U2-2.5c Challenge up: Cartographer and navigator

A cartographer is a person that makes maps. A navigator is a person who figures out how to get from place to place. In this project, you need to be both!

What to do

The first thing to do in this project is to make a big map. You will use this map with your Edison robot, so it needs to be big enough to allow Edison to drive around on the map.

Decide what place your map will be about. Your map could be of your school, your town, a fictional city or a real place in the world where you want to travel. Whatever you choose, you will need to plan out your map and then make a version big enough for Edison robots to drive on.
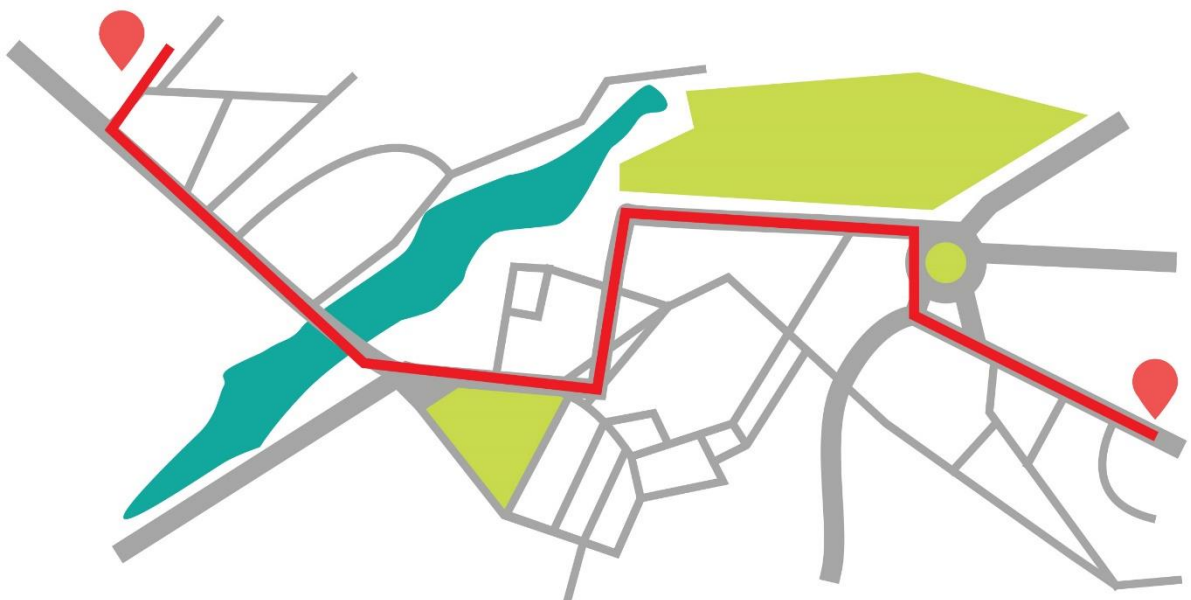
You also need to create programming challenges to be solved using your map. These challenges should tell the programmer where to start the Edison robot, where the programmer needs to have the robot finish, and any rules for the program. For example, you could have a challenge that says: *Start at the school. End at the ice cream shop.* **Don't go past the park.**

Hint!

Your program rules don't have to be just about where to go and where to avoid. You can also make rules about how Edison travels, such as going backwards or the speed Edison moves. Program rules that require the programmer to use blocks from the LEDs and Sound categories are good too!

Test the programming challenges to make sure a solution is possible for each one. Then trade challenges with a partner or another team. How many challenges can you solve?

Student Journal

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Plan out your map!

You also need to create programming challenges to be solved using your map. These challenges should tell the programmer where to start the Edison robot, where the programmer needs to have the robot finish, and any rules for the program. For example, you could have a challenge that says: *Start at the school. End at the ice cream shop. Don't go past the park.*

3. Create and write down your program rules.

   Sample student answer: My program rules were: Start at the oak tree, stop at Starbucks, go through the park and End at the red bench.