



FIRST LEGO League

Robot Game

ROBOT GAME

PROJECT

CORE VALUES

What is
FIRST LEGO
League?

Preparing to
Judge

Teams

Awards

The Decision
Process



Welcome to the Robot Game!

ROBOT GAME

PROJECT

CORE VALUES



MASTERPIECE

Robot Game Basics

ROBOT GAME

PROJECT

CORE VALUES

- ✓ This season is about the arts – Activate technology to enhance the audience's experience
- ✓ Launch from one two launch areas
- ✓ Return to either home before launching again
- ✓ Autonomous Robot
- ✓ 2.5min Game Match
- ✓ Only the robot can move objects
- ✓ Scores are at the end of the match
- ✓ Three matches – highest score counts
- ✓ Gracious Professionalism will be judged by referees (2, 3, or 4 points)



Robot Game Basics

ROBOT GAME

PROJECT

CORE VALUES

Rule Hierarchy:

- ✓ Robot Game Rule Book
- ✓ Robot Game Updates
- ✓ Table Referee
- ✓ Tournament Head Referee



Terms

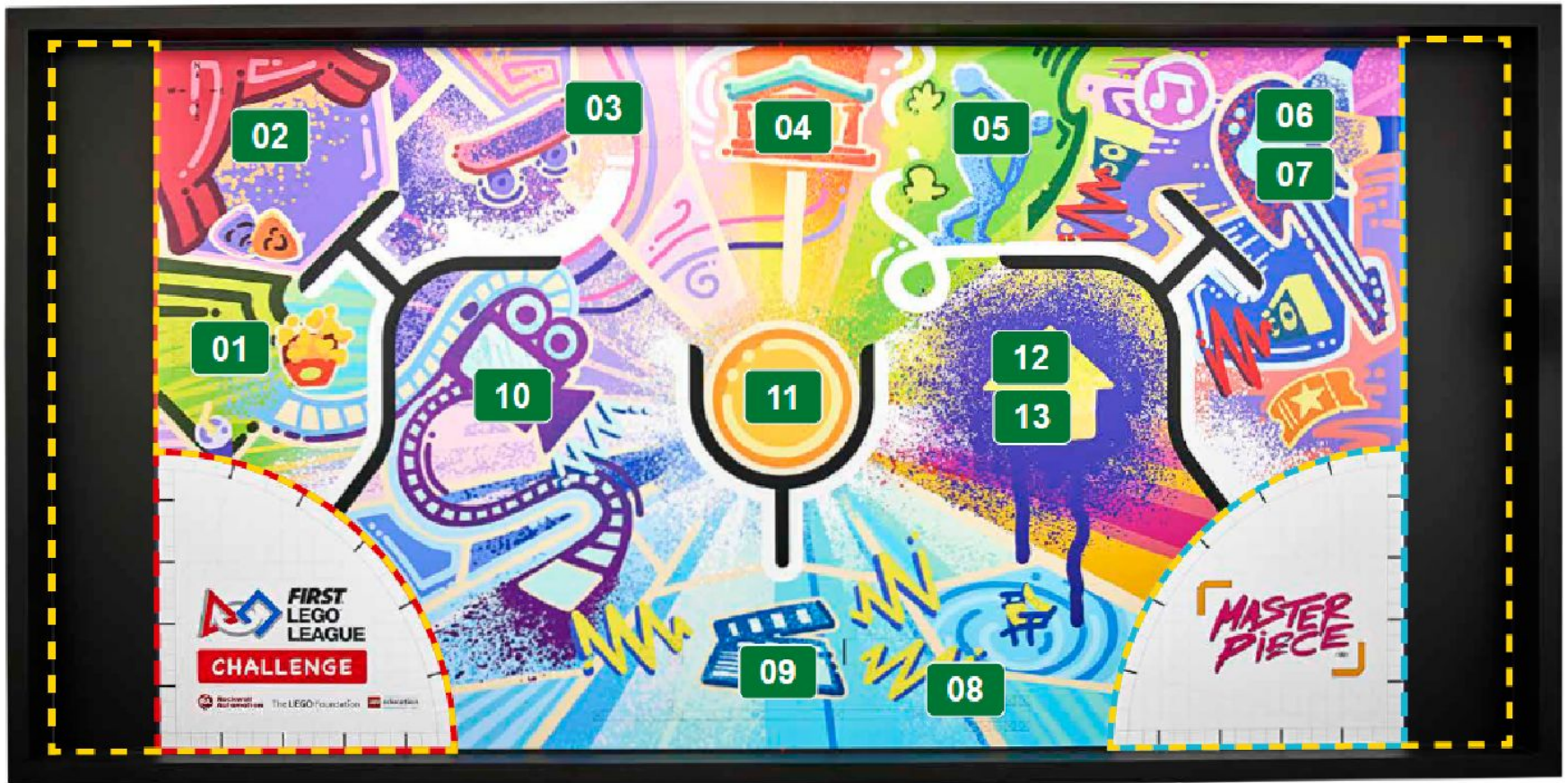
- ✓ **Equipment:** Everything teams bring to the match.
- ✓ **Field:** This consists of the border walls and everything inside them.
- ✓ **Launch:** When technicians activate the robot from completely within a launch area to move autonomously.
- ✓ **Interruption:** When technicians interact with the robot or anything touching it after launch.
- ✓ **Match:** The 2.5 minutes when the robot completes as many missions as possible to earn points.
- ✓ **Mission:** One or more tasks that can be completed for points. Teams may try missions in any order or combination.
- ✓ **Robot:** Your controller and any equipment combined with it by hand and intended to not separate from it, unless by hand.
- ✓ **Technicians:** Team members standing at the table who are handling the robot during a match.

