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# The Future is Bright With Our Color Code Guide

April 29th, 2024

# Introductions

and

# Housekeeping

# What we'll cover today

Newest Color Code Guidelines

Calibrating

Drawing Color Codes

Q&A

Survey

# Our Purpose

Help you:

*Anticipate student  misconceptions

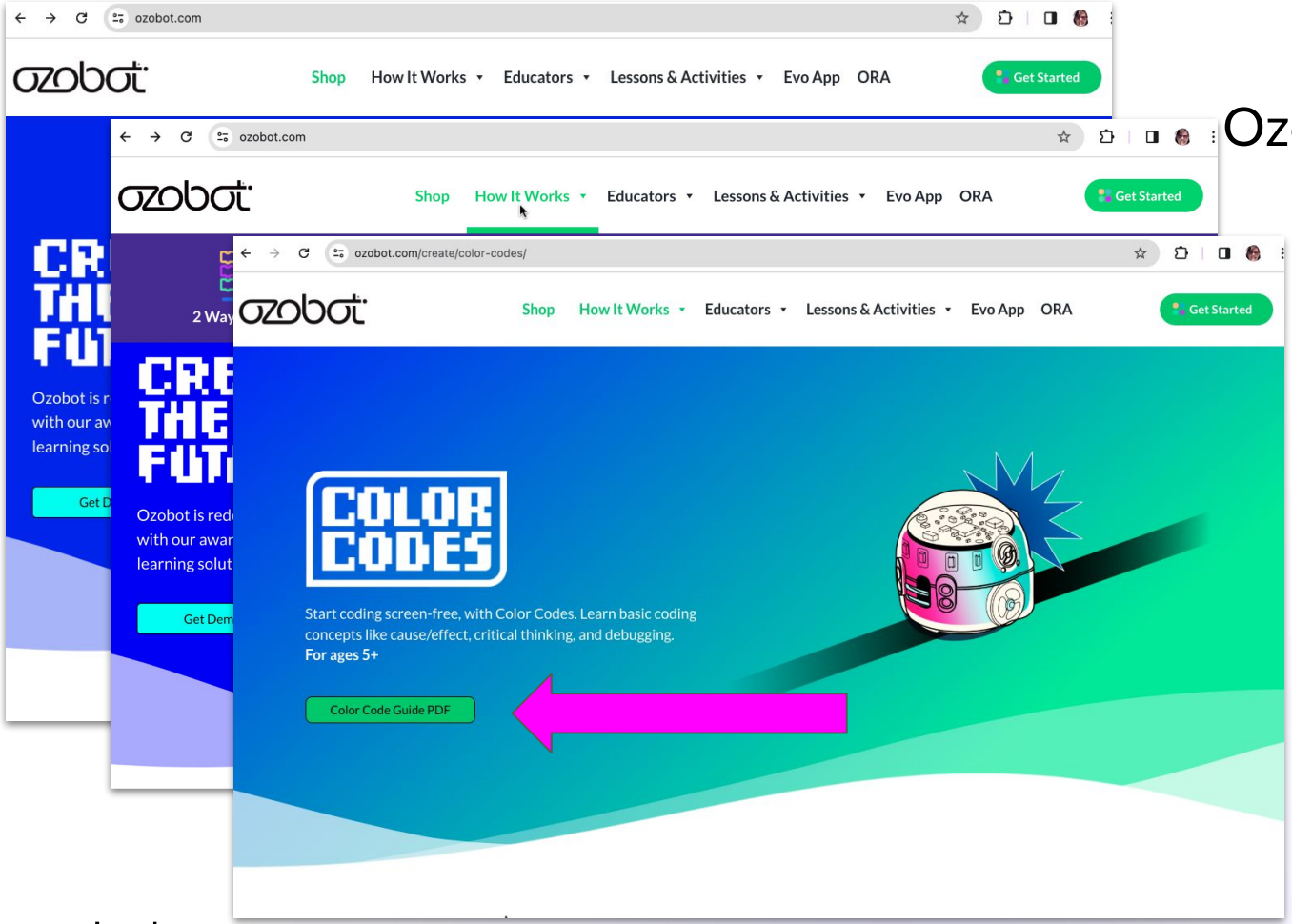
*Feel prepared

*Be empowered in your understanding

*Know where to go for further help

# Color Codes Guidelines

Be sure to follow the guidelines when using Color Codes.

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How It Works > Color Codes

Color Code Guide PDF

# What is a Color Code?

And how does Evo “see” the colors?

