

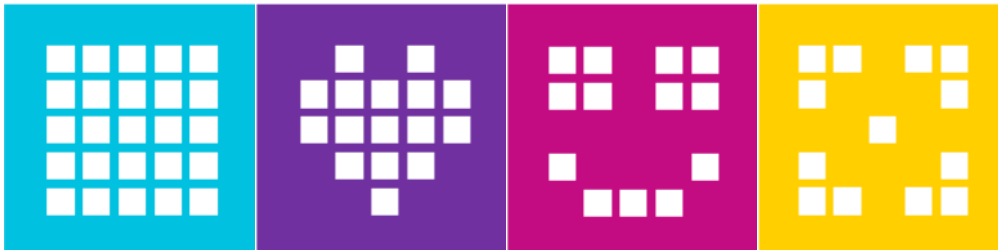
SPIKE PRIME LESSONS

By the Creators of EV3Lessons



INTRODUCTION TO EVENTS

BY SANJAY AND ARVIND SESHAN

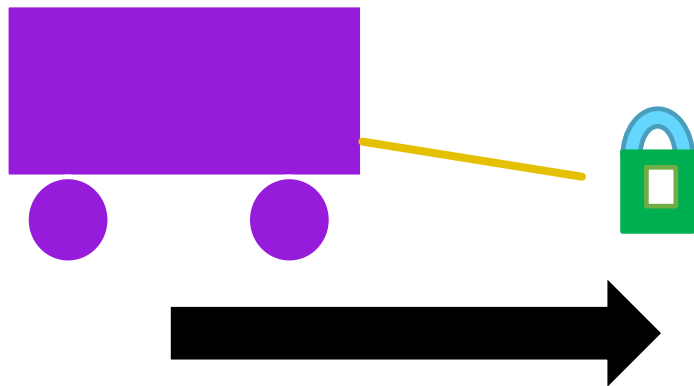


LESSON OBJECTIVES

- 1) Learn what an event is and how to use them
- 2) Learn when you might use events

WHAT ARE EVENTS?

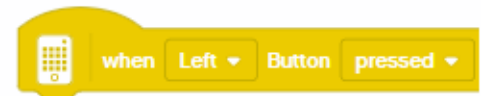
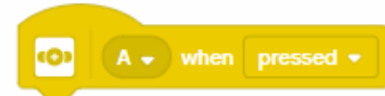
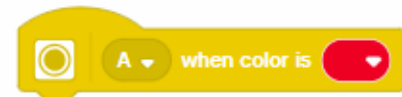
- Events allow you to run two or more blocks at the same time.
- What if you have one or more attachment arms connected to motors and you want to turn these arms while the robot is moving to complete a mission



Robot lifting up
hoops and driving
forward.

EVENT BLOCKS

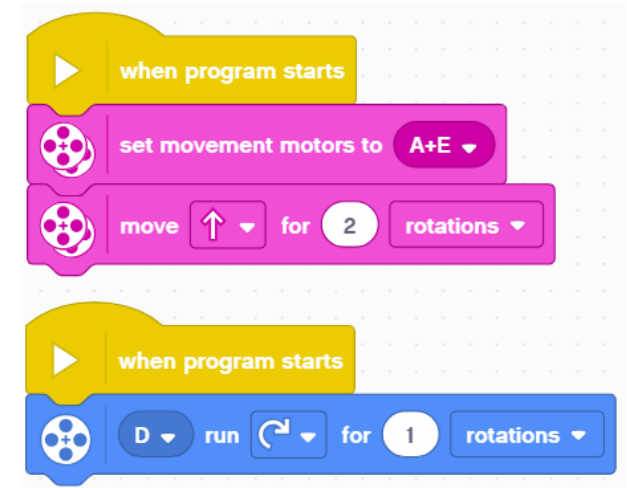
- Events are triggered by different conditions (e.g. sensor values, message broadcasts, or when a program starts)
- This slide shows all the event blocks available



