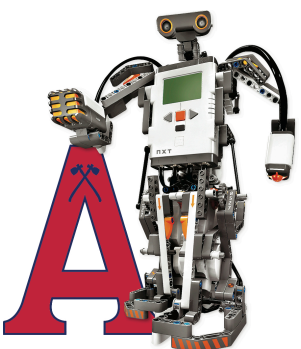


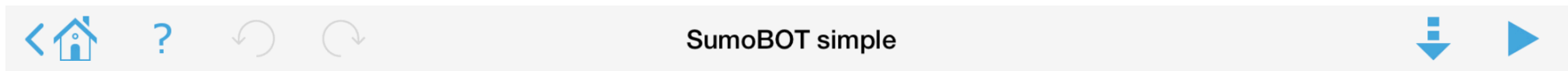
Simple Solution BottleSUMO Program

iPad Classroom App

Robot tasks

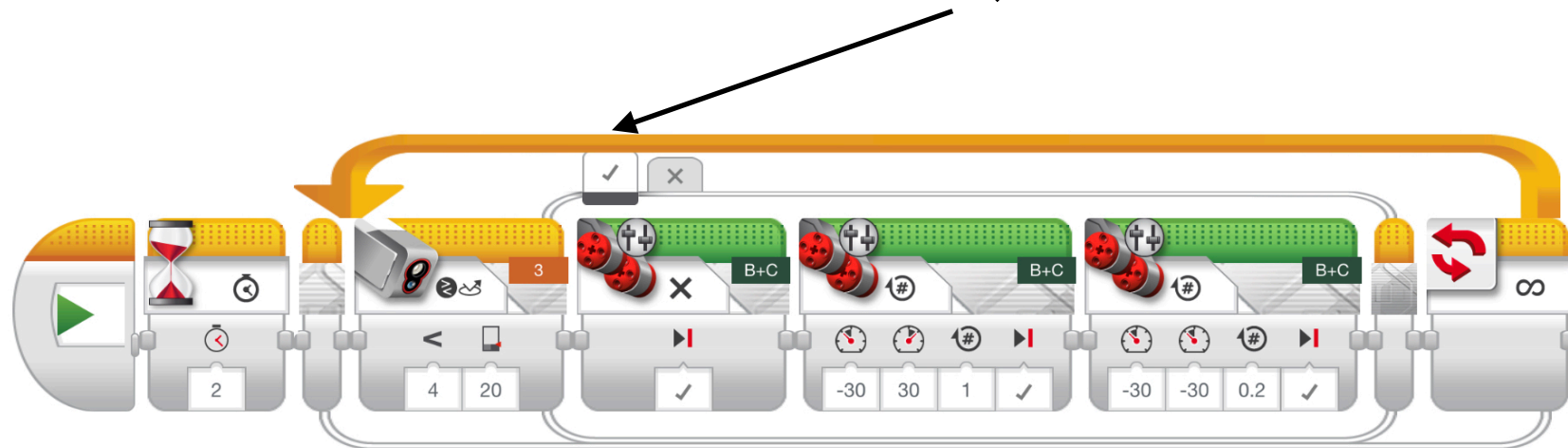
- Stay on the table
- Find the bottle(s)
- Push bottle(s) off the table
- Robot has to stay on the table



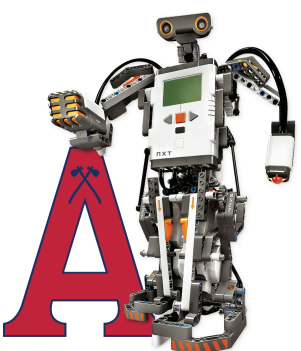


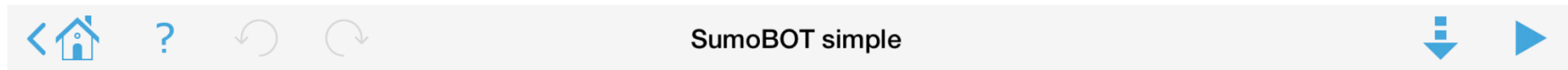
Your loops have a ✓ or ✗

This image shows the robot actions for the ✓ program path for each inside loop.



