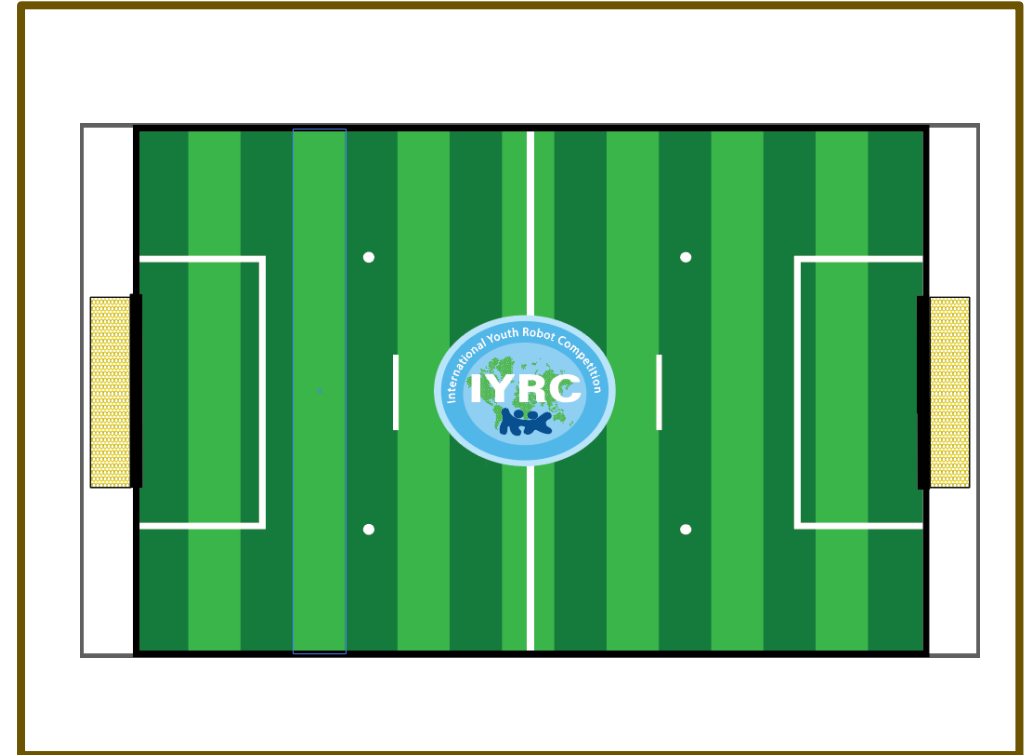
- Participant should prepare their own Android device (Airplane Mode) to control the robot.
- Robot can start to move once the whistle blown.
- During the game, if robot out of battery and not be able to control anymore, game will be terminated and current point will be recorded.
- Each mission has 2 tries. The second try, referee will place the robot at the starting point of the mission / the point gap of the mission.
- If both failed, then referee will move it to the next mission starting point / next point gap.
-