WHEN PROGRAM STARTS

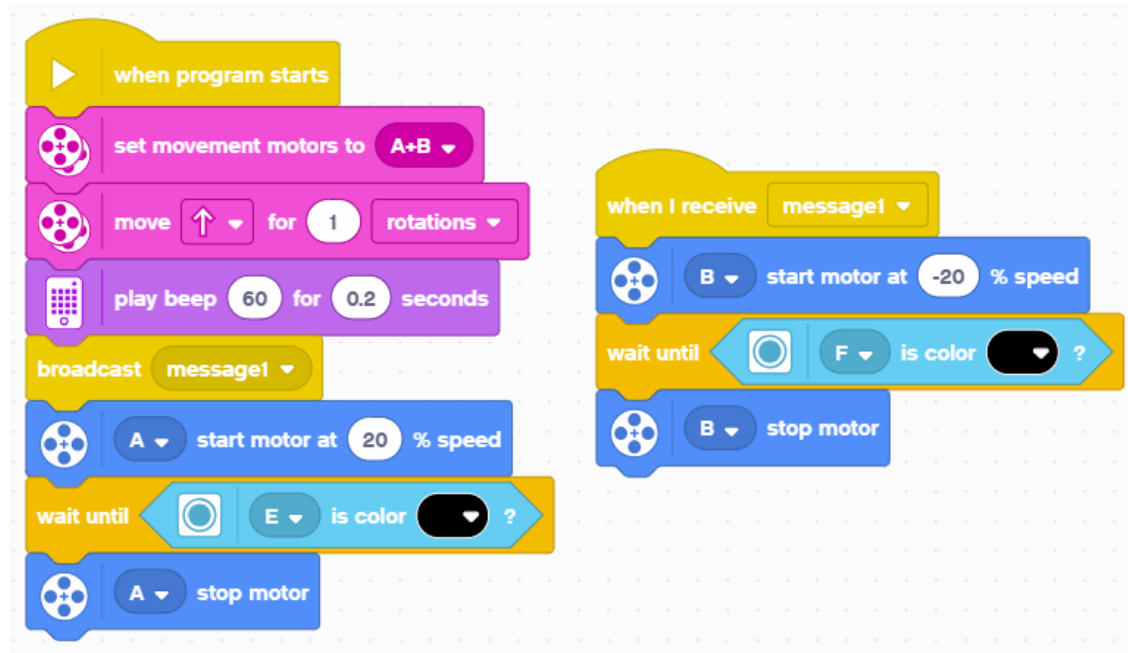
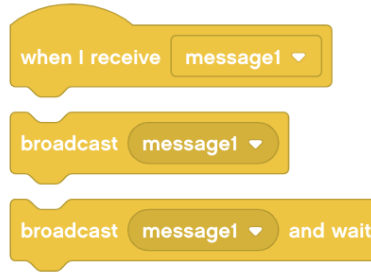


- This block is used to start your programs.
- If you have more than one in a project, you can have two separate pieces of code run when the program starts.
- In the example on the right, the robot will move straight for two rotations while simultaneously running Motor D for 1 rotation



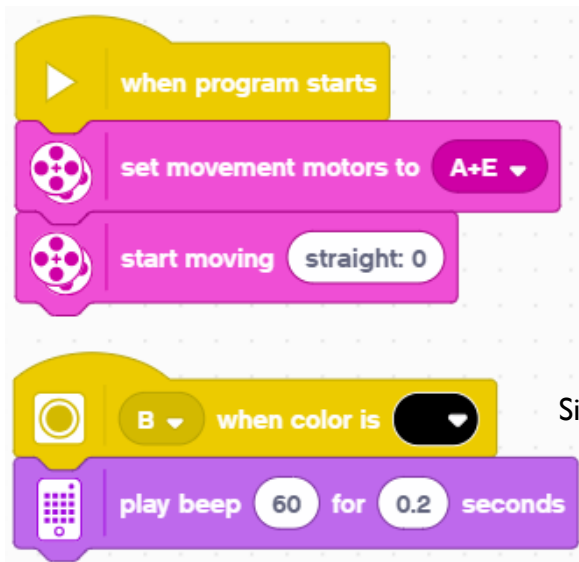
BROADCAST MESSAGES

- Messages can trigger events when you want to (even in the middle of code)
- Broadcast message: sends the message and then continues the rest of the code below it.
- Broadcast message and wait: sends the message and waits for all the code under that received message finish and then continues the code under the broadcast message block



SENSOR ACTIVATION

- You can use the Event Sensor blocks to trigger an event when a sensor condition is met.
- In the example below, the robot moves forward and checks for the color black at the same time.



Moves forward

Simultaneously checks color

Plays a beep when black is found



CREDITS

- This lesson was created by Sanjay Seshan and Arvind Seshan for SPIKE Prime Lessons
- More lessons are available at www.primelessons.org



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