# Color Codes and Evo's Optical Sensors

COLOR CODE Guide

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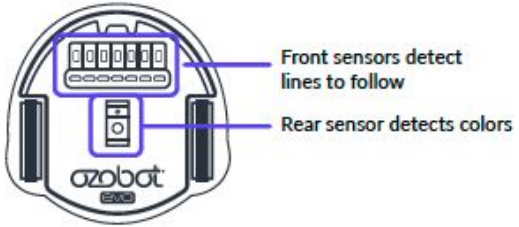
## What is a Color Code?

A Color Code is a short sequence of 2 to 4 colors that Ozobot Evo can read and responds to. Evo uses optical sensors and respond with pre-programmed behaviors–by speeding up, slowing down, changing direction, or making cool moves (see Color Code Chart).

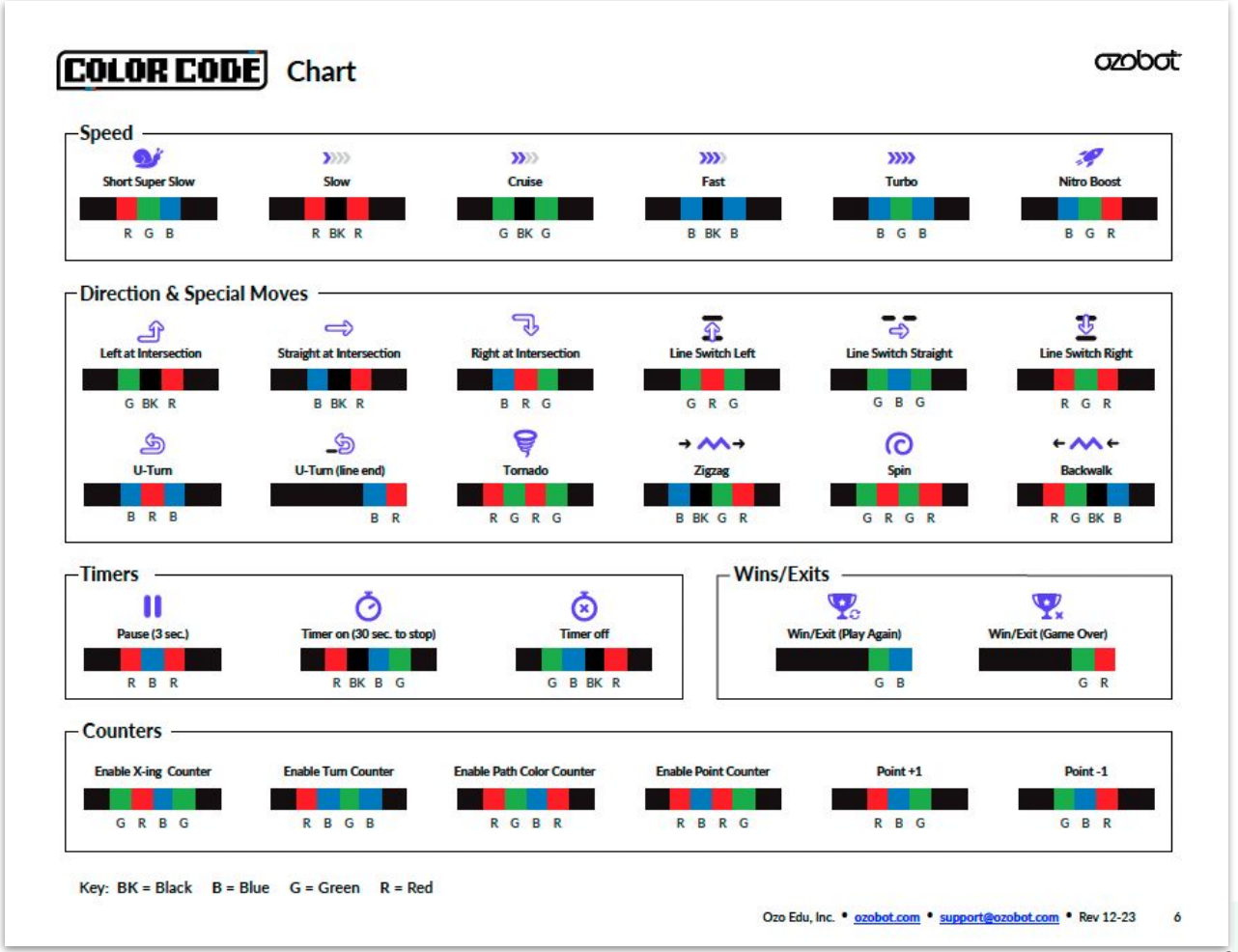
| | | | |
|---|---|---|---|
| RGB: 73/183/73<br>CMYK: 72/0/100/0<br>HEX #49B749 | RGB: 17/131/198<br>CMYK: 82/40/0/0<br>HEX #1183C6 | RGB: 236/32/39<br>CMYK: 0/99/97/0<br>HEX #EC2027 | RGB: 0/0/0<br>CMYK: 30/30/30/100<br>HEX #000000 |

## Ozobot Evo's Optical Sensors

Evo's optical sensors can read colors and line widths, enabling the bot to perform different movements.



