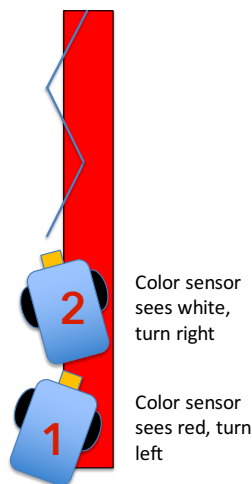
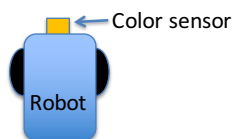


## PROGRAMMING CHALLENGE:

In this lesson, you program your TRACK3R robot to follow a line on the Play Mat.

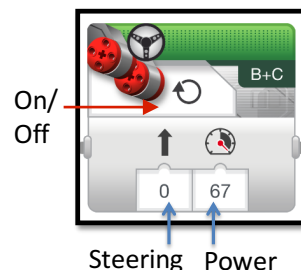
### Human vs. Robot Line Following:

- A human can follow the middle of a line because we see both edges and further ahead
- A human knows which side of the line he/she veered off.
- But a robot can only follow the edge of a line
- A robot uses a color sensor to follow lines
- The robot makes a decision based on what color it sees.

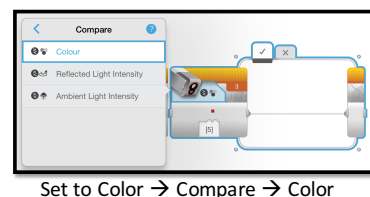


## BLOCKS YOU NEED:

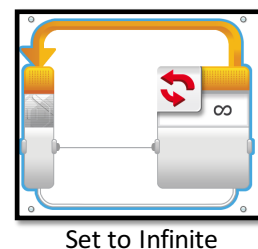
**Move Steering** block in "On" Mode found in the Green Programming Pallet tab



**Switch block** that uses the Color Sensor in "Compare Color" Mode found in the Orange Programming Pallet tab



**Loop block** that repeats forever found in the Orange Programming Pallet tab



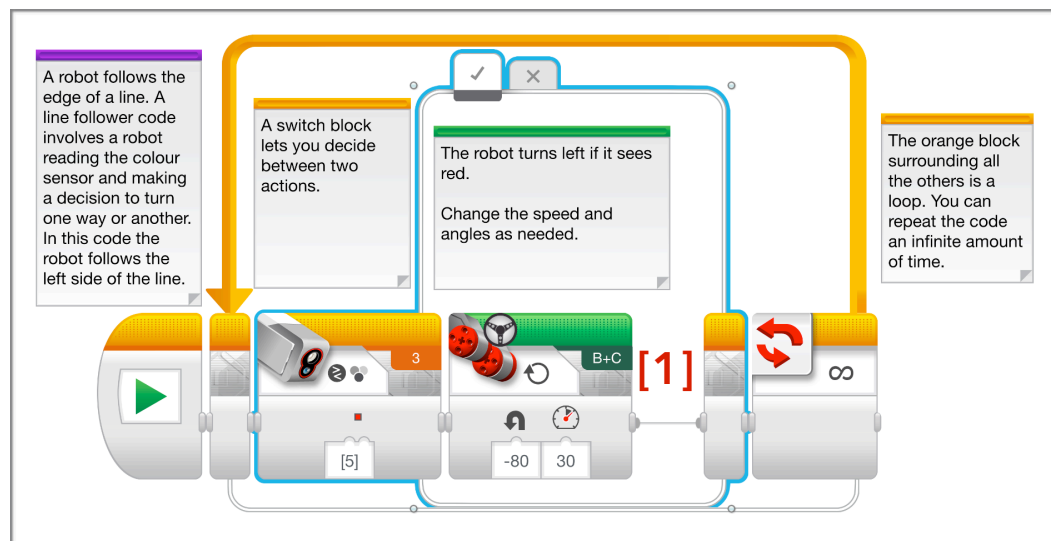
## LINE TRACK3R in Four Easy Steps:

**STEP 1:** Start with a Switch Block

**STEP 2:** Inside the Switch, use a Move Steering Block in "Motor On" mode. Change the Steering value to make the robot turn left if it sees red and right if it sees any other color. Labeled [1] and [2] on the image

**STEP 3:** Place all of the above in a Loop Block

**STEP 4:** Download your program to TRACK3R. Place your robot's color sensor on the left side of the red line of your Play Mat. Play the program.



[2]

In the False (X) tab, you change the Steering Value in the Steering Block to +80 to make the robot turn right.