Equipment

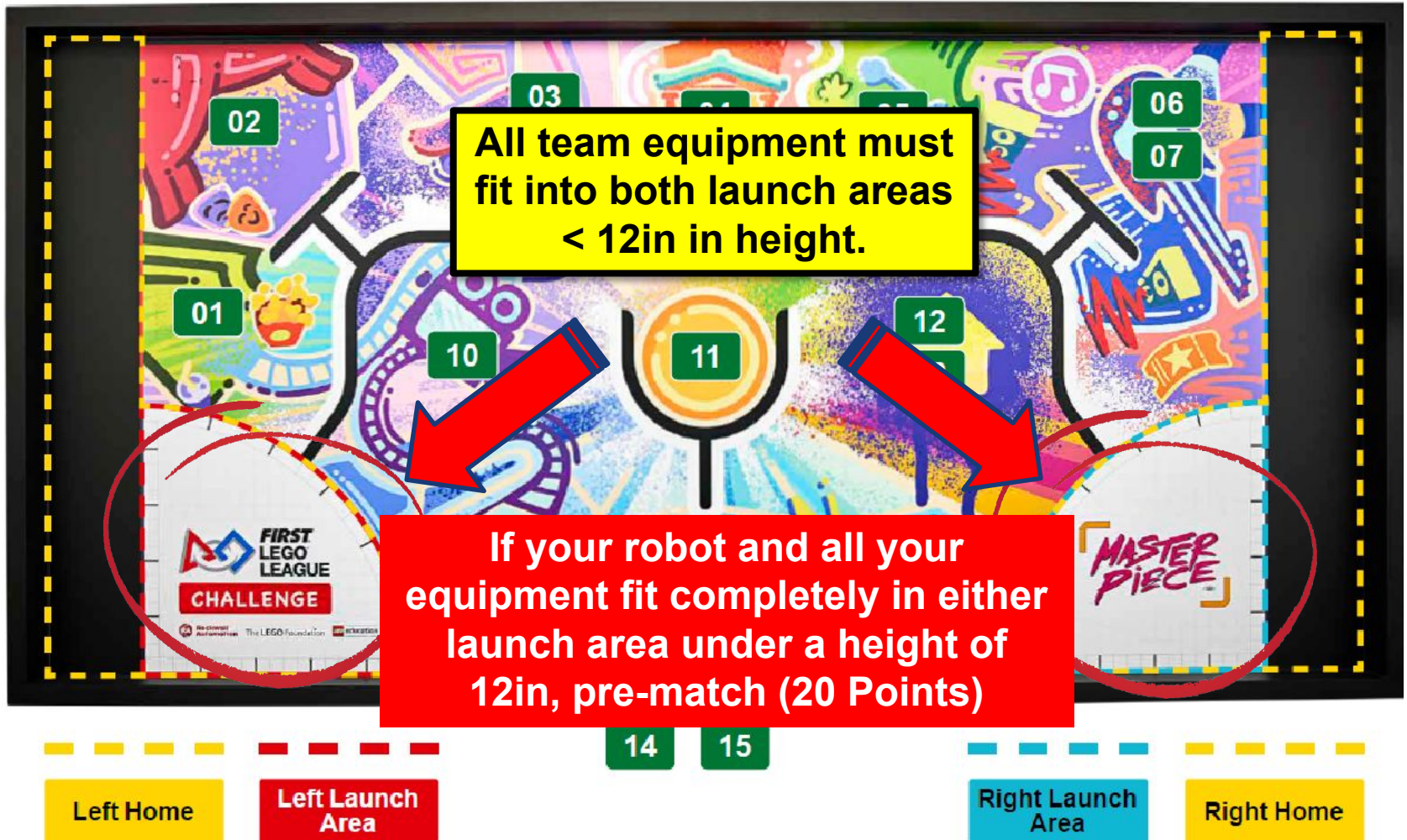
- ✓ 1 Controller
- ✓ 4 Motors
- ✓ **Sensors:** Only touch/force, color, distance/ultrasonic, and gyro sensors are allowed (any mix and number) in any one match.
- ✓ **Additional or duplicate mission models are not allowed.**

Teams may bring one sheet of notebook paper per home area for program notes and does not count as equipment for inspection.

Robot Game



Equipment Inspection



Mission 1 – 3D Cinema



Mission 2 – Scene Change

Red flag is down and “active scene” is:
Blue: 10 Points
Pink: 20 Points
Orange: 30 Points

AND if both teams “active scenes” match:
Blue: 20 added
Pink: 30 added
Orange: 10 added

Active Scene

Colored Ball: Blue

Red Flag

14 15

Right Launch Area

Right Home

Mission 3 – Immersive Experience

Three Immersive Experience screens are raised: **20 Points**



03



Team equipment may not be touching the model at the end of match

08



14

15

Left Home

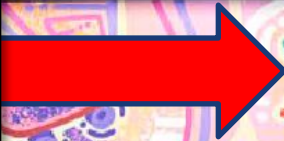
Left Launch Area

Right Launch Area

Right Home

Mission 4 – Masterpiece

Your LEGO art piece is partly in the museum target area: **10 Points**



September 26th Update
Teams must identify their ***Masterpiece*** during pre-match inspection

AND if the art piece is completely supported by the pedestal: **20 added**

Mission 5 – Augmented Reality Statue

The statue's orange lever is rotated completely: 30 Points

30 Points

0 Points

Right Launch Area

Right Home

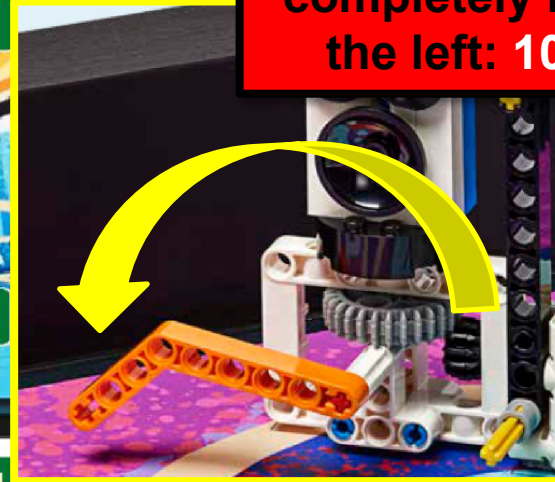
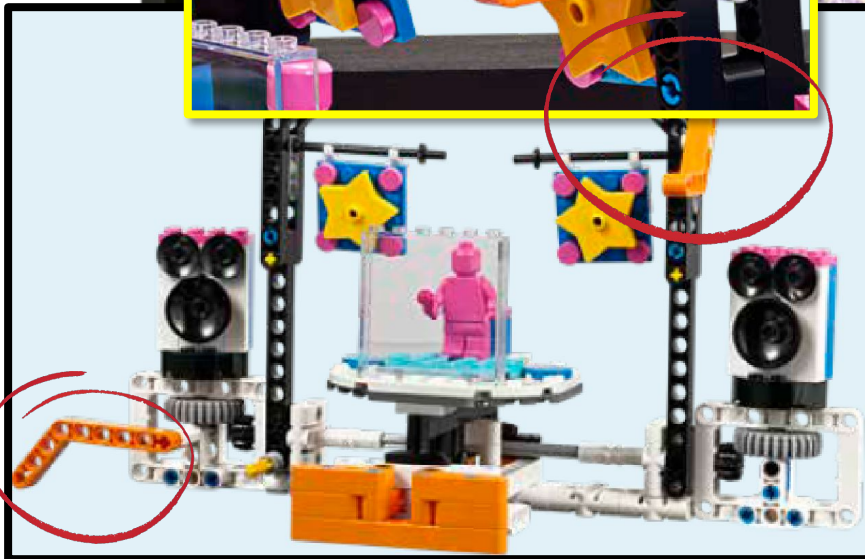
Mission 6 – Music Concert Lights & Sounds