Win/Lose Criteria

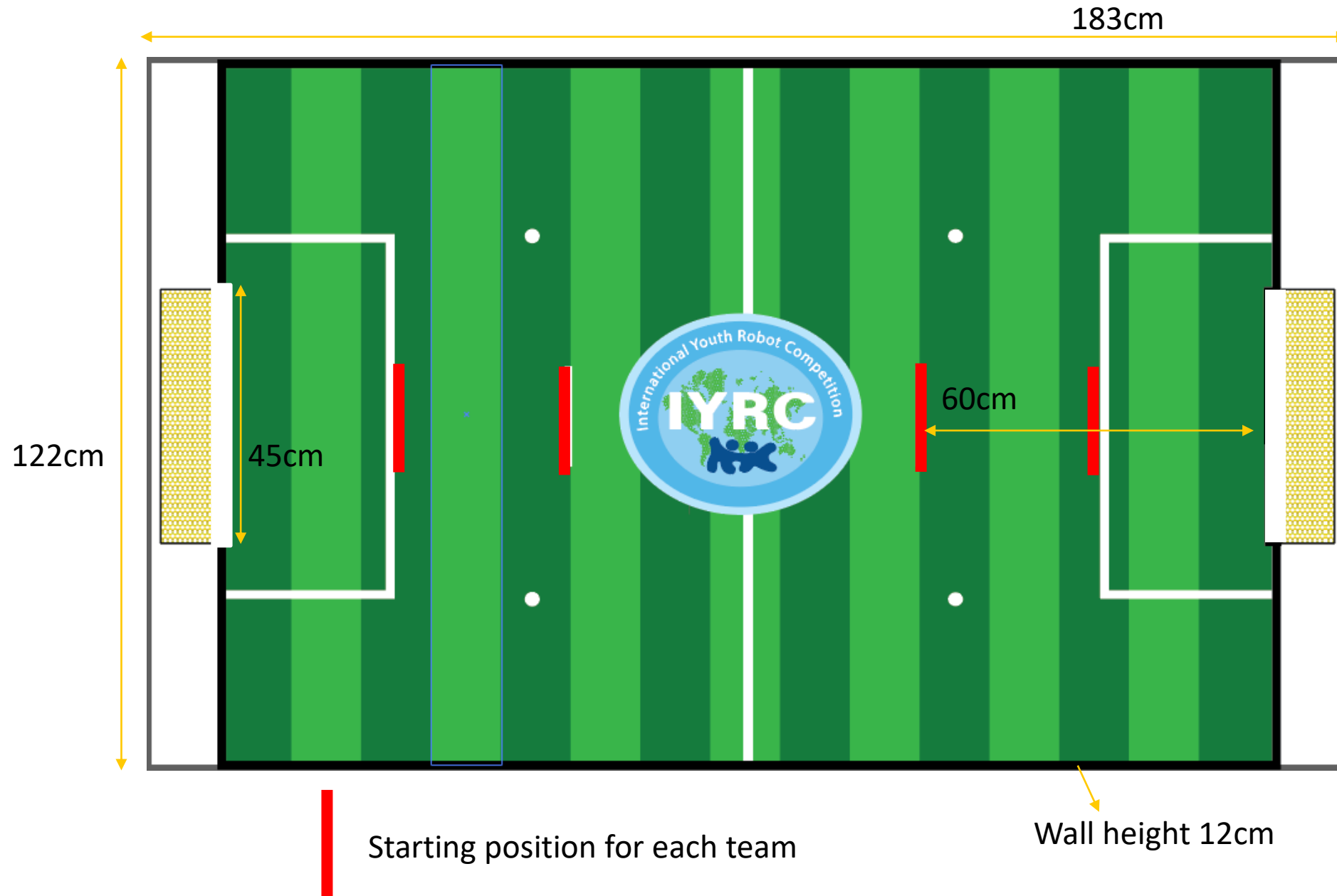
- Participant with the highest score is the winner. If there are two or more participants with the same score, the lowest time recorded to finish the missions is the winner.
- If the points and time of both participants are the same, the participant who is younger would be the winner.

OPEN : AUTONOMOUS IR SOCCER

Age	All
Category	2v2 Tournament
Robot Kits allowed	MRTXUNO or MRTNode robot kit
Mission	Autonomous Soccer match
Robot Building	Pre-build & pre-programmed autonomous robot



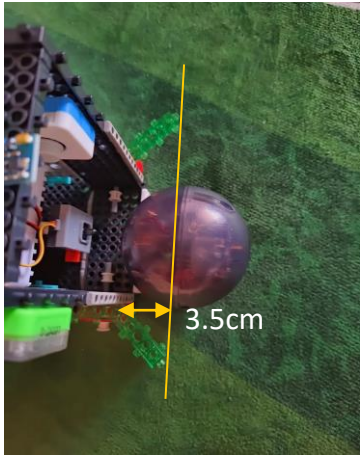
IR SOCCER GAME FIELD



IR SOCCER GAME RULES



Dimensions and Restrictions

- Robots size is limited to 20cm x 20cm.
 - Robots must have a handle for referees to easily pick them up.
 - Robots ball holder/dribble mechanism depth cannot exceed 3.5cm (half of the IR ball diameter).
- 
- The image shows a close-up of a robot's ball holder mechanism. A yellow double-headed arrow indicates the depth of the mechanism, which is labeled as 3.5cm. The robot is built using black and white LEGO bricks and is holding a red IR ball.
- It is prohibited to use modified parts.
 - It is prohibited to use glue, adhesive tape, screws or any other materials for robots building.
 - Maximum of 4 DC motor, 2 Flame sensors, 1 compass sensor (ex: GY-271, BNO055), 1 touch sensor, 1 LED, 1 Ultrasonic sensor, mainboard MRTXUno or MRTNode can be used.
 - Maximum of 9V DC input. Rechargeable Li-ion battery is allowed.
 - All teams should have two robots max. Any replacements or shared usage of robots by several teams during competitions is prohibited and would lead to the disqualification.

