



# *MISSION* **MANUAL**

## **26-27 indi Missions: Smart City**



 **A note about this Mission Manual**

This Mission Manual receives ongoing updates (major and minor). Each published version is official and mandatory for all Sphero Robotics Competition Events. New versions immediately supersede the preceding ones.

For any questions related to this Mission Manual, please email [support@teamalliance.org](mailto:support@teamalliance.org).

Version History:

**Version 1.0 - May 11, 2026 - initial release**

**Version 2.0 - July 15, 2026 - Major Update**

- Changed page numbering to match PDF numbering
- Added hyperlinks to TEAM Alliance Student-Powered Policy and Code of Conduct
- Added clarification to INDI-MFR1 related to In-Person Mission Field
- Changed Mission Objective 3 to Championship Mission
- Added Tile definition to Season Specific Terms
- Changed Remote Submission to Online Submission
- Clarified that Fouls cannot result in a score below 0

**Version 2.1 - September 21, 2026 - Minor update**

- Updated SRM-CR1 - Expanded Student-Powered enforcement
- Updated SRM-CR3 - Expanded Code of Conduct requirements
- Implementation Scoring - Removed "Online Submission Only" documentation
- Fixed typos

## Sphero Robotics Mission Common Rules

|         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
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| SRM-CR1 | <p><u>Student-Powered™</u>: <b>Mission</b> solutions are designed, built, coded, and executed by students. If competition work was designed, built, or coded by an adult instead of the Students, the <b>Team</b> will first be given an opportunity to remove the adult contribution and make corrections using only <b>Student</b> work.</p> <p>If the <b>Team</b> can make the necessary corrections, they may continue participating in the Event. If the adult contribution cannot reasonably be removed or corrected, the <b>Team</b> will not be able to continue competing at that Event. The <b>Head Evaluator</b> makes the final on-site determination and may work with the <b>Event Host</b> or <b>TEAM Alliance</b> when needed.</p> |
| SRM-CR2 | <p><u>Single Participation</u>: A <b>Student</b> can only be on one <b>Team</b> per <b>Program</b> per <b>Season</b>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| SRM-CR3 | <p><u>TEAM Alliance Code of Conduct</u>: <b>Students</b>, <b>Team Coordinators</b>, volunteers, and spectators are expected to treat others with kindness and respect and follow the <b>TEAM Alliance</b> Code of Conduct and any additional Event or venue policies.</p> <p>The <b>Event Host</b> is responsible for addressing conduct or behavior concerns. Serious or continued behavior that does not meet these expectations may result in a <b>Student</b>, adult, or <b>Team</b> being asked to leave the Event. <b>TEAM Alliance</b> may be contacted for assistance when needed.</p>                                                                                                                                                     |
| SRM-CR4 | <p><u>Iterative Excellence</u>: Celebrate learning from failure.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| SRM-CR5 | <p><u>Creative Autonomy</u>: Teams are encouraged to interpret the <b>Mission Objectives</b> through the lens of their own unique strategy. The Mission Manual provides the "What" (the objective) and the "Constraints" (the kit limits), but the "How" is entirely up to the <b>Students</b>.</p> <p>The rules in this <b>Mission Manual</b> are the only rules.</p>                                                                                                                                                                                                                                                                                                                                                                             |
| SRM-CR6 | <p>3D printing is allowed as long as it follows Student-Powered &lt;SRM-CR1&gt;</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| SRM-CR7 | <p><u>Autonomous Solutions</u>: Once a robot's program has started, no <b>Student</b> interaction is permitted with the robot until the <b>Mission</b> is complete unless a specific rule in a <b>Mission Manual</b> allows it. An unpermitted <b>Student</b> interaction voids the results of that <b>Mission</b>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                            |

## Safety Rules

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| SRM-SR1 | <u>Signed Waivers</u> : Any <b>Student</b> participating in the <b>Sphero Robotics Missions</b> must have a signed waiver. |
| SRM-SR2 | <u>Adult Supervision</u> : A <b>Team Coordinator</b> must accompany a <b>Team</b> at all times.                            |