The lights' lever is completely rotated downwards: **10 Points**



The speakers' lever is completely rotated to the left: **10 Points**



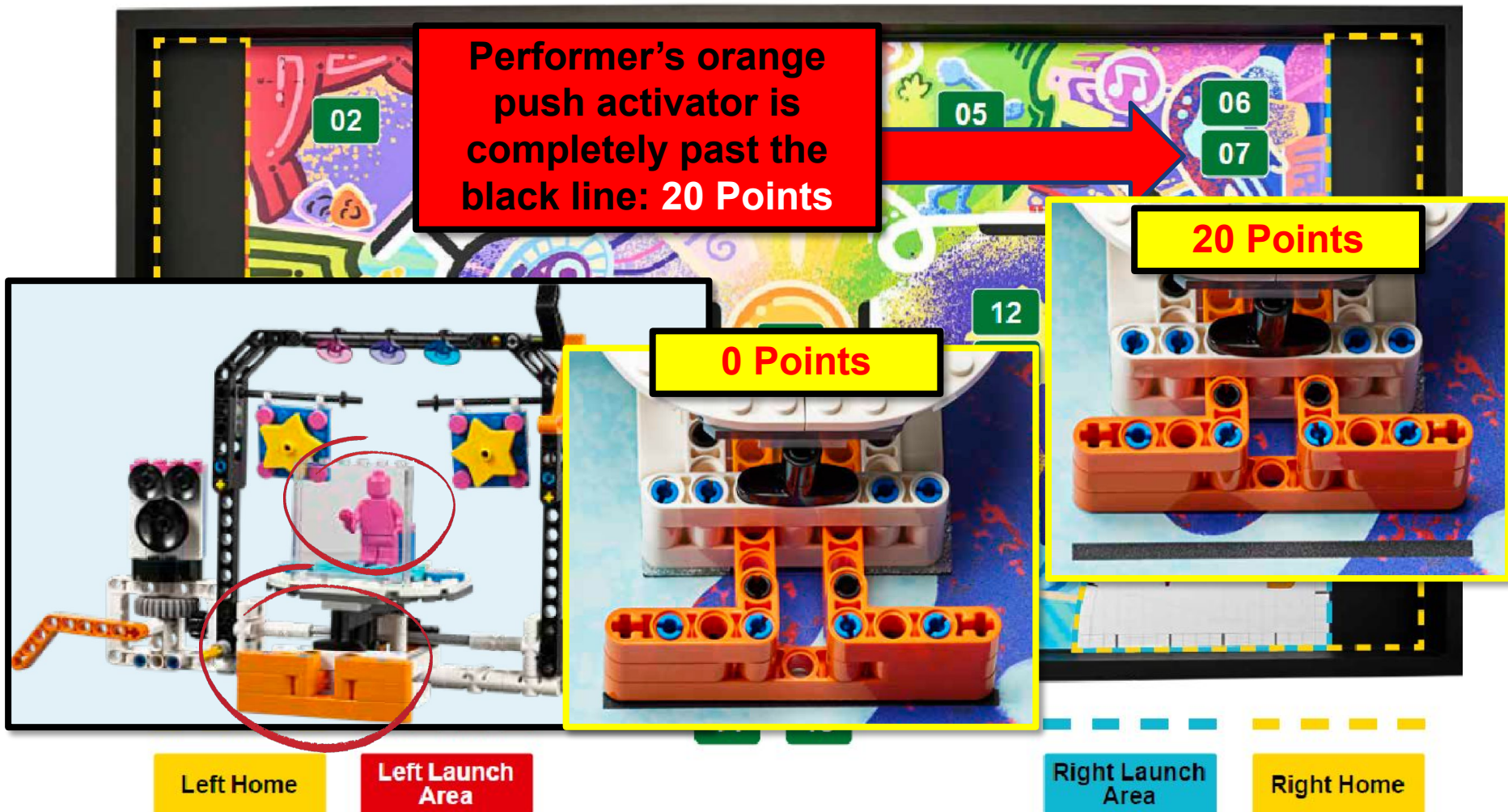
Left Home

Left Launch Area

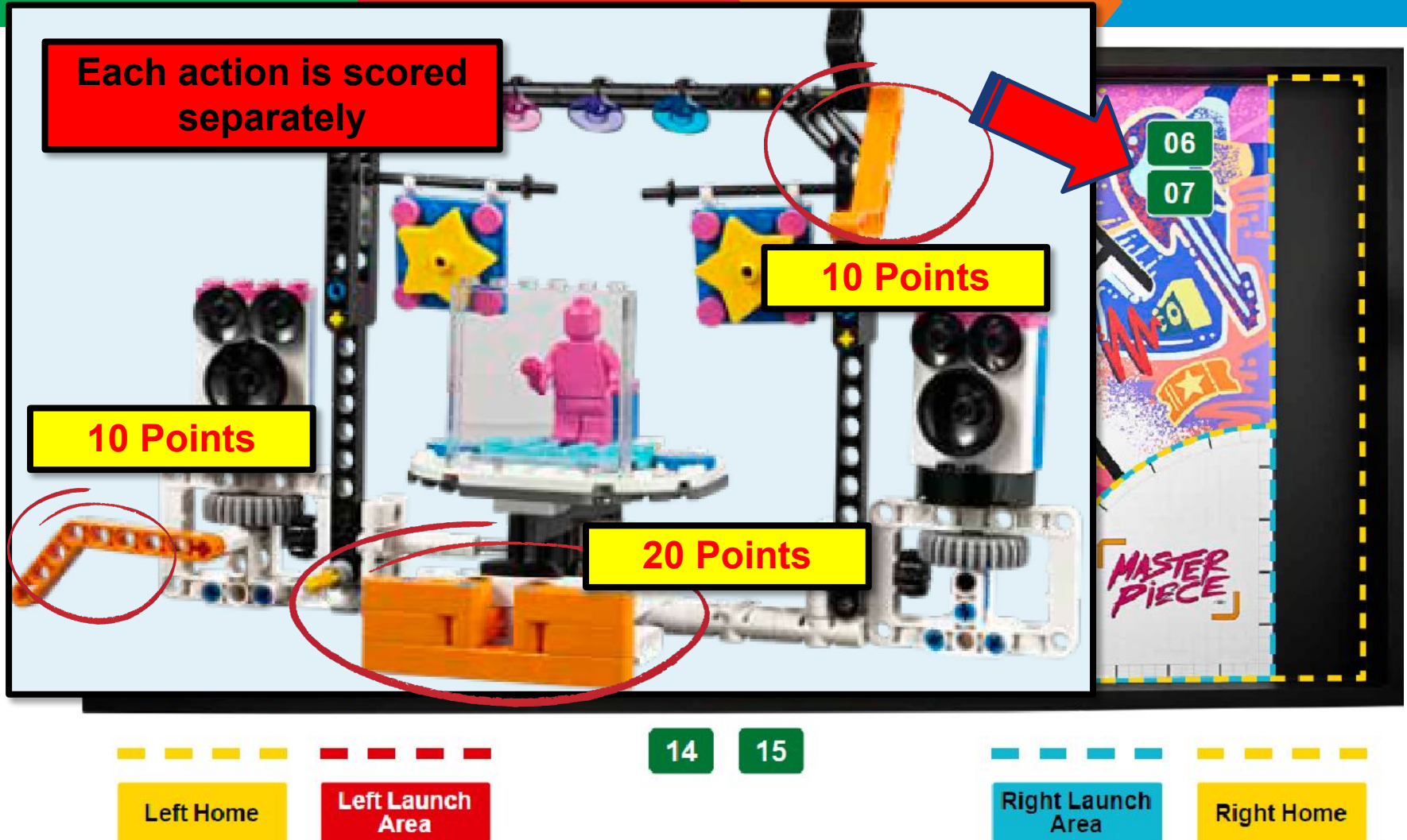
Right Launch Area

Right Home

Mission 7 – Music Concert Lights & Sounds



Missions 6&7 – Concert



Mission 8 – Rolling Camera



If camera's white pointer is:
On or left of dark blue: 10 Points
On or left of med blue: 20 Points
On or left of light blue: 30 Points



