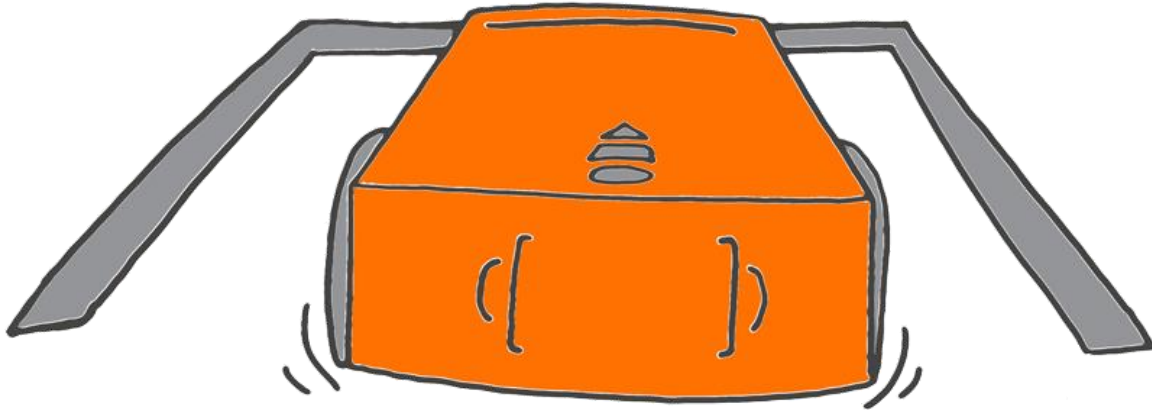# Let's stay in the borders

Remember Edison's tracking sensor? It is the sensor that lets Edison see the difference between dark and light surfaces. We can make a program that uses the tracking sensor to tell Edison to avoid crossing a black line.
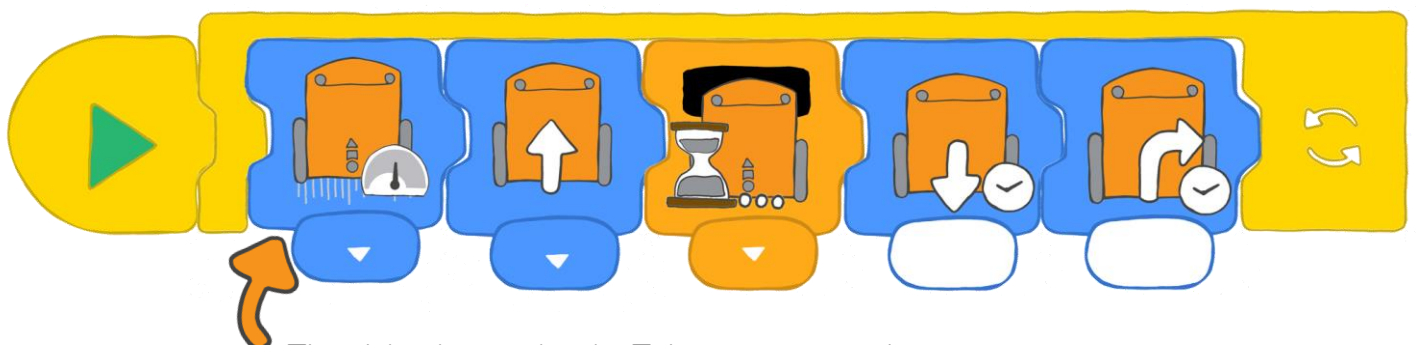

What to do with EdBlocks

Using the EdBlocks app, arrange the blocks into the program below.

Make sure to wrap the main program in the loop block.

This program tells Edison to drive forward. If Edison detects a dark surface, the program tells Edison to reverse, then turn right. This will keep Edison in the border.

How far does Edison need to drive backwards to make enough space to turn right? For how many seconds should you make Edison turn right?

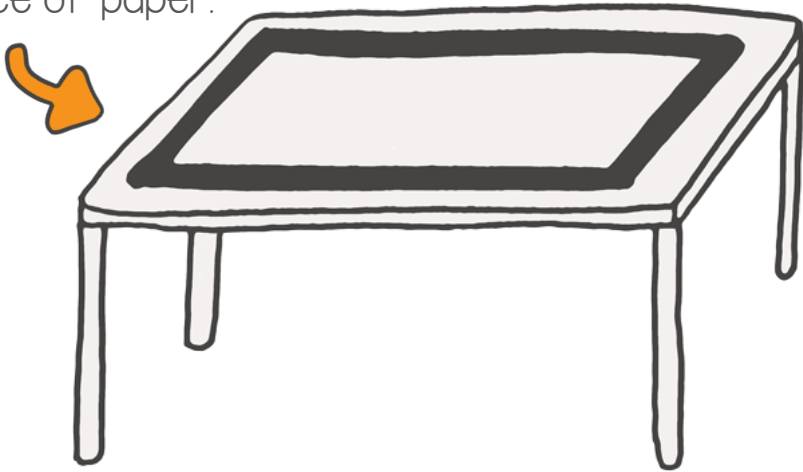Test different times to see what gives you the best results.

This block controls Edison's speed.

You can choose slow, normal or fast.

What to do with Edison

Use some black tape to create a border on a desk for Edison to stay inside. You can also use the track from activity 6 or draw a black border on a large piece of paper.

Download your program to Edison. Run the program with Edison in the border.

Experiment with your program. Test different times in the 'reverse' block and the 'turn right' block.

You should also try using different speed blocks to see what happens.

Find the answer

1. What time, in seconds, worked the best in the 'drive backwards' block?

_____

2. What time, in seconds, worked the best in the 'turn right' block?

_____

3. Which speed block worked best? What made it the best choice?

_____

_____

_____

4. What if cars had a program like this in real life? Would that be good? Why do you think it would be good or bad?

_____

_____

_____