## In-Person Event Rules

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| SRM-IPE1 | At all <b>In-Person Events</b> or <b>Live Remote Events</b> , <b>Teams</b> have timed rounds to attempt a <b>Mission Objective</b> as many times as desired. Teams must tell the <b>Evaluator</b> which attempt to record for their <b>Individual Mission Score</b> . |
| SRM-IPE2 | If a <b>Team</b> has begun their code before the round time is called, the <b>Team</b> will be allowed to let their code finish.                                                                                                                                      |
| SRM-IPE3 | A <b>Team</b> may only challenge the results of an <b>Individual Mission Score</b> before they leave the <b>Mission Field</b> area.                                                                                                                                   |
| SRM-IPE4 | All rounds of <b>Mission Objectives</b> remain Student-Powered. <b>Team Coordinators</b> may not provide assistance to a <b>Team</b> during <b>Mission Objectives</b> .                                                                                               |

## indi Mission Rules:

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| INDI-MR1 | <b>Teams</b> in <b>indi Missions</b> are classified as <b>U9 Student</b>                                                                                                          |
| INDI-MR2 | There are three (3) <b>Mission Objectives</b> in the <b>indi Missions</b> . Each <b>Mission Objective</b> is scored according to the respective points outlined in this document. |

## Robot and Hardware Rules

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| INDI-RHR1 | A <b>Team</b> must have two (2) Sphero indi Student Kits to fully complete the <b>Mission Objectives</b> . |
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## Mission Field Rules

### INDI-MFR1

The **Mission Field** is two (2) indi Folding Code Mats side by side. The total size is 160 cm × 129 cm (5' 3" x 4' 3")

**In-Person Events** must use the indi Folding Code Mats as the **Mission Field** for the indi Missions. **Event Hosts** will supply the **Mission Fields** at **In-Person Events**. Teams may not write on, mark, alter, damage, or permanently modify the **In-Person Mission Field**. Any Missions that require to designate areas on the field must be done using removable items that can be quickly placed and removed from the Code Mat without leaving noticeable residue or causing damage. Any tape used must be painters tape to minimize leaving residue. Teams that cause permanent damage to an In-Person Mission Field receives a score of 0 Points for that Mission, and may be responsible for replacing the Field. Note: **Teams** may place anything on the **Mission Field** as long as the **Mission Field** grid lines are visible along all four sides of the indi Folding Code Mats.

**Live Remote Events** and **Online Submissions** can use any indi Code Mat or a homemade **Mission Field** with the correct dimensions.

## Mission Participation Guidelines

### In-Person & Live Remote Events

**In-Person Events** provide an opportunity for **Teams** to work on their **Mission Objectives** at home, school, or in their extracurricular club and then showcase their completed **Mission Objectives** in an **In-Person Event** format.

**Teams** will be given three (3) minutes to set up for their **Mission Objective**. During these three (3) minutes adults may assist with set up. **Teams** will be given five (5) minutes to attempt their best run of their prepared **Mission Objective** for an **Evaluator**. Adults must leave the area prior to the **Mission Objective** runs. This **Evaluator** will award an **Individual Mission Score** based on the **Team's** best attempt during the round and the **Team's** ability to thoroughly articulate an understanding of code and strategy with the **Evaluator**

### Online Submission

**Online Submission** is where **Teams** work on their **Mission Objectives** at home, school, or in their extracurricular club and submit them to be evaluated virtually. Each **Event** submission will be scored by the **Sphero Robotics Missions Evaluators**