Control

- Robots shall be capable to operate autonomously and detecting the existence of IR ball (diameter ~ 7cm).
- Robots shall be programmed when it is turn on, setting the direction of goal is initiated with a press of touch sensor.
- After the goal direction setting, the programming for the robots should be such that they alternate between starting and stopping operations each time the touch sensor is pressed.



IR SOCCER GAME RULES

Game Pre-setting

- Organizers allow access to the playing field to set up and check the robots before competition start according to the schedule that will be published at the competition beginning.
- Organizers will give 1 minutes for player to set the direction of the opponents goal before game starts.

Game Duration

- Each game is stipulated for 5 minutes.
- Extension of rounds is only when both sides have the same score. The extension round would be one on one match until a goal is generated.

IR SOCCER GAME RULES

Game Rules

- Robot may not hold the ball.
 - Remark: Holding the ball means the full ball control using blocking of all ball's degrees of freedom. For example, if the robot press the ball to its body or cover it with any of its elements, making difficult the access to the ball for other robots. The robot is considered holding the ball, if the ball stops rotating when the robot dribbles the ball or if the ball doesn't bounce when hitting in the robot.
- Robot is prohibited to hold the ball under itself, in other words, no part of the robot shall overlap the ball more than half of the ball diameter. It apply to the dribble mechanism as well.
- If the robot is not able to move independently and/or do not respond to the ball, the referee declares that robot as fault.
- The referee or players (after referee permission) can remove the fault robot (or robots) from the playing field.
- The fault robot may be repaired and by authorization of the referee returned to the start point.
- The game continues during the removal, repair or return of the robot. Note that the referee may decide to stop the game if the robot was damaged in a collision with a robot from competitors team.
- Participants may touch robots only in case of referee permission during the game.

IR SOCCER GAME RULES

Game Play Details

- Referee will place the IR ball at the centre of the field and the robots shall be ready at the start position.
- On a referee signal and the timer is started, all robots shall be immediately started by the members of the teams by pressing the start button.
- Any robot, that has started the game before the referee signal, will be out for one minute.
- During the match, if the ball is held by a robot and not moving (stalemate) for more than 5 seconds, It is considered a “Dead Ball”. Referee will relocate the IR ball at a neutral spot accordingly (white dots on the map) and move away those robot that stucked together. The game will resume with the referee's instruction. If more than 3 times happening at the same place, the ball will be put at the middle field and game reset taking place. Game resume with whistle blow.
- The referee or a referee assistant can help robots get unstuck if the ball is not being disputed near them and if the situation was created from normal interaction between robots. The referee or a referee assistant will pull back the robots just enough for them to be able to move freely again.
- The parts which are fallen or broken from the robots cannot be fixed back onto the robots during the match while in the game field, but can be fixed if it is declared as fault and remove from the field.
- After 5 minutes if a tie game occur, extension match will take place until the first goal is generated.

IR SOCCER GAME RULES

Scoring

- Each goal is 1 point awarded to the scoring team.
- A goal occurs when the ball is being pushed/hit/rolled into the goal post passing the goal line.

Win/Lose Criteria

- The team with the most goals wins.