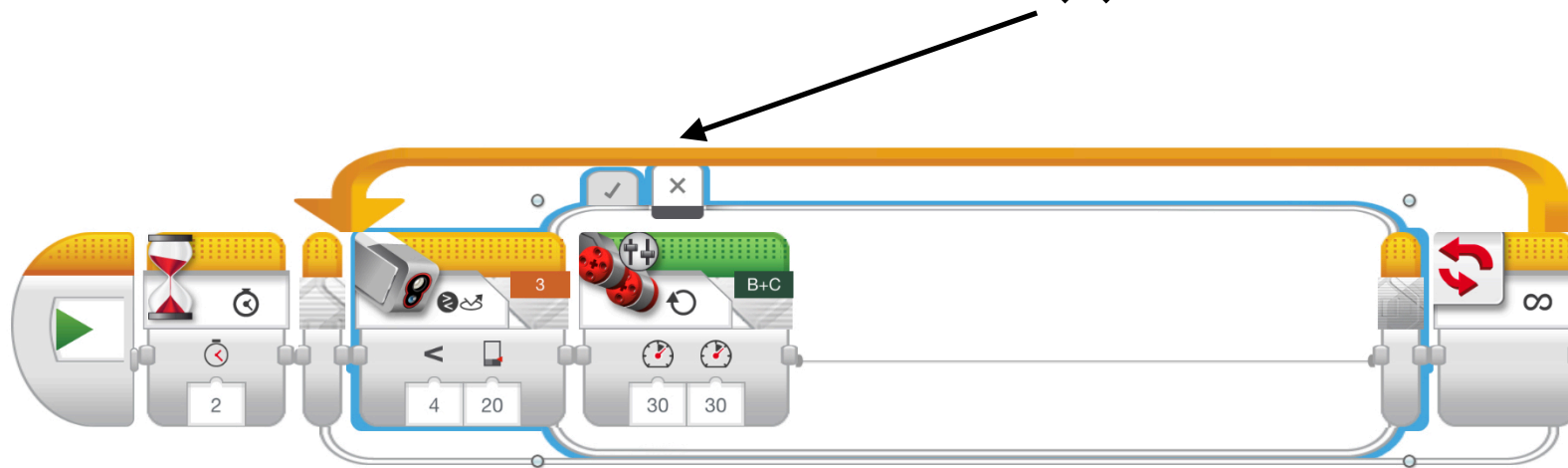
- Program starts with a wait block - once program starts the robot will wait 2 seconds then move onto the next programming block.
- The loop is set to detect if the colour sensor in port 3 is on the table or off the table.
- If the colour sensor is off the table stop the motors. Then the robot will turn for one rotation and then move backwards for 0.2 rotations, and then exit the loop.
- The program then returns to the start of the loop and the colour sensor continues to measure the reflected light intensity.



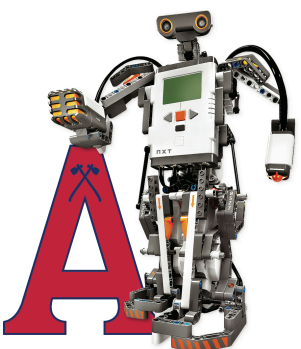


Your loops have a ✓ or ✗

This image shows the robot actions for the ✗ program path for each inside loop.



- Program starts with a wait block - once program starts the robot will wait 2 seconds then move onto the next programming block.
- The loop is set to detect if the colour sensor in port 3 is on the table or off the table.
- If the colour sensor is on the table stop the motors are on at 30% speed and the robot continues to move on the table.
- The program then goes back to the start of the loop and the colour sensor continues to measure the light intensity.



How can you improve your program?

Remember your robot tasks:

- Stay on the table
- Find the bottle(s)
- Push bottle(s) off the table
- Robot has to stay on the table

Think about it: This program uses the colour sensor in port 3 to find the edge of the table.

1. What would happen if the colour sensor in port 2 went off the table first?

Answer: your robot may fall off the table.

2. Does this program 'look for the bottles?

Answer: no

How would you change this program to include 'looking' for the bottle, and making sure your robot stays on the table no matter which colour sensor found the edge of the table first?

Answer: It will involve the ultrasonic sensor and another loop.

Try to solve the problem yourself and test your ideas.
We will look at the answer to these problems in the next tutorial; Advanced BottleSumo Program.