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|  | <p>based on the scoring rubric. <b>Online Submissions</b> are due in Spring 2027—Date to be announced in a future <b>Mission Manual</b> revision.</p> <p>For each <b>Mission Objective</b>, <b>Teams</b> must prepare the following deliverables for <b>an Online Submission</b>:</p> <ul style="list-style-type: none"> <li>Submit the following evidence of completion in the Google Slide Submission template (sphero.cc/SRM-indi-template). <ul style="list-style-type: none"> <li>VIDEO: Submit a publicly viewable video of the <b>Mission Objective</b>. The video must: <ol style="list-style-type: none"> <li>be submitted in a .mp4, .mov, or .avi format</li> <li>be captured from top down perspective</li> <li>show both indis for the entire <b>Mission Objective</b></li> </ol> </li> <li>DOCUMENTATION: Describe your <b>Team's</b> process and strategy.</li> </ul> </li> </ul> <p><b>Online Submission Scores:</b> Individual scores from Online Submission events are not shared with teams or displayed publicly. After all submissions have been reviewed, TEAM Alliance will announce the finalists from each region. These teams will receive an invitation to compete at the Championship Event.</p> |
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| Awards                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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| <b>In-Person &amp; Live Remote Events</b> | <p>The following awards will be given at In-Person and Live Remote SRM Events:</p> <p><b>Mission Mastery Awards:</b> Recognizes the three teams that achieved the highest scores on each individual Mission. These awards are not ranked, and all recipients are recognized equally.</p> <ul style="list-style-type: none"> <li>Mission 1 Mastery Award - 3 Teams</li> <li>Mission 2 Mastery Award - 3 Teams</li> <li>Mission 3 Mastery Award (Championship Events only) - 3 Teams</li> </ul> <p>If a tie would result in more than three teams receiving a Mission Mastery Award, ties are broken using scores from that Mission in the following order:</p> <ol style="list-style-type: none"> <li>Highest Implementation Points</li> <li>Highest Theme Story Points</li> <li>If a tie still remains, all tied teams will receive the Mission Mastery Award, even if there are more than three recipients.</li> </ol> <p><b>Overall Event Mission Awards:</b> Recognizes the top three teams that have achieved the highest <b>Total Scores</b> at that event.</p> <ul style="list-style-type: none"> <li>Overall Event Champion - Team with the highest <b>Total Score</b></li> <li>Overall Event 2nd Place Award - Team with the second highest <b>Total Score</b></li> <li>Overall Event 3rd Place Award - Team with the third highest <b>Total Score</b></li> </ul> |

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|                           | <p>If there is a tie for the Overall Event Mission Awards, then ties will be broken in the following order:</p> <ol style="list-style-type: none"> <li>1. Highest Mission 3 Score (Championship Events only)</li> <li>2. Highest Mission 2 Score</li> <li>3. Highest Mission 1 Score</li> <li>4. If there is still a tie, then the teams will have the same rank</li> </ol>                                                                                                                                                                                                                                                             |
| <b>Online Submissions</b> | <p><b>Championship Events</b><br/>The following awards will be given for Online Submission Championship Events:</p> <p><b>Overall Event Mission Awards:</b> Recognizes the top three teams that have achieved the highest <b>Championship Mission Scores</b> at that event.</p> <ul style="list-style-type: none"> <li>• Overall Event Champion - Team with the highest <b>Championship Mission Score</b></li> <li>• Overall Event 2nd Place Award - Team with the second highest <b>Championship Mission Score</b></li> <li>• Overall Event 3rd Place Award - Team with the third highest <b>Championship Mission Score</b></li> </ul> |