OPEN : COCOMON GO

Age	8-13
Category	2 members a team
Robot Kits Allowed	COCONUT
Mission	A simple mission to create a round line using the dot matrix function and line tracer function of MRT Coconut solves the problem of improving algorithmized computing thinking ability to obtain scores and final arrival scores using different puzzle boards
Robot Building	Pre-build robot



COCOMON GO GAME FIELD

Objective

- MRT Coconut's dot-matrix function and line tracer function, which are integrated physical computing with Arduino-based hardware, are used to perform a simple mission to create a round line while passing through different puzzle boards in a set time, and the score of the dot-matrix of Cocomon at the final point of arrival is added to achieve higher scores

Restriction on Robot Design

- MRT Coconut with scratch and entry, Python-coding Arduino-based hardware, and MRT Coconut with line tracer made using MRT blocks run.
- It should start from the starting point (green puzzle board) (starting is irrelevant in either direction)
- The starting coconut takes five seconds to move one compartment of the puzzle board.
 - ※ The starting coconut is prepared by the organizers of the competition.
- Scores Cocomon are 5 units in total, each located on a red puzzle board.
- Scores Cocomon each marks the score with a tote matrix, consisting of 5 points (1 unit), 10 points (3 units), and 15 points (1 unit)
- Score Cocomon can be checked by turning on the score Cocomon on the puzzle board that arrived when the departing coconut arrived at the point of arrival (red puzzle board).

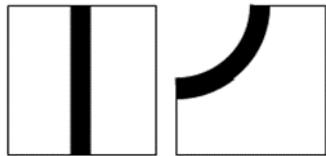
COCOMON GO GAME FIELD

Obstacle Puzzle Edition

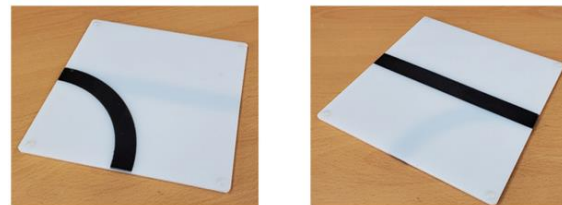
- Obstacle puzzle plates are given four, which interfere with the driving of the starting coconut.
- The position of the obstacle puzzle board is determined by random drawing before the start of the game.
- The size of the obstacle puzzle board is 19.5 cm wide and 19.5 cm long, and it is black.

Road puzzle board

- The road puzzle board is marked with a black line to create a line for the starting coconut to drive
- The size of the road puzzle board is 19.5cm wide and 19.5cm long.



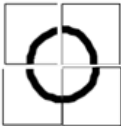
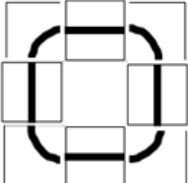
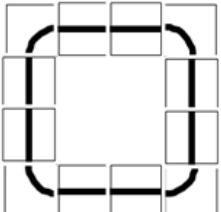
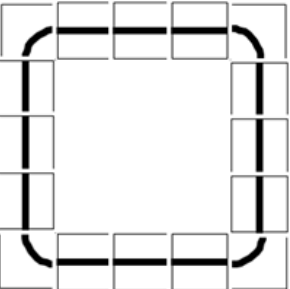
As shown in the figure, the road puzzle board has black lines in front and back consisting of straight lines and curves, so you can flip and make a different path.



COCOMON GO GAME RULES

Game Rules

- The race time is 5 minutes, and within 5 minutes the departing coconut must depart and arrive at the point of arrival.
- If the arrival point is not reached within the game time, the team's score will be determined only by the mission performance score up to the point after 5 minutes.
- Prior to the start of the game, the position of the five Cocomon players and the position of the four obstacle puzzle boards are determined by random drawing by the team.
- The following is how to obtain a mission score while traveling to the point of arrival.
- The road puzzle board flips back and forth to create a road and the starting coconut can drive.
- The obstacle puzzle board is immovable.
- Check the location of the obstacle puzzle board and earn a mission score when the coconut drives along the path below.

 <p>2×2</p>	 <p>3×3</p>	 <p>4×4</p>	 <p>5×5</p>
4 point	10 point	16 point	22 point

COCOMON GO GAME RULES

- You make a round road with a starting coconut and drive to score points, and even if you drive the same road again, the same road is not recognized as a score.
- If you want to make a round road with a starting coconut to earn points, and if you want to get points again, you must make a round road made of another route into a road puzzle board to earn points.
- All scores obtained by creating a round road while driving are summed up to become mission scores obtained by the team.
- If you arrive at the point of arrival within 5 minutes of the match, turn on the Cocomon on the red puzzle board to earn the Cocomon score.
- The final score is the sum of the total mission scores obtained during the match and the Cocomon score captured at the point of arrival of the score.
-

