

#12 Robot Design Executive Summary



Team Name and Number:

Part A: Instructions for Robot Manager

Create one page pamphlet (front and back) for Robot Design

Robot Facts:

1. Chassis – size, point of attachments, center of mass

2. Drivetrain details number – forward vs. rear drive and type of wheels and tires

3. Number and type of sensors

4. Number of attachments

5. Programming language, number of programs and amount of memory

Lego Mindstorm EV3

6. Number and names of the completed missions

8. Design Process

Describe how your team designed their robot and what process they used to make improvements to the design over time. Briefly share how different team members contributed to the design.

9. Mechanical Design

Explain the robot's basic structure. Explain to the Judges how the robot moves (drivetrain), what attachments and mechanisms it uses to operate or complete missions, and how your team makes sure it is easy to add/ remove attachments.

10. Challenges and Innovation

Describe most challenging design and how you solve the problem.

11. Fun

Describe the most fun or interesting part of robot design as well as the most challenging parts. If your team has a fun story about your robot, please feel free to share.

Part B: Instructions for Programming Manage

Create one page pamphlet (front and back) for Strategies and Programming

Strategies and Programming Facts:

1. Strategy

Explain your team's strategy and reasoning for choosing and accomplishing missions. Talk a little bit about how successful the robot was in completing the missions that were chosen.

2. Programming - Organization

Describe how your team organized your programming for the missions to be more effective. (Calibrations, My Blocks, naming, labels, comments, etc.)d

3. Programming – Navigation

Describe how your team navigated the robot on the field using sensors and walls.

4. Programming - Game

Describe how your team programmed the robot to be accurate and efficient for the game.

5. Programming – Challenges and Innovation

Describe most challenging program and how your team solved the problem.