Engineering Notebook

CITY SHAPER
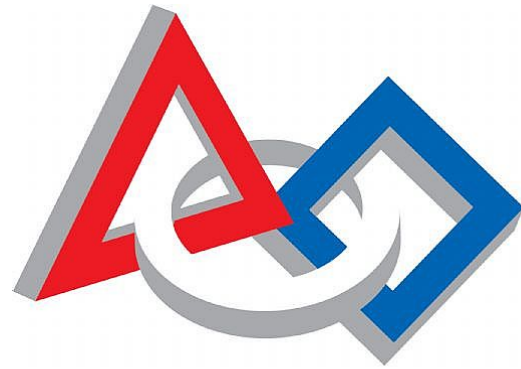
FLL
FIRST LEGO® League
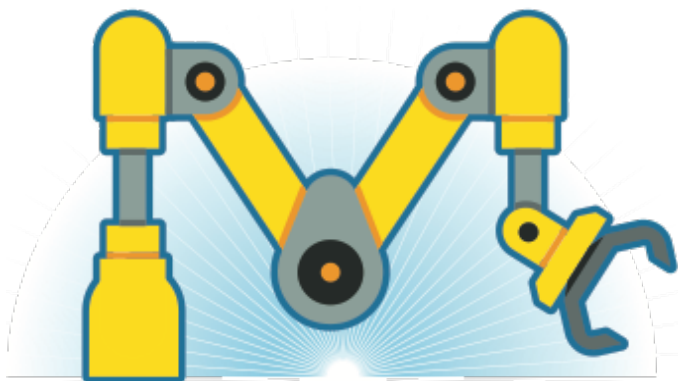
MILFORD ROBOTICS

MILFORD EDUCATION FOUNDATION

Student Name:_____

Robot Game

What is your favorite mission model? Why?

_____

_____

_____

What real world problems can be demonstrated with this model?

_____

_____

_____

How do the Game Rules and field setup impact
your strategy in the Robot game?

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_____

Which missions are located near each other on the field?

_____

_____

Which missions have similar elements?

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_____

_____

Which missions could be grouped together for maximum points?

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_____

_____

What is your game strategy? How many Missions will you attempt in the event?

_____

_____

_____

What are some obstacles you may encounter on the field?
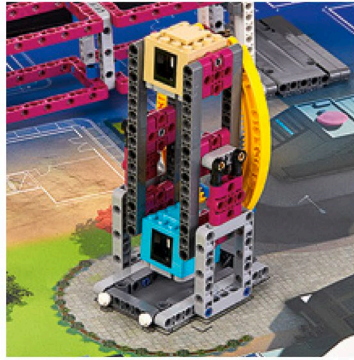
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How can you program your robot to be fast AND reliable on the Challenge field?

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_____

Sketch your robot solution. What does the base look like? Does it have sensors and attachments?

What changes did you make to your robot?

_____

_____

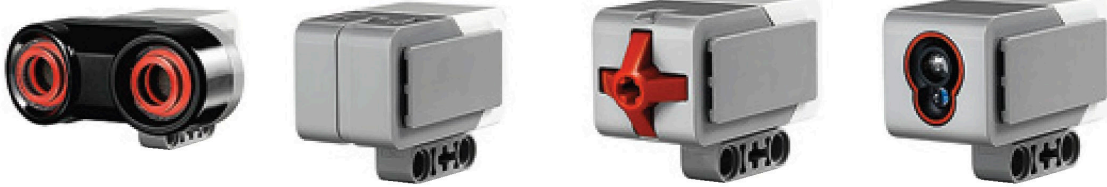_____

How is the final design different from your first design? Sketch the changes.

_____

_____

_____

Sensors & Programming

What sensors does your robot use?

_____

_____

_____

How does the robot use the sensors to get around the field?

_____

_____

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_____

Did you team use any MyBlocks? If yes, what do they do and how do they work?

_____

_____

_____

_____

_____

Mission Name:_____

What was your first idea for solving this mission? (Sketch or photo your idea)

_____

_____

_____

How did your idea work when you tested it?

_____

_____

_____

Did you make any changes to the robot design to improve the robot performance? What were they?