## Championship Event Advancement Criteria

|                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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| <b>In-Person &amp; Live Remote Events</b> | <p>Teams may receive an invitation to a <b>Championship Event</b> in one of the following ways:</p> <ol style="list-style-type: none"> <li>1. Earn a qualifying award at a <b>Qualifying Event</b>.</li> <li>2. Receive an invitation from the Global Leaderboard if <b>Championship Event</b> spots remain available.</li> <li>3. Receive an invitation from the <b>Championship Event</b> waitlist if <b>Championship Event</b> spots still remain available.</li> </ol> <p>Depending on <b>Championship Event</b> capacity and the number of <b>Qualifying Events</b> within a state or region, one or more of the following awards may qualify teams for a <b>Championship Event</b>:</p> <ul style="list-style-type: none"> <li>• Overall Event Champion Award*</li> <li>• Overall 2nd Place Award</li> <li>• Overall 3rd Place Award</li> </ul> <p>*The Overall Event Champion Award is guaranteed to qualify at <b>In-Person Events</b> when the <b>Qualifying Event</b> meets the minimum registered team requirement. Additional awards may qualify to a Championship Event at the discretion of TEAM Alliance.</p> <p><b>Live Remote Events</b> that have teams from multiple Championship event regions may only upload results to the Global Leaderboard.</p> |
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|                    | <p>Teams are ranked in the Global Leaderboard using their highest <b>Total Score</b> from a single <b>Qualifying</b> or <b>Championship Event</b>. Ties are broken using the following criteria, in order:</p> <ol style="list-style-type: none"> <li>1. Highest Mission 3 score from the most recent event</li> <li>2. Highest Mission 2 score from the most recent event</li> <li>3. Highest Mission 1 score from the most recent event</li> <li>4. If there is still a tie, then the teams will have the same rank</li> </ol> <p><b>Global Leaderboard Deadline:</b> Results must be uploaded to the Global Leaderboard by May 17, 2027, to be included in TEAM Alliance and Sphero's 2026–2027 Global Leaderboard recognition. Events held after this date may still upload results, but those scores will not be considered for global recognition.</p> <p><b>Championship Events</b> must be posted by May 15th, 2027.</p> |
| Online Submissions | <p><b>Qualifying Online Submission Events</b><br/>The top 20 Teams from each region will be Online Submission Finalists and advance to their region's <b>Online Submission Championship Event</b>. Ties are broken by:</p> <ol style="list-style-type: none"> <li>1. Highest Mission 2 score</li> <li>2. Highest Mission 1 score</li> <li>3. If there is still a tie, then the teams will have the same rank</li> </ol> <p>Qualifying Online Submissions must be submitted in myTEAMevents.org by March 5, 2027. Online Submission Finalists will be notified on or before March 15, 2027 and must submit their additional Championship Online Submission by April 16th.</p> <p>Regions will be defined by TEAM Alliance for the 2026-2027 season and will be posted in an upcoming manual update.</p>                                                                                                                           |

## 26-27 indi Mission Specific Terms

|                       |                                                                                                                                     |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| <b>Garage</b>         | A <b>Team</b> -created <b>Ending Area</b> for <b>Mission Objective #3</b>                                                           |
| <b>Number Markers</b> | <b>Team</b> -created <b>Field Elements</b> for <b>Mission Objective #3</b> - paper or other craft supplies that signify numbers 1-6 |
| <b>Ramp</b>           | A <b>Team</b> -created <b>Field Object</b> for indi to drive up and over for <b>Mission Objective #2</b>                            |
| <b>Tile</b>           | The colored squares that indi uses for coding commands.                                                                             |
| <b>Tunnel</b>         | A <b>Team</b> -created <b>Field Object</b> for indi to drive through for <b>Mission Objective #2</b>                                |

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|-----------------|--------------------------------------------------------------|
| <b>Waypoint</b> | A <b>Field Object</b> that is a <b>Tunnel</b> or <b>Ramp</b> |
|-----------------|--------------------------------------------------------------|

## Mission Objective 1: Route Planner

**Overview:** As the morning commute begins in a Smart City, the public transit network comes to life. To ensure residents reach their destinations without delay, the city utilizes a fleet of autonomous shuttles that must navigate busy intersections with perfect timing.

In this **Mission Objective**, **Teams** act as traffic controllers, coding two indi robots to depart from opposite ends of the city. The challenge is to orchestrate their paths so they pass each other closely within the city without ever making contact. Precision routing is required to ensure both indi robots reach their **Ending Area** safely and on schedule. Build up your city and let your indis traverse the streets in style!