Scoring

- Two points will be deducted if the referee does not comply with the order during the game.
- If you turn on the arrival Cocomon in advance and check, you will get 2 points deducted.
- Points will be deducted according to the judge's judgment when receiving external assistance.
- Equalizer Rules: If the points earned by the team are the same, the team with the highest order shall win.
- a team with a high score by making a round road
- The team with the highest score of Cocomon
- The team that has less time left to arrive at the destination in 5 minutes
- The lower team after adding the grades of 2 students from the participating team
- Participating teams in the lower grades
- The participating team is the team with the late birth date of the lower grade student

OPEN : GAME MAKER KIT GAME DESIGN CHALLENGE

Age	All
Category	Team 1-3 students
Robot Kits Allowed	Game Maker Kit
Mission	Design a proper game based on the theme given and submit online.
Robot Building	Pre-build robot



GAME DESIGN CHALLENGE

Objective

Provide a platform for students to showcase their creativity, innovative and programming skills. They are required to work together as a team to design a game based on the given theme. Besides, they will also need to present and demonstrate their game creation well to convince and impress the referees.

Restrictions on Game design

- Only MRT Game Maker Kit is to be used to make game.
- Participants should make code at <https://arcade.makecode.com>.
- Participants should make sure that games work properly both at emulator of websites above and MRT Game Maker Kit.



GAME DESIGN CHALLENGE

Game Rules

- Participants shall make game code in advance.
- Each group has a presentation time of 3 minutes to introduce their games to the referee on the competition place. Presentations can be done in English. If they are unable to present in English, they have to prepare their own translator.
- Game kit and lab top may be displayed in the allocated table assigned to each group. Hence, Participants are required to ensure their game kit are taken care of during the display time to the public until the judging is completed.
- After registration, a poster(presentation) form will be sent the teams by organizer, and participants need to fill the poster content. Besides, 4 copies of the printed Manual (Presentation File) in English are required for the display and referees review, it needs to include:
 - Game Name
 - Purpose
 - Team member introduction and task allocation
 - Introduction of the project
 - How to program (coding block captured)
 - How to play.

Theme: My Robot, Time to Save the Earth



GAME DESIGN CHALLENGE

Scoring

- Referees will check if the team meets the requirements or not, and evaluate teams' works. Score will be given based on different criteria and weightage respectively:
 - Relevance to theme: 10 score
 - Creativity & Uniqueness: 30 score
 - Code Functionality: 30 score
 - Team work: 10 score
 - Presentation skill: 20 score
 - Additional Points
 - When participants create their own Character/Background, they will get additional points up to 5 ~10 points.
 - When participants use more than 3 kinds of coding blocks, they will get additional points up to 5 ~10 points.
- e.g.) Loops, Logic, Music...
- Participating group with the highest score is the winner. If there are two or more groups with the same score, the lowest average younger participating group is the winner.