# Color Code Chart



COLOR CODE Chart

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**Speed**

| Short Super Slow | Slow | Cruise | Fast | Turbo | Nitro Boost |
|---|---|---|---|---|---|
| R G B | R BK R | G BK G | B BK B | B G B | B G R |

**Direction & Special Moves**

| Left at Intersection | Straight at Intersection | Right at Intersection | Line Switch Left | Line Switch Straight | Line Switch Right |
|---|---|---|---|---|---|
| G BK R | B BK R | B R G | G R G | G B G | R G R |

| U-Turn | U-Turn (line end) | Tornado | Zigzag | Spin | Backwalk |
|---|---|---|---|---|---|
| B R B | B R | R G R G | B BK G R | G R G R | R G BK B |

**Timers**

| Pause (3 sec.) | Timer on (30 sec. to stop) | Timer off |
|---|---|---|
| R B R | R BK B G | G B BK R |

**Wins/Exits**

| Win/Exit (Play Again) | Win/Exit (Game Over) |
|---|---|
| G B | G R |

**Counters**

| Enable X-ing Counter | Enable Turn Counter | Enable Path Color Counter | Enable Point Counter | Point +1 | Point -1 |
|---|---|---|---|---|---|
| G R B G | R B G B | R G B R | R B R G | R B G | G B R |

Key: BK = Black B = Blue G = Green R = Red

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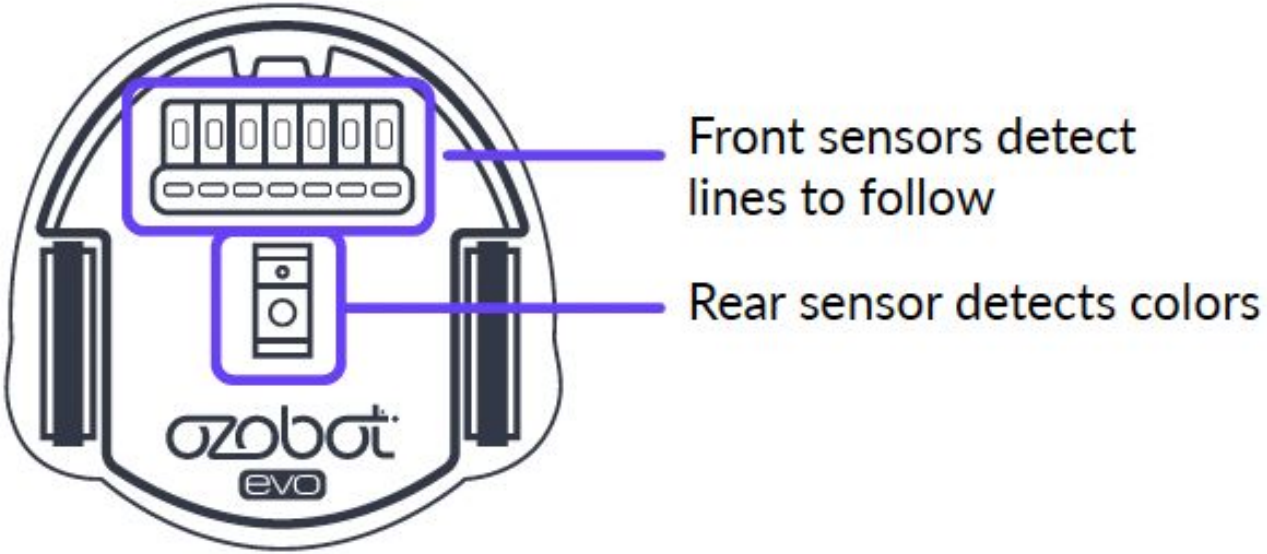
# Line-following and Color Sensors



# Calibration

Best practices for the initial steps of beginning a Color Code lesson.

## What is calibration?

Calibration allows Evo to detect the light in your space and adjust itself to better ‘see’ lines and Color Codes.