| MO ID     | Objective                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Possible Points |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| indi-M1-1 | indi 1 and indi 2 begin in their <b>Starting Areas</b> on opposite sides of the <b>Mission Field</b> . (10 points per indi)                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 20              |
| indi-M1-2 | Code a path for indi 1: <ol style="list-style-type: none"> <li>The path should use at least 8 <b>Tiles</b>. (10 points)</li> <li>indi 1 uses a red <b>Tile</b> as its <b>Ending Area</b>. (10 points)</li> <li>The <b>Ending Area</b> for indi 1 is a <b>Tile</b> next to the <b>Starting Area</b> for indi 2. (20 points)</li> </ol>                                                                                                                                                                                                                                                                     | 40              |
| indi-M1-3 | Code a path for indi 2: <ol style="list-style-type: none"> <li>The path should use at least 8 <b>Tiles</b>. (10 points)</li> <li>indi 2 uses a purple <b>Tile</b> as its <b>Ending Area</b>. (10 points)</li> <li>The <b>Ending Area</b> for indi 2 is a <b>Tile</b> next to the <b>Starting Area</b> for indi 1. (20 points)</li> </ol>                                                                                                                                                                                                                                                                  | 40              |
| indi-M1-4 | The path for indi 1 and indi 2 must include a point where each indi is on a different <b>Tile</b> , and those two <b>Tiles</b> touch each other along an edge or at a corner. While in motion, indi 1 and indi 2 must pass each other without ever colliding.                                                                                                                                                                                                                                                                                                                                             | 60              |
| indi-M1-5 | <p><b>“Theme Story Points”:</b> <b>Teams</b> implement unique features beyond the Mission requirements that enhance the theme.</p> <p>Field Design Features (custom structures, Blueprint Engineering parts, improved zone designations, or other custom design elements)</p> <ul style="list-style-type: none"> <li>None = 0 pts</li> <li>1-3 = 5 pts</li> <li>4-5 = 7 pts</li> <li>6+ = 10 pts</li> </ul> <p>Robot Design Features (digital audio, and physical changes to the base robot)</p> <ul style="list-style-type: none"> <li>None = 0 pts</li> <li>1-3 = 5 pts</li> <li>4+ = 10 pts</li> </ul> | 20              |

|           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |    |
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| indi-M1-6 | <p><b>“Implementation Points”:</b> <i>Teams</i> demonstrate understanding of the coding concepts and strategic decisions used to complete the Mission Objectives. <i>Teams</i> that use Sphero EDU Jr to customize code must show the code to the Evaluator.</p> <p>Mission Strategy Features (planning, testing, iteration, trade-offs, time-management, robot positioning, or other strategies to optimize performance)</p> <ul style="list-style-type: none"> <li>• None = 0 pts</li> <li>• 1-3 = 5 pts</li> <li>• 4-5 = 7 pts</li> <li>• 6+ = 10 pts</li> </ul> <p>Coding Features (number of different colored Tiles, using custom sounds or LED Colors)</p> <ul style="list-style-type: none"> <li>• None = 0 pts</li> <li>• 1-3 = 5 pts</li> <li>• 4-5 = 7 pts</li> <li>• 6+ = 10 pts</li> </ul> | 20 |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|

**Max Points:** 200

## Mission Objective 2: Delivery Dash

**Overview:** A Smart City thrives on speed. When a high-priority package is ordered, the autonomous delivery vehicles get to work ensuring that deliveries are handled accurately even through difficult terrain.

In this **Mission Objective**, **Teams** code their indis to navigate a route that includes at least four unique city **Waypoints**. Success depends on indi being able to traverse tunnels and ramps before returning back to its original location. In this dash for efficiency, make sure that indi hits all of the **Waypoints**!

| MO ID     | Objective                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Possible Points |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| indi-M2-1 | Using whatever craft materials you have available, create four <b>Waypoints</b> that indi 1 and indi 2 will travel to. You need to have two of each type of <b>Waypoints</b> : <ul style="list-style-type: none"> <li>• <b>Tunnel</b> (10 points each; total of 20 points)</li> <li>• <b>Ramp</b> (10 points each; total of 20 points)</li> </ul>                                                                                                                                                                                                                                                                       | 40              |
| indi-M2-2 | indi 1 and indi 2 begin at the same <b>Starting Area</b> . indi 2 begins its program shortly after indi 1 has started its program.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 10              |
| indi-M2-3 | Code a path for indi 1: <ol style="list-style-type: none"> <li>1. The path should use at least 12 <b>Tiles</b>. (5 points)</li> <li>2. indi 1 must travel to at least two of the specific <b>Waypoints</b> from indi-M2-1. (20 points each; total of 40 points)</li> <li>3. The <b>Ending Area</b> is a <b>Tile</b> adjacent to the <b>Starting Area</b>. (10 points)</li> </ol>                                                                                                                                                                                                                                        | 55              |
| indi-M2-4 | Code a different path for indi 2: <ol style="list-style-type: none"> <li>1. The path should use at least 12 <b>Tiles</b>. (5 points)</li> <li>2. indi 2 must travel to at least two of the specific <b>Waypoints</b> from indi-M2-1. (20 points each; total of 40 points)</li> <li>3. The <b>Ending Area</b> is a <b>Tile</b> adjacent to the <b>Starting Area</b> (10 points)</li> </ol>                                                                                                                                                                                                                               | 55              |
| indi-M2-5 | <p><b>“Theme Story Points”:</b> <b>Teams</b> implement unique features beyond the Mission requirements that enhance the theme.</p> <p>Field Design Features (custom structures, Blueprint Engineering parts, improved zone designations, or other custom design elements)</p> <ul style="list-style-type: none"> <li>• None = 0 pts</li> <li>• 1-3 = 5 pts</li> <li>• 4-5 = 7 pts</li> <li>• 6+ = 10 pts</li> </ul> <p>Robot Design Features (digital audio, and physical changes to the base robot)</p> <ul style="list-style-type: none"> <li>• None = 0 pts</li> <li>• 1-3 = 5 pts</li> <li>• 4+ = 10 pts</li> </ul> | 20              |