_____

_____

_____

_____

Did you make any changes to the programming to improve the robot performance? What were they?
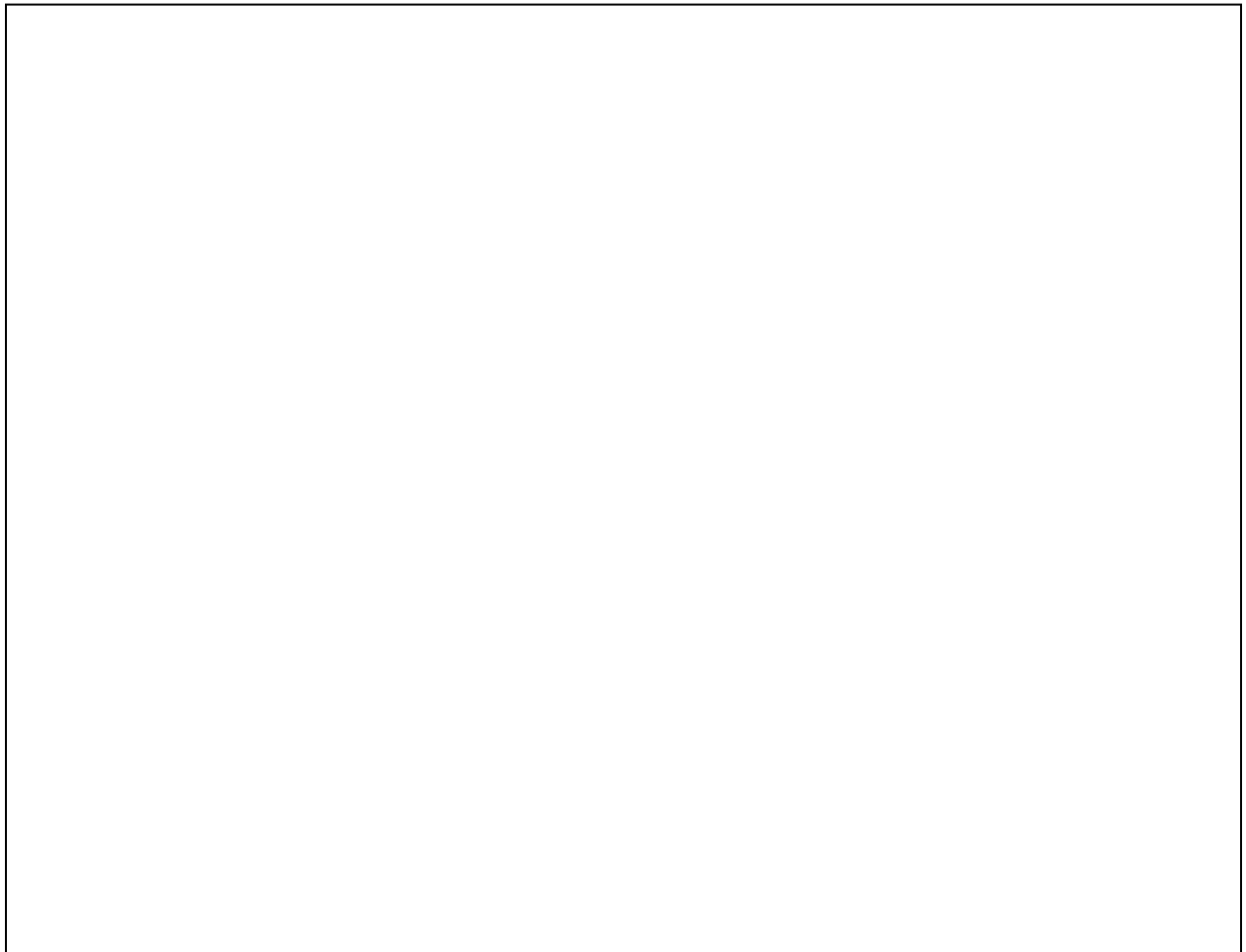
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***Mission Name:*_____

What was your first idea for solving this mission? (Sketch or photo your idea)

_____

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How did your idea work when you tested it?

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Did you make any changes to the robot design to improve the robot performance? What were they?