If the pointer is on a colored tile, you earn the higher points

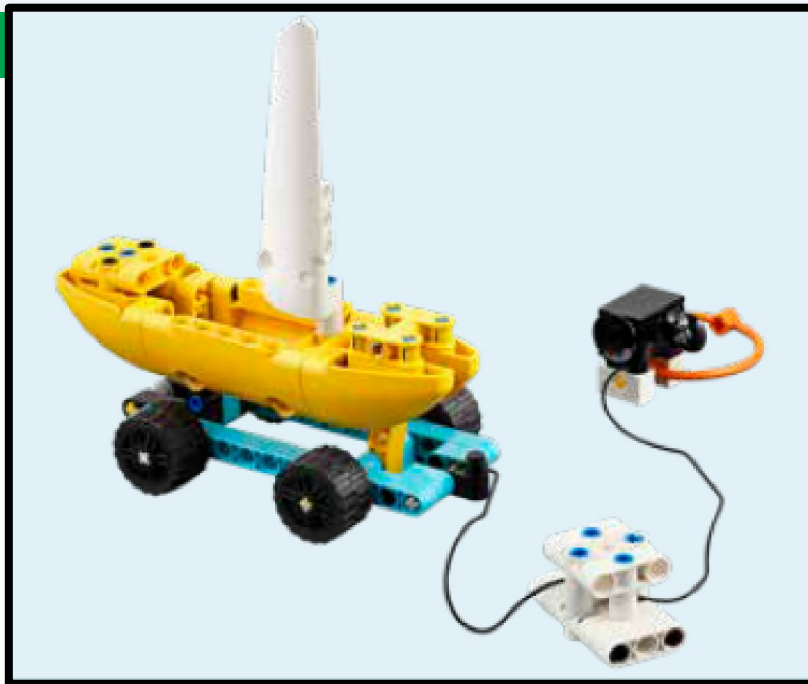
Left

Right Launch Area

Right Home



Mission 9 – Movie Set



If boat is touching the mat and is completely past black line: **10 Points**

Black line extends from bottom to top of mat



If camera is touching the mat and is partly in target area: **10 Points**



Target Area



Left Home

Left Launch Area

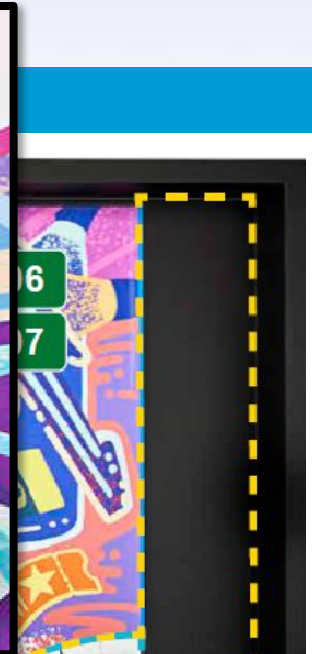
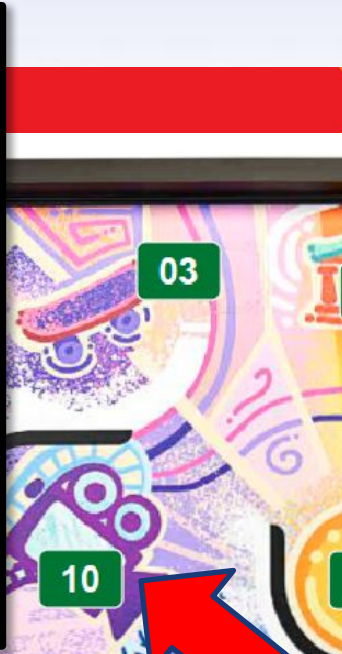
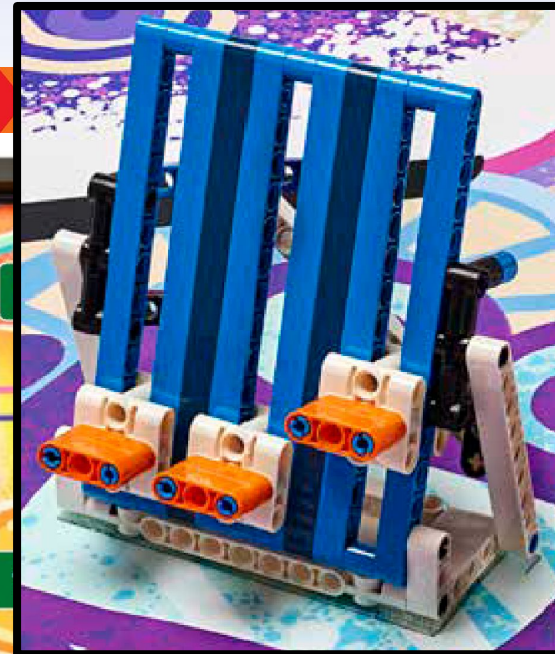
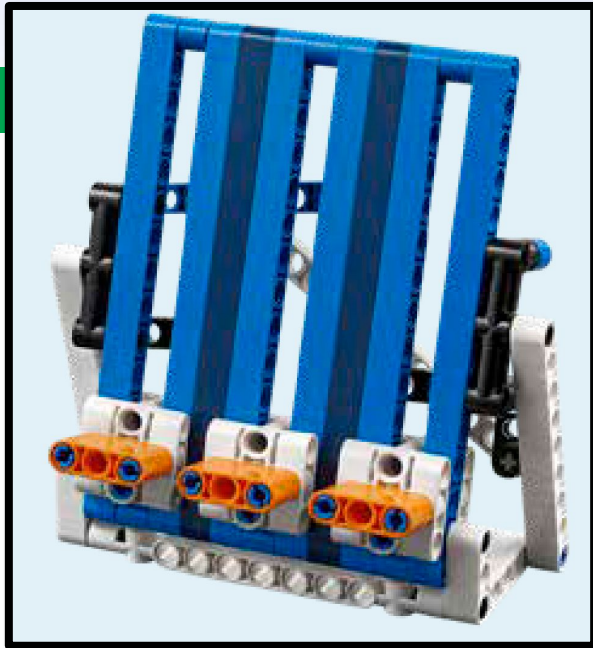
14