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| indi-M2-6 | <p><b>“Implementation Points”:</b> <b>Teams</b> demonstrate understanding of the coding concepts and strategic decisions used to complete the Mission Objectives. <b>Teams</b> that use Sphero EDU Jr to customize code must show the code to the Evaluator.</p> <p>Mission Strategy Features (planning, testing, iteration, trade-offs, time-management, robot positioning, or other strategies to optimize performance)</p> <ul style="list-style-type: none"> <li>• None = 0 pts</li> <li>• 1-3 = 5 pts</li> <li>• 4-5 = 7 pts</li> <li>• 6+ = 10 pts</li> </ul> <p>Coding Features (number of different colored Tiles, using custom sounds or LED Colors)</p> <ul style="list-style-type: none"> <li>• None = 0 pts</li> <li>• 1-3 = 5 pts</li> <li>• 4-5 = 7 pts</li> <li>• 6+ = 10 pts</li> </ul> | 20 |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|

**Max Points:** 200

### Mission Objective #3 - Championship Mission: Trash & Recycling

**Overview:** Maintaining a clean and sustainable environment is a core pillar of a Smart City’s design. To keep the streets pristine, the city employs vehicles to collect recyclable and landfill waste.

This **Mission Objective** requires **Teams** to coordinate a dual collection effort across six different pickup zones marked throughout the city. Because the waste and recycling plants have different processing speeds, the two robots must never follow the same collection sequence. To maximize efficiency and conserve energy, **Teams** are encouraged to share paths where possible before both units return to the **Garage** for offloading.

| MO ID     | Objective                                                                                                                                                                                                                                                                                                                                        | Possible Points |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| indi-M3-1 | <b>Teams</b> place six <b>Number Markers</b> in any spot and orientation on the <b>Mission Field</b> .                                                                                                                                                                                                                                           | 20              |
| indi-M3-2 | <b>Teams</b> build a <b>Garage</b> for the <b>Ending Area</b> that fits both indis.                                                                                                                                                                                                                                                              | 20              |
| indi-M3-3 | indi 1 and indi 2 begin their program from the same <b>Starting Area</b> . (5 points each)                                                                                                                                                                                                                                                       | 10              |
| indi-M3-4 | Code a Trash path for indi 1: <ul style="list-style-type: none"> <li>1. The path should use at least 12 <b>Tiles</b>. (10 points)</li> <li>2. indi 1 must travel to all six <b>Number Markers</b>, but cannot go in the same order as indi 2. (20 points)</li> <li>3. indi ends in the <b>Ending Area</b> from indi-M3-2. (10 points)</li> </ul> | 40              |
| indi-M3-5 | Code a different path for indi 2. (Recycling) <ul style="list-style-type: none"> <li>1. The path should use at least 12 <b>Tiles</b>. (10 points)</li> </ul>                                                                                                                                                                                     | 40              |