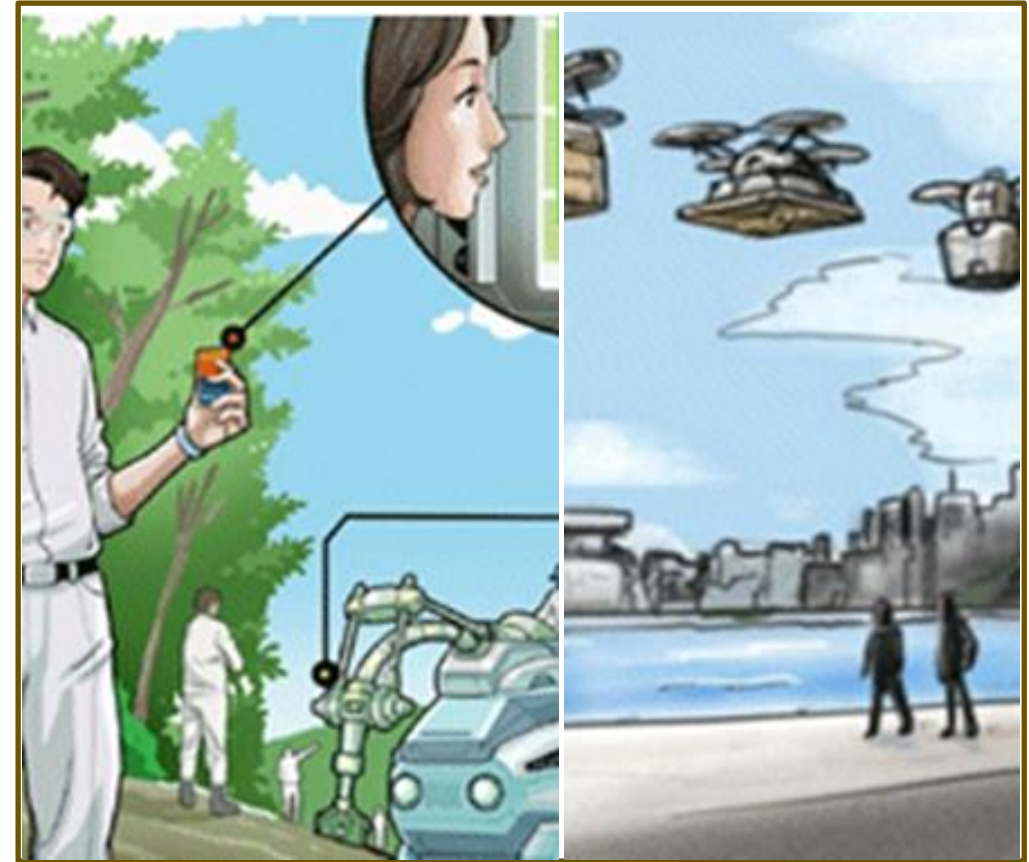


ONLINE CATEGORY

Robot Dream Design

ONLINE : ROBOT DREAM DESIGN

Age	All
Category	Individual
Theme	My Robot, Time to Save the Earth
Mission	Drawing robots expressing the theme.
Robot Building	Presentation



ROBOT DREAM DESIGN

Objective

- Students are encouraged to freely imagine scenarios of living with robots in the future, where creativity, innovation, and imagination are key. They can design robots or systems based on scientific evidence and underlying technology to enhance future living. Submit a one-page A4 jpg file with a freeform introduction of the robot and its functions, along with an imaginative depiction of future living with robots.

Theme: My Robot – Time To Save The Earth

Design Specification

- A4 1-page content containing explanatory text and an illustration (format can be comic, diary, drawing, diagram, etc).



ROBOT DREAM DESIGN RULES

Robot Design Rules

- Isaac Asimov's Three Laws of Robotics must not be violated.
- First Law: A robot may not injure a human being or, through inaction, allow a human being to come to harm.
- Second Law: A robot must obey the orders given it by human beings, except where such orders would conflict with the First Law.
- Third Law: A robot must protect its own existence as long as such protection does not conflict with the First or Second Law.
- When designing robots, they should be presented in free-form formats such as scenarios, comics, blueprints, etc., based on scientific evidence or existing technology.
- As design is involved, the submission should provide specific guidance, explanations, or colored results regarding color schemes.
- Hand-drawn illustrations are acceptable, and submissions should be in the form of a one-page A4 jpg file.

ROBOT DREAM DESIGN REQUIREMENTS



Participation Procedure

- Participants must submit a jpg file via email along with the participation application form and personal information consent form. Files should be saved with the participant's name. For example, "name.jpg". In the case of a group, submission should be made collectively in an Excel file.
- File submissions are made as a group through the responsible teacher or mentor.
- Submissions are accepted until **July 24, 2024**, to **seyu7374@naver.com**



ROBOT DREAM DESIGN SCORING

Judging Criteria

- The judges will verify whether the team meets the required conditions and evaluate the team's image file.
- Scores are composed as follows:
 1. Practical aspects based on scientific evidence or current technology (35 points)
 2. Ideas or creative problem-solving skills addressing current issues or attempting new approaches (35 points)
 3. Expressiveness of the design representing the implementable features of the robot or system (30 points)



GENERAL GAME RULES



GENERAL RULES

Common Rules

- The organizer reserves the right to disqualify any participants if found violates any rules.
- In the event of any disagreement or misunderstanding, the judges' decision will be final.
- If there are any changes to the rules and regulations, it will be announced to all participants 10 days before the competition starts. The judges will have full authority to explain and enforce the rules for all the competition category.

