

## CHECKPOINTS: KEEP YOUR ROBOT ON THE ROAD!

### CHECKPOINT 2: INTRO TO COLOR SENSOR AND LINE FOLLOWING

THE PURPOSE OF THIS CHECKPOINT IS TO PRACTICE USING THE EV3 ROBOT AND PROGRAMMING SOFTWARE. FURTHER, THIS IS THE FIRST PRACTICE OF THE CONVENTIONS:

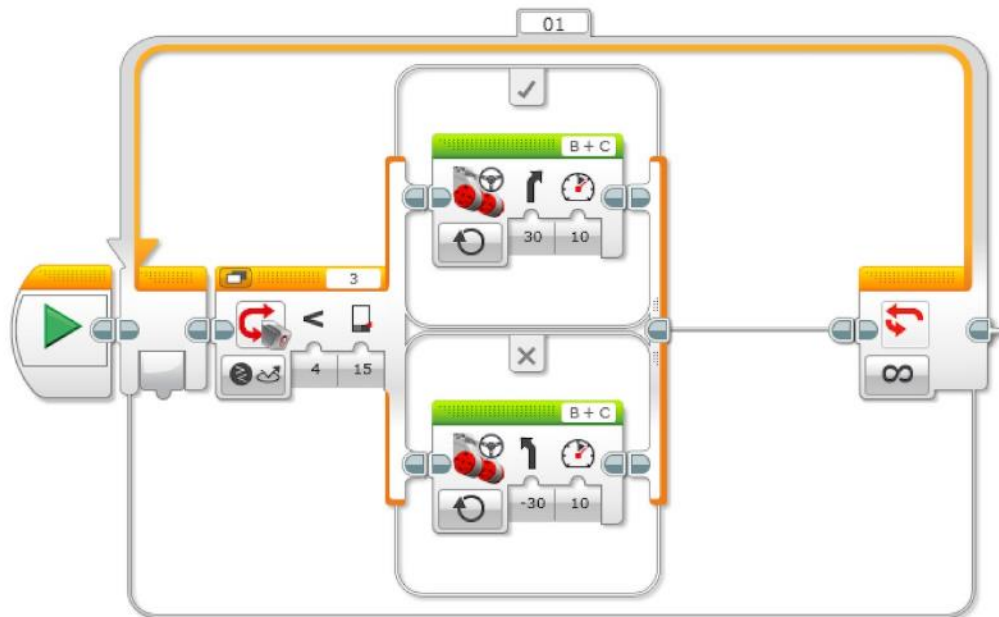
- CONVENTIONS

#### STEP 1: OPEN THE LESSON ON THE MACBOOK

[HTTPS://EDUCATION.LEGO.COM/EN-US/LESSONS/MINDSTORMS-EV3/LINE-DETECTION](https://education.lego.com/en-us/lessons/mindstorms-ev3/line-detection)