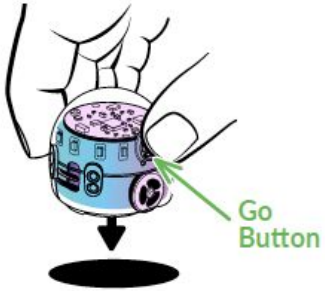
## When should I calibrate?

Calibration should be done at the beginning of each session where you are using Evo.

Calibration is also the first troubleshooting step when the bot is not behaving as expected.

# How to Calibrate

**Step 1:**
Draw a black circle, slightly bigger than your bot. Place Evo on it.

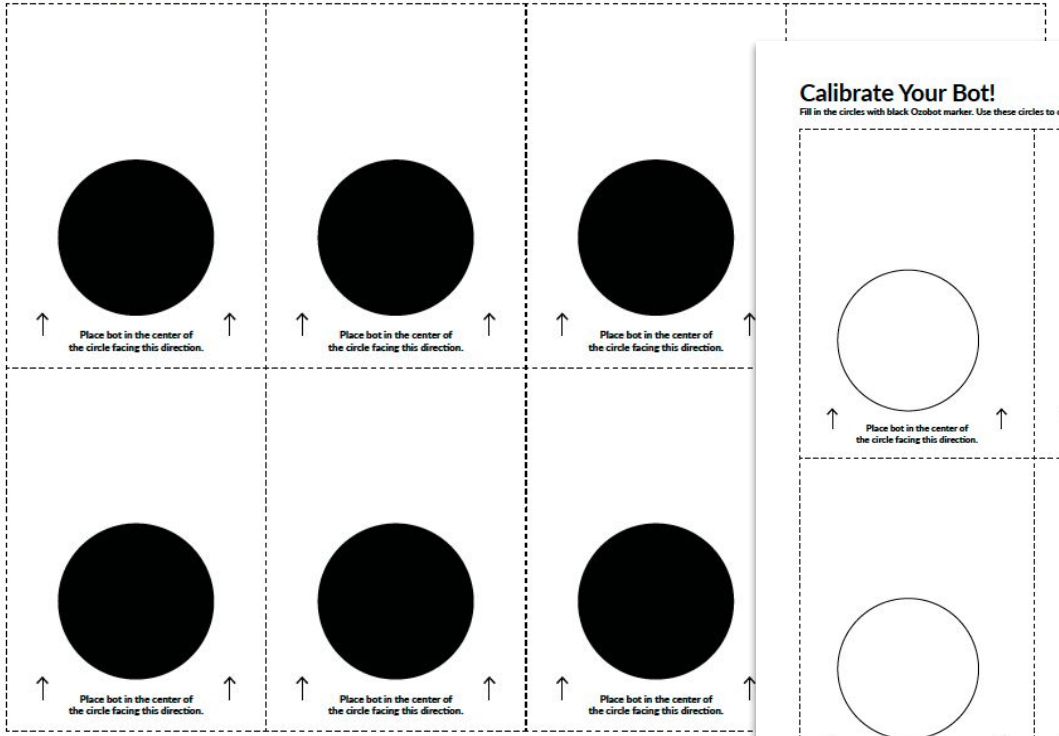



**Step 2:**
Press and hold Evo's Go Button for 2 seconds (or until its top LED flashes white), then release.


**Step 3:**
Evo will rotate left, right move outside the circle, and blink green when calibrated. If Evo blinks red, start over from Step 2 then release.

## Calibrate Your Bot!

Use these circles to calibrate bots when using them on pre-filled, printed tracks.

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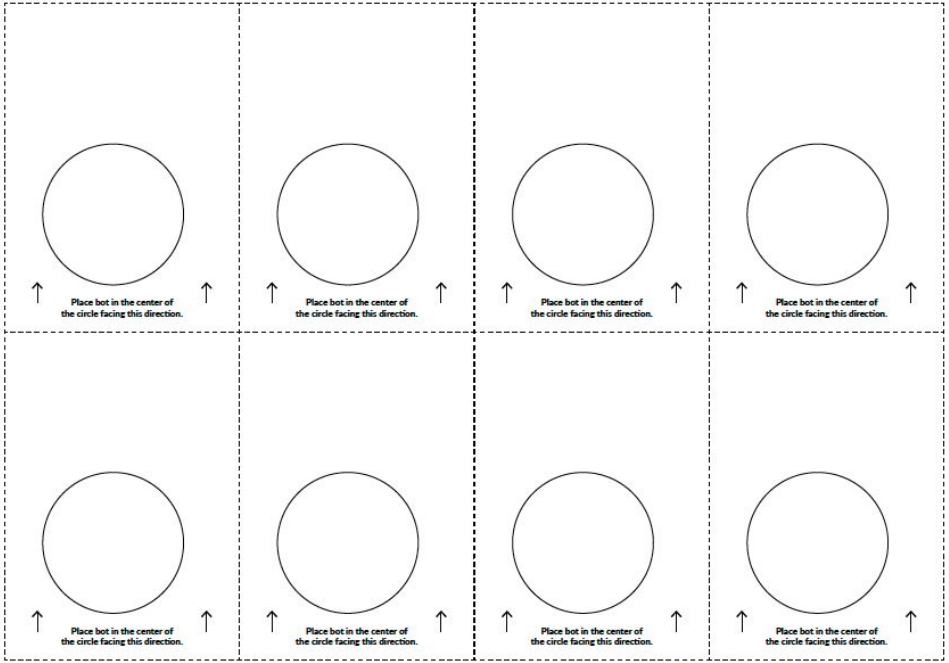
## Calibrate Your Bot!