2. indi 2 must travel to all six **Number Markers**, but cannot go in the same order as indi 1. (20 points)
3. indi ends in the **Ending Area** from indi-M3-2. (10 points)

|           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |    |
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| indi-M3-6 | After leaving the <b>Starting Area</b> , the indis can share <b>Tiles</b> as part of their path to each of the <b>Numbered Markers</b> to earn more points. (5 points each shared <b>Tile</b> : maximum 30 points)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 30 |
| indi-M3-7 | <p><b>“Theme Story Points”</b>: <b>Teams</b> implement unique features beyond the Mission requirements that enhance the theme.</p> <p>Field Design Features (custom structures, Blueprint Engineering parts, improved zone designations, or other custom design elements)</p> <ul style="list-style-type: none"> <li>• None = 0 pts</li> <li>• 1-3 = 5 pts</li> <li>• 4-5 = 7 pts</li> <li>• 6+ = 10 pts</li> </ul> <p>Robot Design Features (digital audio, and physical changes to the base robot)</p> <ul style="list-style-type: none"> <li>• None = 0 pts</li> <li>• 1-3 = 5 pts</li> <li>• 4+ = 10 pts</li> </ul>                                                                                                                                                                                 | 20 |
| indi-M3-8 | <p><b>“Implementation Points”</b>: <b>Teams</b> demonstrate understanding of the coding concepts and strategic decisions used to complete the Mission Objectives. <b>Teams</b> that use Sphero EDU Jr to customize code must show the code to the Evaluator.</p> <p>Mission Strategy Features (planning, testing, iteration, trade-offs, time-management, robot positioning, or other strategies to optimize performance)</p> <ul style="list-style-type: none"> <li>• None = 0 pts</li> <li>• 1-3 = 5 pts</li> <li>• 4-5 = 7 pts</li> <li>• 6+ = 10 pts</li> </ul> <p>Coding Features (number of different colored Tiles, using custom sounds or LED Colors)</p> <ul style="list-style-type: none"> <li>• None = 0 pts</li> <li>• 1-3 = 5 pts</li> <li>• 4-5 = 7 pts</li> <li>• 6+ = 10 pts</li> </ul> | 20 |

Max Points: 200

## Glossary:

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|----------------|--------------------------------------------------------------------------|
| <b>Program</b> | <b>Sphero Robotics Missions</b> comprises three unique <b>Programs</b> : |
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|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                 | <ul style="list-style-type: none"> <li>• <b>indi Missions</b></li> <li>• <b>BOLT Missions</b></li> <li>• <b>RVR Missions</b></li> </ul>                                                                     |
| <b>Student</b>                  | Anyone born after May 1, 2007                                                                                                                                                                               |
| <b>Team</b>                     | A group of <b>Students</b>                                                                                                                                                                                  |
| <b>U9 Student</b>               | Any <b>Student</b> born on or after Sept 1, 2017 meaning they will be 8 or younger on Aug 31, 2026                                                                                                          |
| <b>U12 Student</b>              | Any <b>Student</b> born on or after Sept 1, 2014 meaning they will be 11 or younger on Aug 31, 2026                                                                                                         |
| <b>U15 Student</b>              | Any <b>Student</b> born on or after Sept 1, 2011 meaning they will be 14 or younger on Aug 31, 2026                                                                                                         |
| <b>indi Missions</b>            | <b>Teams</b> competing in this <b>Program</b> must consist of only <b>U9 Students</b> and at least one <b>Team Coordinator</b>                                                                              |
| <b>BOLT Missions</b>            | <b>Teams</b> competing in this <b>Program</b> must consist of only <b>U12 Students</b> and at least one <b>Team Coordinator</b>                                                                             |
| <b>RVR Missions</b>             | <b>Teams</b> competing in this <b>Program</b> may consist of only <b>U15 Students</b> , and at least one <b>Team Coordinator</b>                                                                            |
| <b>Team Coordinator</b>         | An adult in a supervisory role for the <b>Students</b> that will handle the registration, submission, and management of <b>Team</b> meetings. <b>Teams</b> may have more than one <b>Team Coordinator</b> . |
| <b>Mission Objectives</b>       | Each <b>Program</b> is broken up into <b>Mission Objectives</b> that <b>Teams</b> will be evaluated on based on guidelines in this document                                                                 |
| <b>Mission Field</b>            | A defined space for each <b>Program</b> . Reference individual <b>Mission Manual</b> for specific <b>Mission Field</b> guidelines                                                                           |
| <b>Individual Mission Score</b> | A <b>Team's</b> score for an individual <b>Mission Objective</b> recorded by an <b>Evaluator</b>                                                                                                            |
| <b>Total Score</b>              | The total combined score of all <b>Individual Mission Scores</b> for a <b>Team</b>                                                                                                                          |

