

Student Journal

U2-2.5 Let's explore Edison's Motors

Task 1: Spin that robot

In EdScratch, write the program using the same input parameters as the one in the picture. Download the program and run it with Edison on the desk or floor.

Now run the program again, but this time hold Edison in your hands. Feel how the wheels are moving. What do you notice?

1. Which direction is the left wheel moving?

2. Which direction is the right wheel moving?

Open the EdScratch app and look at the Drive category in the block pallet. Look at the different blocks and see if you can discover blocks you could use if you only wanted an output from one of Edison's motors.

3. Which blocks do you think only use one of Edison's motors? Why do you think that?

4. You can use Edison to build and invent lots of different things. Imagine you need to create something using Edison which only uses one of Edison's motors. What could you build? How would your creation use the one motor?

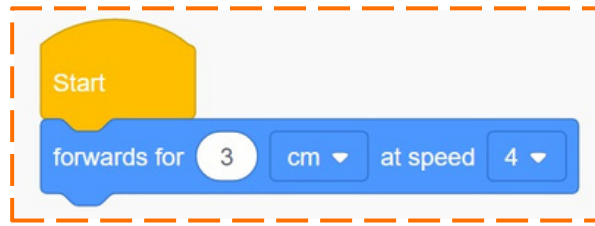


Don't forget

The wheels of your Edison robot can be removed from the powered sockets they sit in. These sockets are what Edison's motors actually move.

Task 2: Direction = forward

Look at this program:



If you ran this program in an Edison robot, would the robot have all the information it needed to know what to do? In other words, does this program tell the robot the direction, distance, distance units and speed to move the motors?

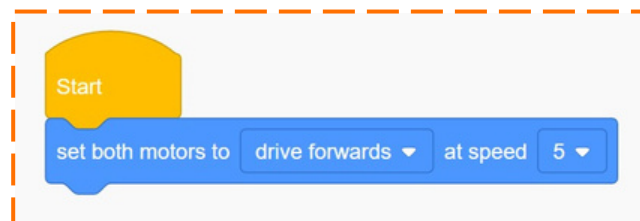
5. Fill in this chart. If the information is in the program, write the value of that input in the 'value' column. For example, the value of 'distance' is the answer to the question 'how far is this program telling the robot to go?'

Information	In the program?	Value
Direction		
Distance		
Distance units		
Speed		

Write the program in EdScratch, download it and run it in your robot.

6. What did the robot do when you ran the program?

Now look at this next program:



Does this program give the robot all the information it needs?

Task 2: Direction = forward

7. Fill in this chart. If the information is in the program, write the value of that input.

Information	In the program?	Value
Direction		
Distance		
Distance units		
Speed		

Write the program in EdScratch, download it and run it in your robot.

8. What did the robot do when you ran the program? Why did it behave that way?

How can you give the robot the rest of the information it needs so that the robot moves its motors? Experiment in EdScratch to see if you can write a program that uses the **set both motors** block but no other blocks from the **Drive** category and gets the robot to move forward.

Write the program in EdScratch, download it and run it in your robot.

9. What did you try? Did it work? Write what you did, what worked, what didn't work and how experimenting made you feel.