15

Camera includes loop, but not string



Mission 10 – Sound Mixer



If a sound mixer slider is raised: 10 Points Each

Team Equipment may not be touching the mixer or slides

Left Home

Right Home

Mission 11 – Light Show

If the light show's
pointer is within zone:
Yellow: 10 Points
Green: 20 Points
Blue: 30 Points

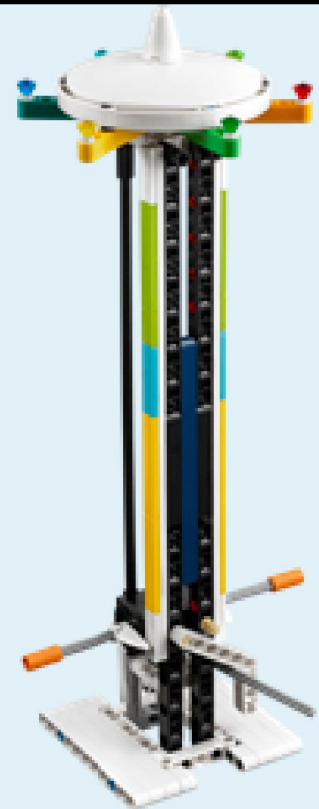
If the pointer is
between zones, you
earn the higher zone

Left Home

Left Launch
Area

Right Launch
Area

Right Home



Mission 12 – Virtual Reality Artist



The diagram illustrates the layout for Mission 12, 'Virtual Reality Artist'. It features a central map with various numbered zones (01, 03, 04, 05, 10, 11, 12, 13, 14) and a red text box stating: 'If the chicken is intact and moved from its starting position: 10 Points'. A red arrow points from this box to a yellow house icon in zone 12. To the right is an inset image of a LEGO Technic robot. Below the map are two detailed views of the robot's arm mechanism, showing a purple dot and a red button. At the bottom, there are three yellow buttons labeled 'Left Home', 'Left Launch Area', and 'Right Home'. A yellow text box at the bottom right states: 'AND if chicken is over or past the lavender dot: 20 Points Added'. The FIRST logo is in the bottom left corner, and the text 'OF SCIENCE & TECHNOLOGY' and the page number '21' are in the bottom right corner.

If the chicken is intact and moved from its starting position: 10 Points

AND if chicken is over or past the lavender dot: 20 Points Added

Left Home

Left Launch Area

Right Home

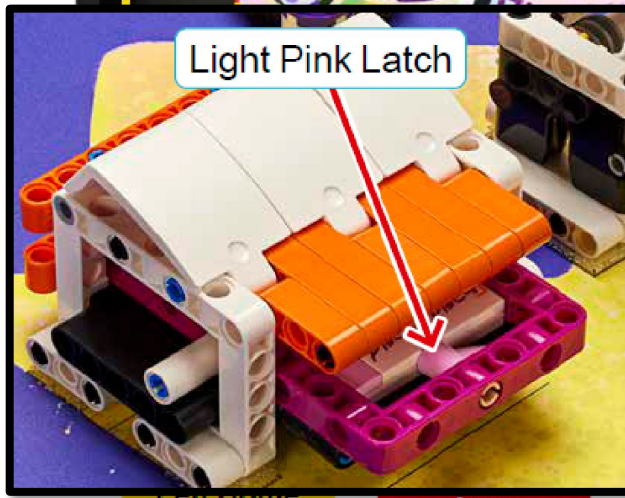
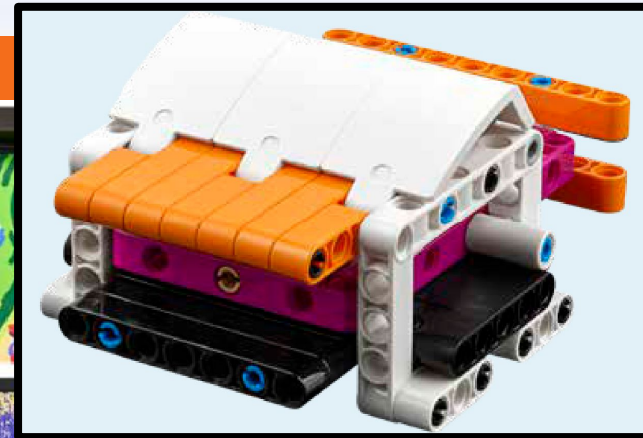
FIRST