1. YOU WILL FIND THIS LINK IN THE GMAIL ON THE MACBOOK WITH THE SUBJECT "CHECKPOINT 2 HELPERS".

#### STEP 2: REVIEW THE LESSON, FOLLOW THE STEPS STARTING AT THIS POINT IN THE LESSON



#### LINE FOLLOWING IN LOOP

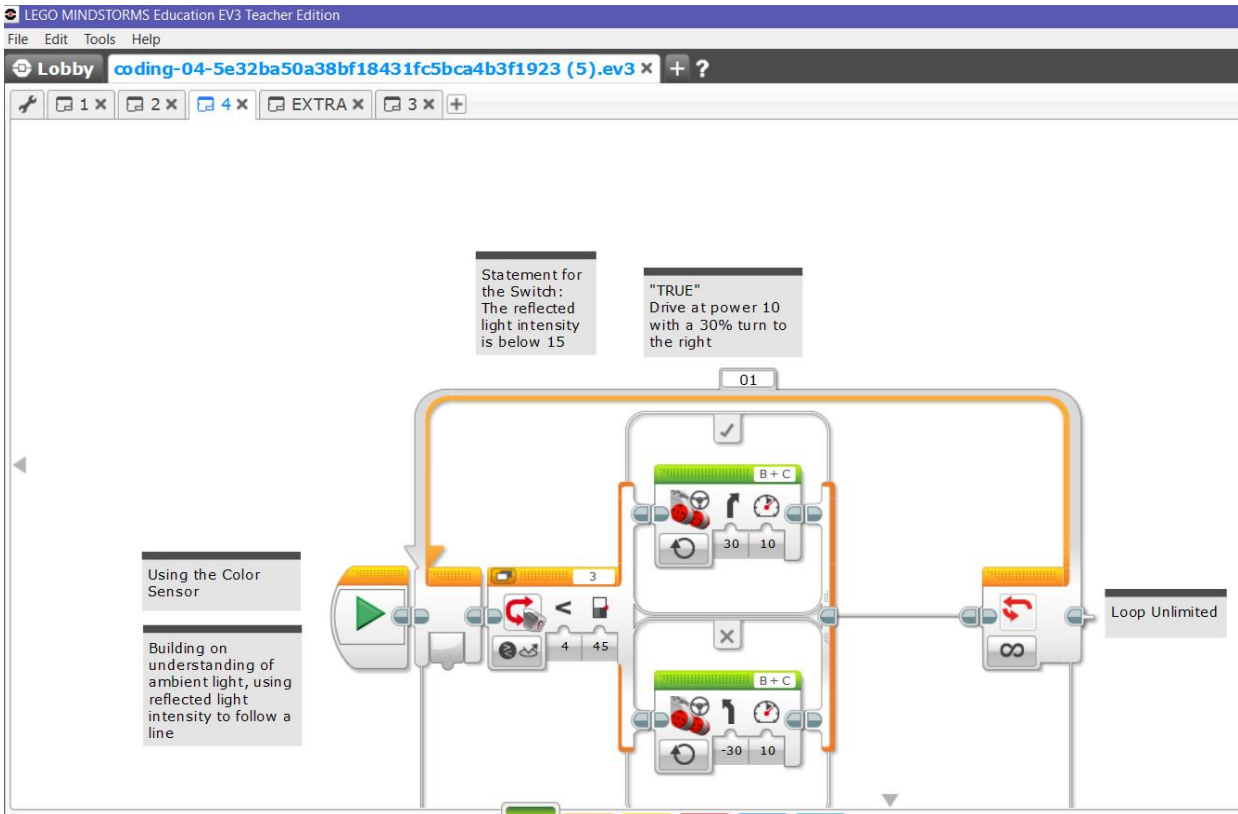
1. Start the program.
2. Start motors B and C (drive forward with a curve toward the line).
3. Wait for the Color Sensor to detect the color black.
4. Start motors B and C (drive forward with a curve away from the line).
5. Wait for the Color Sensor to detect the color white.

#### STEP 3: OPEN THE EV3 SOFTWARE ON THE MACBOOK

#### STEP 4: DOWNLOAD THE SAMPLE CODE

**STEP 5: DOUBLECLICK ON THE EV3 PROGRAM IN THE DOWNLOAD FOLDER, STARTING WITH CODING-**

**STEP 6: GO TO TAB MARKED 4**



**STEP 7: DOWNLOAD AND RUN! TEST ON A TEST PATTERN YOU USED IN CHECKPOINT 1.**

**STEP 8: USE [COMMENTING CODE GUIDELINES](#) TO DOCUMENT YOUR CODE.**

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## STEP 9: SAVE YOUR EV3 PROGRAM TO GOOGLE DRIVE

1. HERE ARE THE STEP BY STEP INSTRUCTIONS IF YOU NEED THEM.

A. [HTTPS://TINYURL.COM/BACKUP-CODE-DRIVE](https://tinyurl.com/backup-code-drive)

## STEP 10: EXIT TICKET

1. SUBMIT CHECKPOINT 2 IN PLP

2. TEACHER DEMO

3. TEACHER LOOK FOR PROGRAM COMMENTED AND UPLOADED CORRECTLY