Participants

- Participants are allowed to participate in **Maximum 2 categories** + 1 Creative Design (Compulsory).

Scoring

- Each participant/team representative needs to confirm the competition result and sign immediately after the end of the match.
- Participants are not allowed to dispute the result recorded after the confirmation.
- All time are measured using a stopwatch.



GENERAL RULES

Competition Rules

- Prior to the start of the competition, all robots will undergo an inspection.
- If a robot does not meet the specifications or design restrictions, the participant will be given a grace period of 15 mins to modify their robot to meet the specification or comply with the design restriction, failure to do so within the time limit the participant will be disqualified.
- If the robots encounter any technical difficulty before the start of the match, they will be given 5 minutes to fix the robot.
- Judges can assign practice playfield and restrict practice time per participant / team to ensure equal and fair practice time.
- RF Remote Control will be provided by organizer for categories that requires a remote control robot. In this case, robot should set to Channel 1 or programmed to Channel 1(MRTX mainboard) in order for it to work.
- All robot parts are not allowed to drop while the match is in progress. Judges may take necessary action against the teams that dropped their robot parts that could affect on-going matches.
- Participants are not allowed to touch their robots and/or remote controls during the competition unless instructed by the judges.
- Sharing of robots among the participants in the competition is not allowed.



GENERAL GAME RULES

Robot Design Restrictions

- Only MRT Series, & HUNA educational robot kit are allowed (Cross using parts is allowed).
- No limitation to the amount of blocks used to build the robot as long as within size and weight restrictions.
- My Robot Time Toy series and MRT Soccer Robot are **Strictly NOT ALLOWED**.
- Electronic parts are not allowed to be modified in any way. If found guilty, the participant would be **IMMEDIATELY** disqualified.

Robots

- Robots are not allowed to have any power supply above 9V DC (Volt of Direct Current). VAC (Volt of Alternating Current) power supplies are strictly prohibited for safety reasons.
- Robots will need to protect their sensors from any outside interferences if necessary.
- Robots RC receivers will need to be protected from any outside interferences.

Game Fields

- Robots shall not damage any part of the field or obstacles deliberately.
- Robots shall not cause any danger to the arena and surroundings in anyway whatsoever.



GENERAL GAME RULES

Fouls (2 Fouls = Disqualification)

- Not obeying judges' order. Disrupting order
- Communication with spectators or other participants

IMMEDIATE Disqualification

- Robot does not comply with the size/weight restrictions of the game participated
- Usage of parts that is not authorized before match
- In case of technical problem such as robots are uncontrollable, the referee will pause the match and help participants to turn off and on the robot only. If the robot still cannot function after the robot is turned back on, the participant will be disqualified.
- When the robot is not able to move not due to technical reasons for more than 10 seconds (due to fallen off parts, stuck, design flaw, etc)
- Carry storage devices including MP3 player, PMP, USB memory
- Touching or damaging other participant's robot, laptops, or belongings
- Touching the robot or the game field and it's contents while the match is in progress. (except for Bowling)



GENERAL GAME RULES

Remote Controlled Robots

- Participants who remote control the robot shall keep a certain distance away from the game field area without touching or disturbing the game.
- Any related to channel setting in programming, do program it to Channel 1 (default) as RF Remote Control will be used in the competition.

Other Rules

- **While the match is in progress, at any time the referee whistles, the human operator should stop the robot.**
- Upon removal of a robot from the playing pitch, it can only re-enter the match upon referee's approval.
- The parts which are fallen or broken from the robots cannot be fixed back onto the robots during the match.
- The referee's decision would be final and no disputes will be entertained.

GENERAL TOURNAMENT RULES



Team Tournament Rules

- All the tournament based games will be based on “Knock out” system.
- Participants are to submit their robots for inspection in the morning of their competition day before 9am.
- After participant’s robot are submitted for inspection and passed the restricted regulations, participants are not allow to touch their robots until their match begins with the approval of the referee. Any participant who touches their own or other’s robot without consent of the referee will be **IMMEDIATELY** disqualified.
- All the teams will be distributed in opposing pairs by IYRC committee randomly.
- Number of participants per team is determine by category of game registered.
- Each participant is to control his/her own robot only
- Only the winning teams will proceed to the next round of competition.