OF SCIENCE & TECHNOLOGY 21

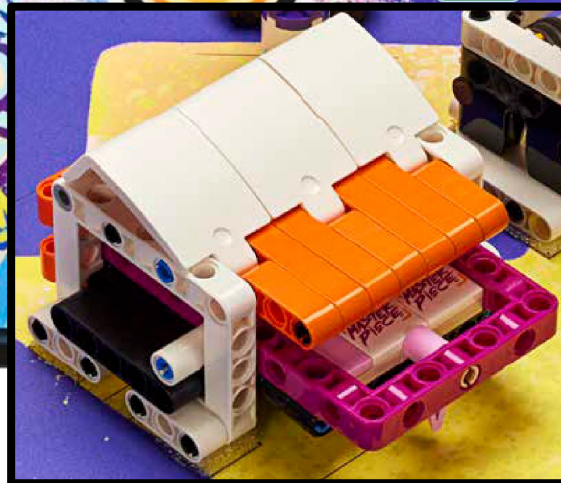
Mission 13 – Craft Creator

If the machine's lid is completely open: 10 Points

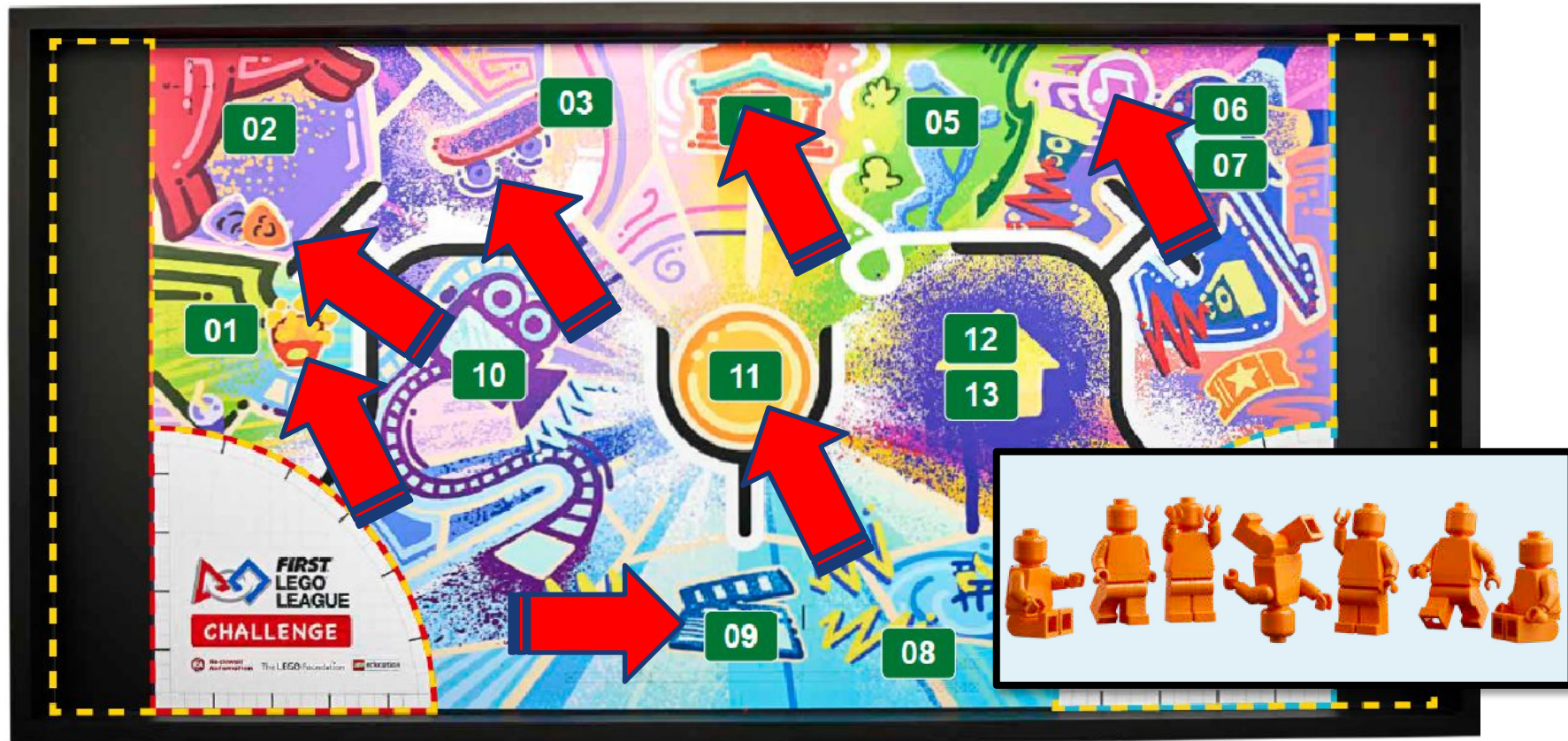
If the machine's pink latch is pointing straight down: 20 Points



Light Pink Latch



Mission 14 – Audience Delivery



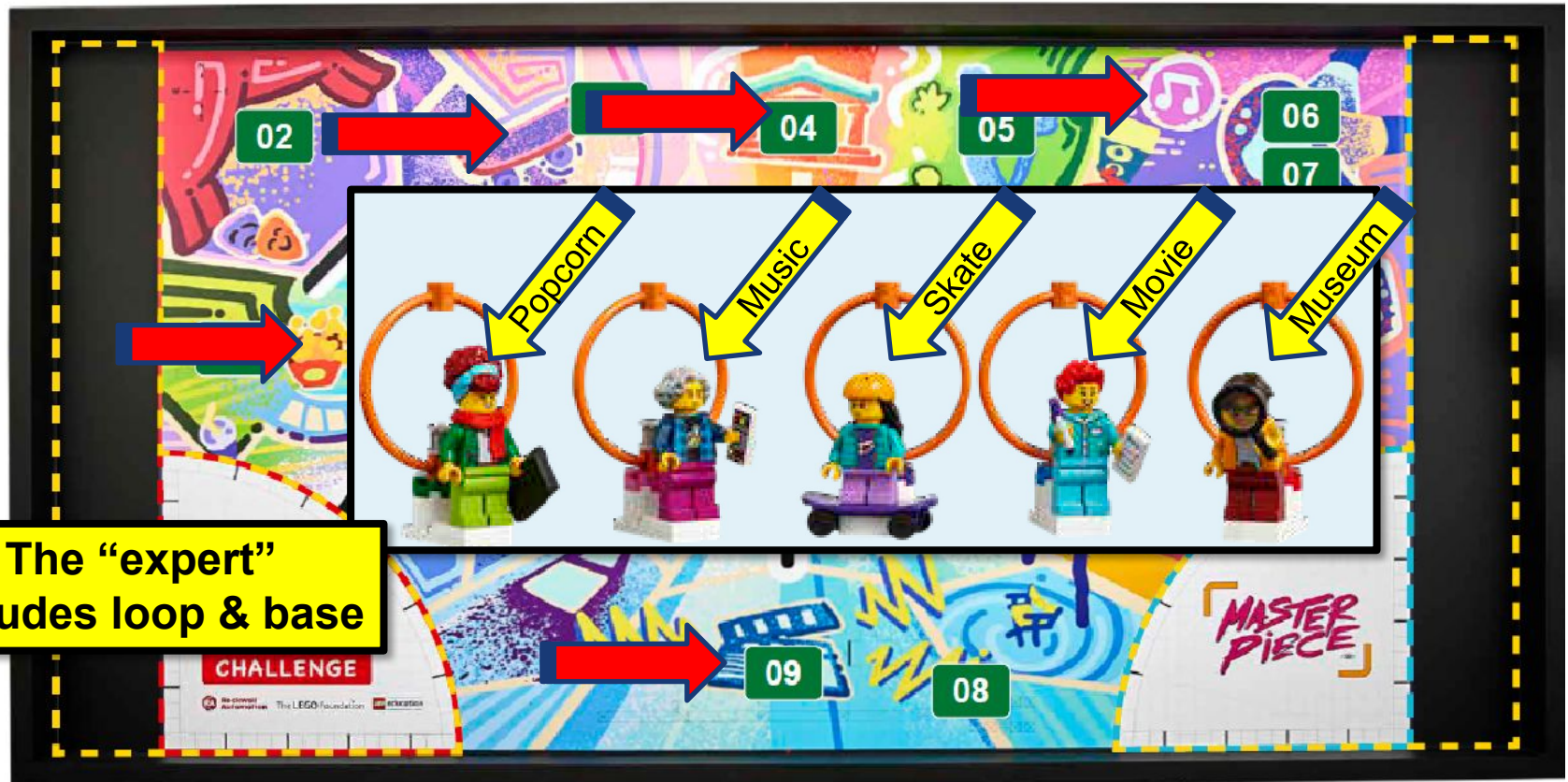
Left Home

Right Home



Every member completely in a target destination: **5 Points/member**
Every destination that has at least one member completely in: **5 Points/destination**

