DEVELOPING A MISSION STRATEGY

SESHAN BROTHERS
OBJECTIVES

- Learn how to come up with a strategy for the robot game
STEP 1: UNDERSTAND THE MISSIONS

Rule #1 is to read the Challenge Guide thoroughly – everyone should do this.

Rule #2 is to read the Updates during the season.

Tip: Many teams like to take notes on each mission (the rules, the points, etc.) and place them next to the missions on the mat.

Photo Credits: Michael Graffin, Iona Primary
STEP 2: PLAN YOUR ROBOT GAME

- Which missions are near base and could be done quickly?
- Which missions might be grouped together because of their proximity?
- Which missions might use the same attachment/tool to complete?
- Are some missions harder than others?
- Are some missions harder to get to?
- What are the team’s goals for the year when it comes to the robot game?
- How many points is the mission?

Use the answers to the questions to determine which missions to do and when.

A Planning Guide is available on the next page.
Create a worksheet with all the missions

Use it to evaluate all your options for a given year’s robot game
STEP 3: TEAM ROBOT GAME STRATEGY

- Now, use an online tool such as our Interactive Strategy Planner to determine the path your robot will take.
  - Each time you go out of base is called a “run”
  - Draw each run using a different color.
- Or print out an image of the challenge mat and hand-draw.
- We recommend that each team member comes up with a strategy and then the team listens to all the ideas and combines them.
Once you have a strategy, start to build your robot and write Pseudocode for each “run”.

Read the Pseudocode lesson available on EV3Lessons.com

<table>
<thead>
<tr>
<th>Run Information: Mega-Awesome Run: Airplane and Tsunami</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Setup/Action</strong></td>
</tr>
<tr>
<td>1 Robot in base, Facing W, touching S wall, attachment STICK</td>
</tr>
<tr>
<td>2 Move to Airplane</td>
</tr>
<tr>
<td>3 Trigger Airplane</td>
</tr>
<tr>
<td>4 Turn towards Tsunami</td>
</tr>
<tr>
<td>5 Straighten out</td>
</tr>
<tr>
<td>6 Move to Tsunami</td>
</tr>
<tr>
<td>7 Trigger Tsunami</td>
</tr>
<tr>
<td>8 Turn towards Base</td>
</tr>
<tr>
<td>9 Return to Base</td>
</tr>
<tr>
<td>10 Remove stick, realign in base facing N, against E wall, add attachment (CAGE)</td>
</tr>
</tbody>
</table>
SOME THOUGHTS

- Remember that a robot game strategy may change over time
  - You might get a new idea or find a way to combine missions
  - You might build a different attachment
- As a rookie team, complete missions closer to base first
  - Usually, they are easier to get to and easier to activate
  - When you finish those and can do them reliably, start to add more missions
- You don’t need to do all the missions to “win”.
  - Doing the missions you can well can often yield better results than completing all the mission unreliably.
  - Example: We have won the robot performance award and Champion’s without completing all the missions
This lesson was written by Sanjay and Arvind Seshan


Attribution-NonCommercial-ShareAlike 4.0 International (CC BY-NC-SA 4.0)