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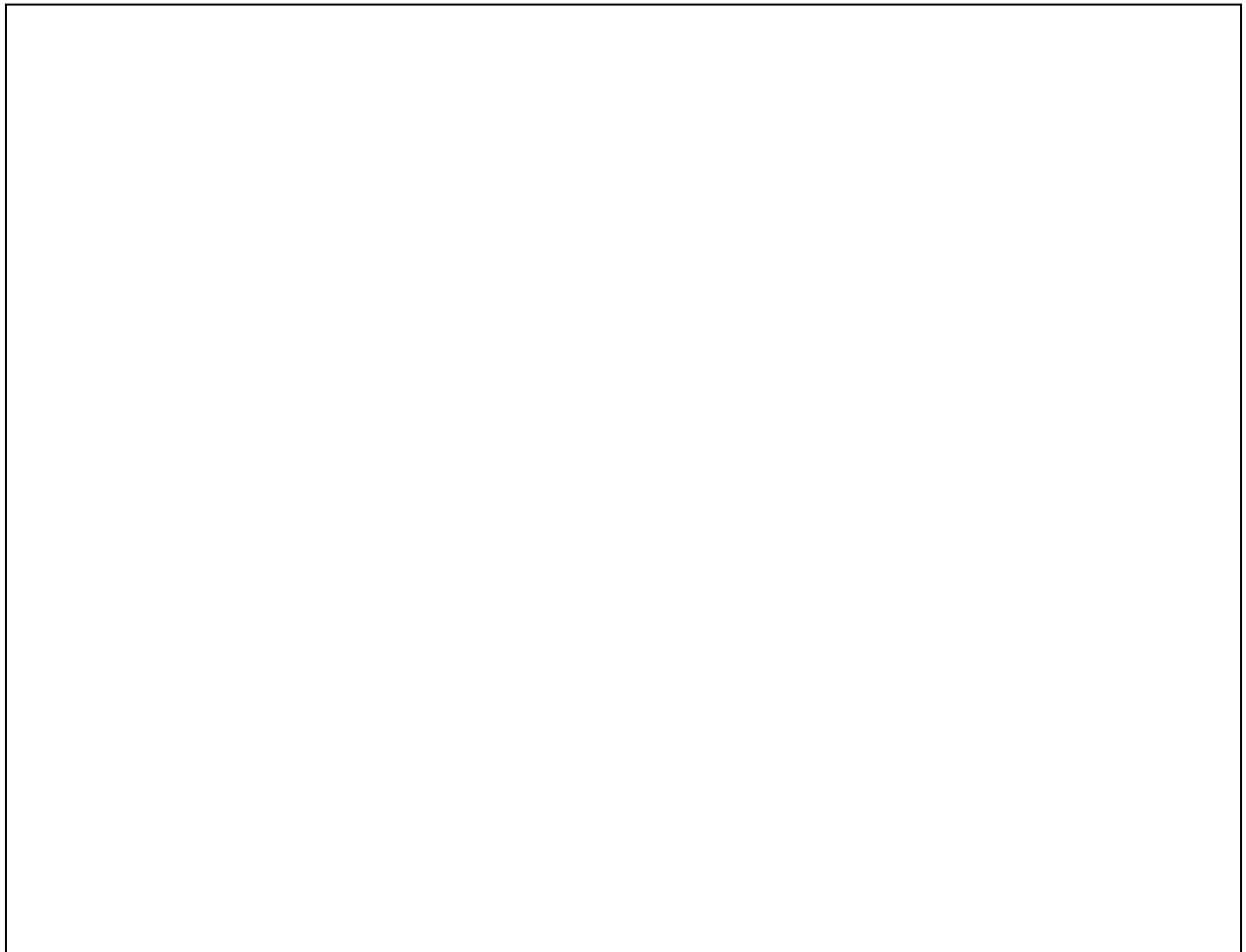_____

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_____

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Did you make any changes to the programming to improve the robot performance? What were they?

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Innovation Project

CITY SHAPER

What do you find most interesting about the challenge?

_____

_____

_____

What do you already know about the challenge topic?

_____

_____

_____

What are some project topics your team considered?

_____

_____

_____

What criteria did you team use to decide what your project topic would be?

_____

_____

_____

What is the building or public space your team selected for the project?

_____

What is the problem your team identified?

_____

_____

_____

Who is the client for this job?

_____

_____

What are some constraints on your project solution?

_____

_____

_____

How did you project solution change over time as you worked on it?

_____

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What research sources did you consult for this project?

_____

_____

_____

_____

Who did you identify as experts and why?

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Expert Name:

_____

Question:

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Answer:

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Expert Name:

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Question:

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Answer:

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How did your solution evolve after consulting with your expert?

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_____

Who did you share your solutions with?

_____

_____

_____

_____

Sketch your project solution or a particular component of your solution.

Core Values

Discovery: We explore new skills and ideas.

Innovation: We use creativity and persistence to solve problems.

Impact: We apply what we learn to improve our world.

Inclusion: We respect each other and embrace our differences.

Teamwork: We are stronger when we work together.

Fun: We enjoy and celebrate what we do!

What did you learn about working together as a team?

_____

_____

_____

What are your key takeaways from this experience?

_____

_____

_____

What was the most fun you had this season?

_____

_____

_____