Mission 15 – Expert Delivery



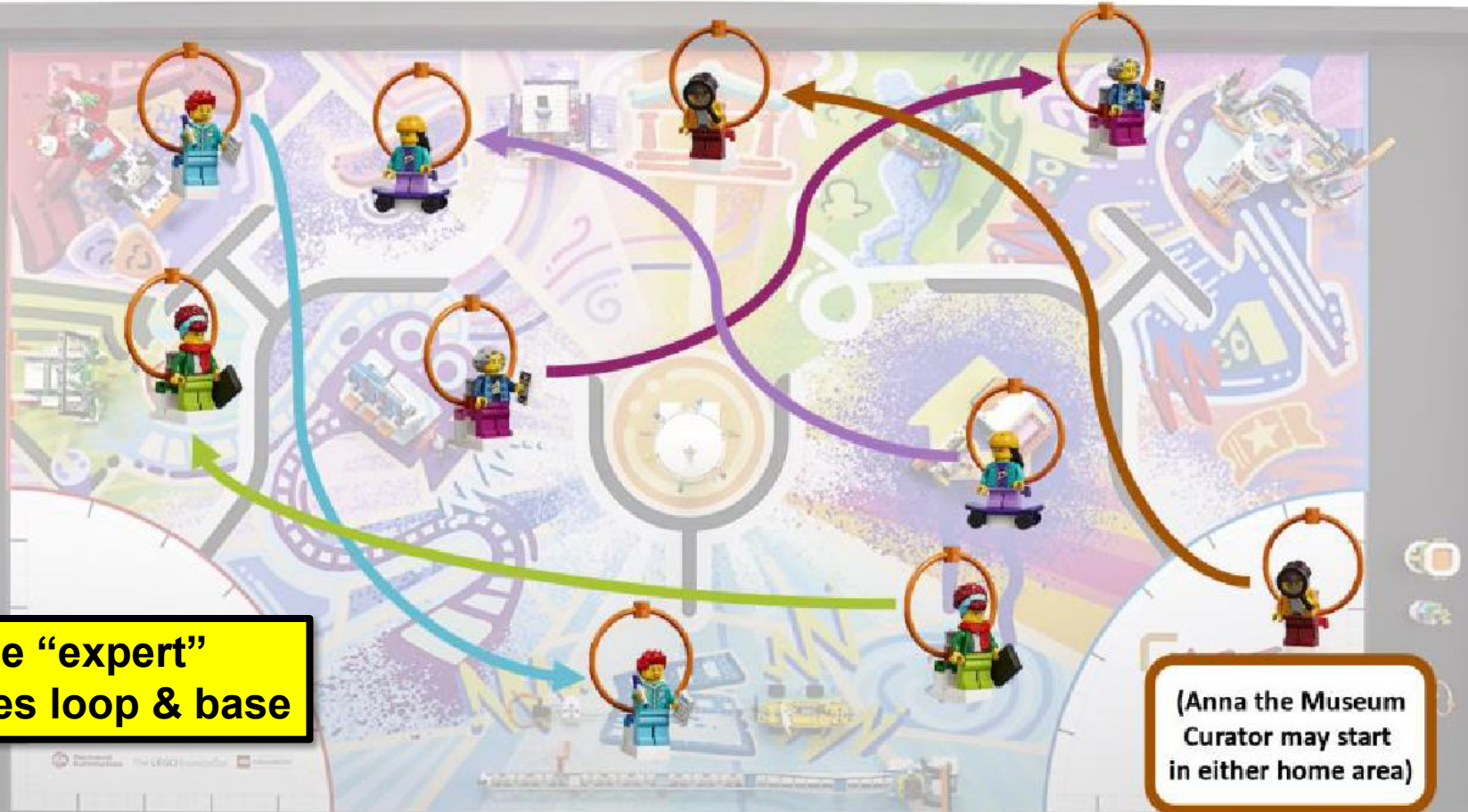
Left Home

If the correct expert is partly within their target destination: **10 Points Each**

Right Home

Mission 15 – Expert Delivery

September 26th Update



The “expert” includes loop & base

(Anna the Museum Curator may start in either home area)

Left Home

If the correct expert is partly within their target destination: **10 Points Each**

Right Home

Precision Tokens



- ✓ You begin the match with six precision tokens worth 50 free points.
- ✓ The referee holds onto them.
- ✓ If you interrupt the robot outside of home, the referee removes one token.
- ✓ You keep points for the number of remaining tokens at the end of the match.
- ✓ If the number remaining is:

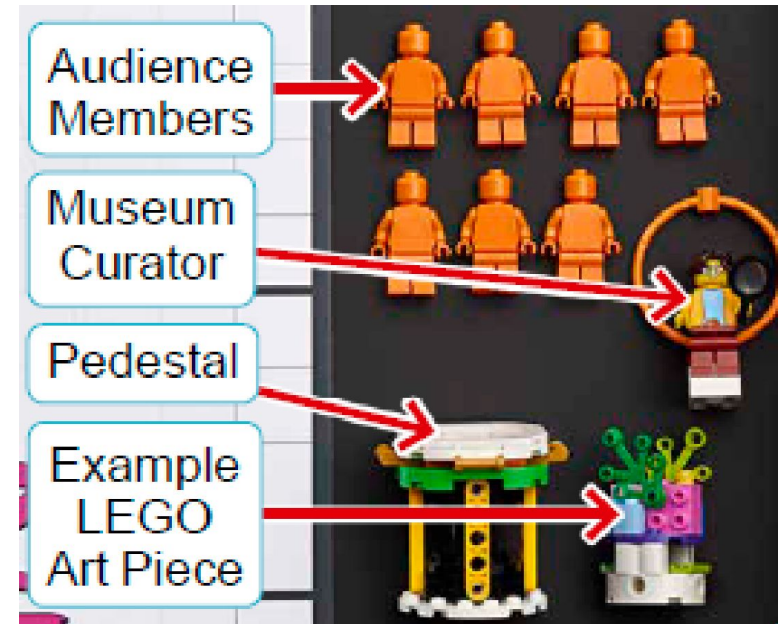
1: 10 3: 25 5: 50

2: 15 4: 35 6: 50



Before The Match | Match Setup pt.1

- ✓ Teams will not be given additional storage space.
Storage tables or trolleys are not allowed.
Everything must stay on the table or in the hands of a technician.
- ✓ After the team has passed inspection, they will be given a couple of minutes to set up. They start by distributing their equipment and loose mission model(s) between the two home areas.
- ✓ Stored equipment may extend past the left & right walls for storage only (not into field of play)
- ✓ Teams may distribute the audience members, Museum Curator, and your art work/pedestal to either home.



Before The Match | Match Setup pt.2

- ✓ Team members must then divide into two groups and position one group at each side of the field (left and right).
- ✓ These members cannot switch sides during the match.
- ✓ If possible, position two technicians at each home area.
- ✓ All other team members must stand back on their respective side.
- ✓ Teams may never have more than two technicians at a single home area, but team members may swap places with technician(s) on their side at any time.

During the Match | Inside Home

- ✓ Home is split into two areas. Each home area contains its own launch area.
- ✓ Technicians may use their hands on the robot, equipment, and mission models when these are completely within their home area.
- ✓ When launching:
 - Technicians may not keep anything from moving.
 - The robot and anything it is about to move must fit completely inside the launch area.
- ✓ Technicians may not touch anything outside of their home area or cause anything to move or extend outside this area, except the robot.
- ✓ After any launch, technicians should allow the robot to return completely into home before interrupting it.