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| <b>Starting Area</b>       | The area of the <b>Mission Field</b> where robots begin a <b>Mission Objective</b>                                                                                                                                                                                                                                                            |
| <b>Ending Area</b>         | When required, the area of the <b>Mission Field</b> where robots finish their program                                                                                                                                                                                                                                                         |
| <b>Manual Drive Mode</b>   | A driver controlled portion of a <b>Mission Objective</b> instead of programmed commands                                                                                                                                                                                                                                                      |
| <b>Foul</b>                | Points deducted in some <b>Mission Objectives</b> if a team commits a <b>Foul</b> as outlined in the <b>Mission Manual</b> . Unless stated otherwise, there is no limit on the number of <b>Fouls</b> a Team can receive in a <b>Mission Objective</b> . The <b>Team's Mission Total Score</b> cannot go below 0 points due to <b>Fouls</b> . |
| <b>Obstacles</b>           | Defined as any object placed in the <b>Mission Field</b> as part of the setup for a <b>Mission Objective</b> that should be avoided as outlined in the <b>Mission Manual</b> . If a robot drives into an <b>Obstacle</b> , they will receive a <b>Foul</b> .                                                                                  |
| <b>Field Element</b>       | An element added to the <b>Mission Field</b> as specified in the <b>Season</b> rules                                                                                                                                                                                                                                                          |
| <b>Field Object</b>        | A scored object added to the <b>Mission Field</b> as specified in the <b>Season</b> rules                                                                                                                                                                                                                                                     |
| <b>Season</b>              | The approved timeline for participation in the <b>Sphero Robotics Missions</b> . A standard <b>Season</b> runs from June 2026 through May 2027.                                                                                                                                                                                               |
| <b>Event Host</b>          | Approved adult coordinator and primary contact to organize, plan, and implement successful Sphero Robotics Mission <b>Events</b> with the help of TEAM Alliance                                                                                                                                                                               |
| <b>Evaluator</b>           | A volunteer responsible for evaluating a <b>Team's</b> mission attempts during an <b>Event</b>                                                                                                                                                                                                                                                |
| <b>Online Submission</b>   | <b>Teams</b> submit pre-recorded <b>Mission Objectives</b> to an <b>Event Host</b> for evaluation. This is an option for <b>Online Submission Season</b> registrations.                                                                                                                                                                       |
| <b>In-Person Event</b>     | Events that are included as an option with in-person <b>Season</b> registrations. These events allow a <b>Team</b> to run <b>Mission Objectives</b> at a location with other <b>Teams</b> and an in-person <b>Evaluator</b> .                                                                                                                 |
| <b>Prequalifying Event</b> | An early <b>Season In-Person Event</b> that doesn't qualify for a <b>Championship Event</b> (or any other <b>Event</b> ). An in-person <b>Team</b> registration does not include entry into a <b>Prequalifying Event</b> .                                                                                                                    |
| <b>Qualifying Event</b>    | A <b>Season In-Person Event</b> that qualifies a <b>Team</b> for <b>Championship Events</b> . An in-person <b>Team</b> registration includes entry into one <b>Qualifying Event</b> .                                                                                                                                                         |
| <b>Live Remote Event</b>   | <b>Events</b> that are included as an option with <b>In-Person Season</b> registrations. These events allow a <b>Team</b> to run <b>Mission Objectives</b> remotely with other <b>Teams</b> and a remote <b>Evaluator</b> .                                                                                                                   |
| <b>Championship Event</b>  | A state, regional, or national event that serves as the culminating competition for <b>Teams</b> that qualify through designated <b>Qualifying Events</b> . In the U.S., <b>Championship Events</b> are typically state-level, but may include multiple <b>Championship Events</b> within a single                                            |

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|  | state or combining multiple states into a regional <b>Championship Event</b> . Internationally, regional or national <b>Championship Events</b> are used where geographic considerations apply. |
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