During the Match | Outside Home pt1

- ✓ If technicians interrupt their robot, it must be relaunched.
 - > If the robot was outside home (even partly) when it was interrupted, **they lose one precision token.**
 - > If the robot was partly outside home: Bring the robot into that home area.
 - ➡ If the robot was completely outside home: Return the robot to either home area.
 - > If an object was with the robot when it launched: Keep it. Bring it with the robot.
 - > If an object was obtained after the robot was launched: Give it to the referee for the remainder of the match.
- ✓ Exception: If the team does not plan to launch again, they may stop their robot in place without losing a precision token. The robot and anything it is in contact with should remain in place where it was interrupted. **The team may not earn points based on the interruption.**

September 26th Update: If the robot is interrupted completely outside of home; the technicians may hand the robot to the other side

During the Match | Outside Home pt2

- ✓ If a piece of equipment or a mission model is dropped or left outside of home, wait for it to come to rest:
 - > If it rests completely outside home: It stays as is unless the robot changes it.
 - > If it rests partly in home: It stays as is unless the robot changes it.
 - > Alternatively, at any time, the technicians may remove it by hand.
 - >> If the object removed by hand was a mission model, it must be given to the referee
 - >> If the object was equipment, it must be taken into that home area, and
the team will lose one precision token.
- ✓ Teams cannot separate the Dual Lock, take models apart, or break a mission model.
- ✓ Teams also may not interrupt their robot in such a way that they earn points from it. Points scored in these ways will not count.
- ✓ Teams may not interfere with the opposing field or robot unless there is a mission exception. Points failed or lost due to interference will score automatically for the other team.

After the Match | Scoring

- ✓ After the 2.5min, the teams must **stop their robot** and **touch nothing else.**
- ✓ All mission scoring requirements must be visible at the end of the match.
- ✓ Completely in – the lines and airspace above the area count as “in” unless otherwise mentioned.
- ✓ If a team cannot run their robot, they may still earn Gracious Professionalism points.

NO FIRST LOSS CHALLENGE

FAZE

Team 1: Mobile | Subteam: Tallyo

TEAM RESULTS:

EQUIPMENT INSPECTION

1. Your robot and all your equipment fit completely in one launch area and are undamaged (total of 12, 3000 min) during the pre-match inspection.

MISSION 01 - 3D CHICKEN

1. Your robot must enter and launch in compliance to the right of the black tracer.

MISSION 02 - HEATER CHICKEN CHANGE

1. Your painter's not fire down and obstructive white circle on floor.
Blue 10 Orange: 30
2. - BONUS! Add both teams within 100mm radius.
Blue 20 ORANGE 30 ORANGE 100 ADD
3. Name the industry of your own choice.
4. If you fail to pass the inspection, you are disqualified.

MISSION 03 - IMPRESSIVE EXPERIENCE

1. Your team must impress the audience with a ritual.
2. In 30 seconds, each participant must do the following: the competitive experience must be the best of the robots.

MISSION 04 - MASTERPIECE

1. Your team's L200P are placed in the museum target area.
2. If your team is completely supported by the protocol.
3. To score the robot, the robot of the match, the audience must be the best of the robots.
4. If you fail to pass the inspection, you are disqualified.

MISSION 05 - AUGMENTED REALITY STATUS

1. Your team must be able to change their status in the right.
2. If the robot is not in the right, it is not considered a success.
3. If the robot is not in the right, it is not considered a success.

MISSION 06 - MUSIC CONCERT LIGHTS AND SOUNDS

1. Your team must be able to change their status in the right.
2. If the robot is not in the right, it is not considered a success.
3. If the robot is not in the right, it is not considered a success.

MISSION 07 - BREAKDOWN PERFORMANCE

1. Your team must be able to change their status in the right.
2. If the robot is not in the right, it is not considered a success.
3. If the robot is not in the right, it is not considered a success.

MISSION 08 - ROLLING CAMERA

1. Your team must be able to change their status in the right.
2. If the robot is not in the right, it is not considered a success.
3. If the robot is not in the right, it is not considered a success.

SCORE

MISSION 09 - MOVE RESET

1. If the robot is not in the right, it is not considered a success.
2. If the robot is not in the right, it is not considered a success.

MISSION 10 - SOUND MIXER

1. If the robot is not in the right, it is not considered a success.
2. If the robot is not in the right, it is not considered a success.

MISSION 11 - LIGHT SHOW

1. If the robot is not in the right, it is not considered a success.
2. If the robot is not in the right, it is not considered a success.

MISSION 12 - VIRTUAL REALITY ARTIST

1. If the robot is not in the right, it is not considered a success.
2. If the robot is not in the right, it is not considered a success.

MISSION 13 - CRASH CREATOR

1. If the robot is not in the right, it is not considered a success.
2. If the robot is not in the right, it is not considered a success.

MISSION 14 - AUDIENCE DELIVERY

1. If the robot is not in the right, it is not considered a success.
2. If the robot is not in the right, it is not considered a success.

MISSION 15 - EXPERT DELIVERY

1. If the robot is not in the right, it is not considered a success.
2. If the robot is not in the right, it is not considered a success.

MISSION 16 - PRECISION TONERS

1. If the robot is not in the right, it is not considered a success.
2. If the robot is not in the right, it is not considered a success.

MISSION 17 - FINAL SCORE

1. If the robot is not in the right, it is not considered a success.
2. If the robot is not in the right, it is not considered a success.

MISSION 18 - DEVELOPING

1. If the robot is not in the right, it is not considered a success.
2. If the robot is not in the right, it is not considered a success.

MISSION 19 - ACCOMPLISHED

1. If the robot is not in the right, it is not considered a success.
2. If the robot is not in the right, it is not considered a success.

MISSION 20 - CHALLENGE

1. If the robot is not in the right, it is not considered a success.
2. If the robot is not in the right, it is not considered a success.

MISSION 21 - CHALLENGE

1. If the robot is not in the right, it is not considered a success.
2. If the robot is not in the right, it is not considered a success.

MISSION 22 - CHALLENGE

1. If the robot is not in the right, it is not considered a success.
2. If the robot is not in the right, it is not considered a success.

MASTERPIECE 31

30 4th of Gummy Bunnies | Score sheet

After the Match | Scoring

- ✓ The referee will document the match with the team (not coaches!).
- ✓ When there is agreement on the results the ref & team sign the scoresheet and the results become official.
- ✓ If no agreement is reached, the tournament head ref makes the final call.
- ✓ Only the teams' best score (of three) counts toward awards & advancement
- ✓ Ties are broken by the teams 2nd/3rd best runs.

The image shows a FIRST Robotics Competition Match Scoresheet. It is a detailed form used to record the results of a match. The form is divided into two main columns for 'Team 1' and 'Team 2'. It includes sections for 'Equipment Inspection', 'Mission 1-10' (each with specific criteria and scores), and a 'Final Score' section at the bottom. The 'Final Score' section includes a table for 'Qualifying Performance' and 'Final Score' with columns for 'Developed', 'Accomplished', and 'Exceeded'. The form is signed by the referee and team members.