Fill in the circles with black Ozobot marker. Use these circles to calibrate bots when using markers to create your own tracks.

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# Specifics about drawing lines

Let’s use best practices !

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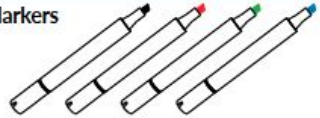
## Markers & Paper

To draw Color Codes, you'll need black, red, green, and blue markers (included with your Evo).

### YES

**Ozobot Markers**

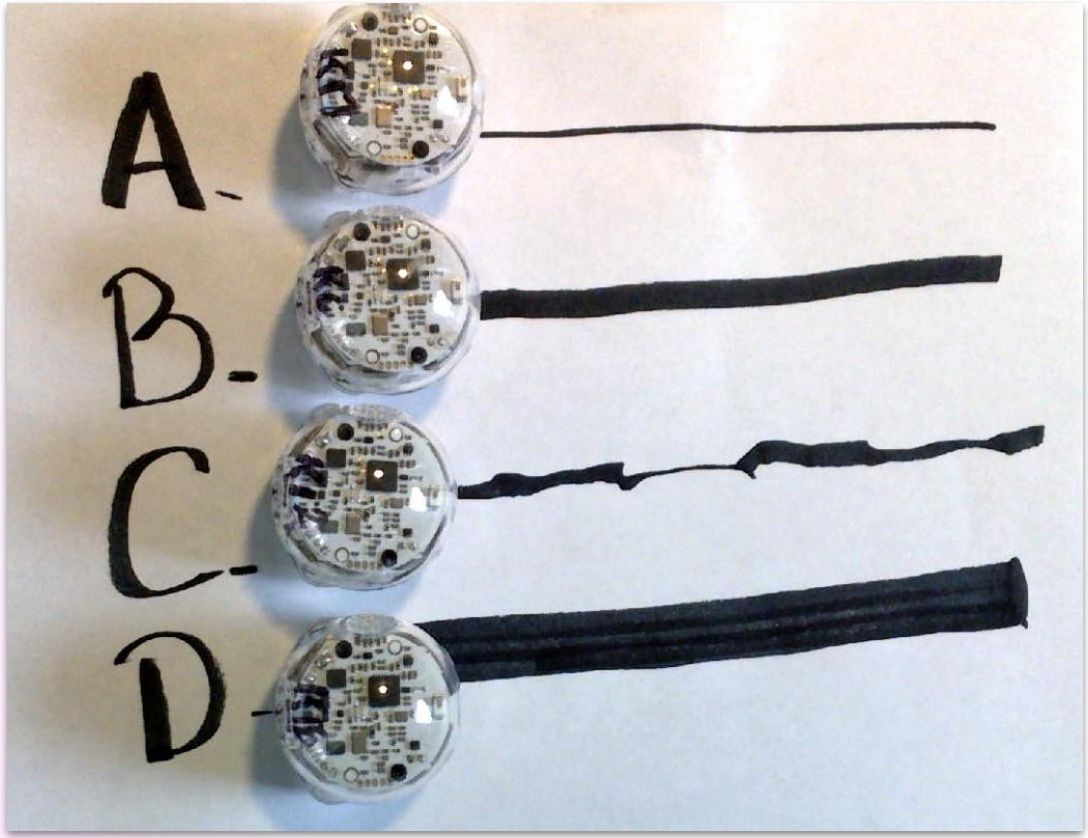


**Paper**

- White paper (multipurpose, non-photo/glossy)

### NO


# On which line will Ozobot be most successful?




Line B

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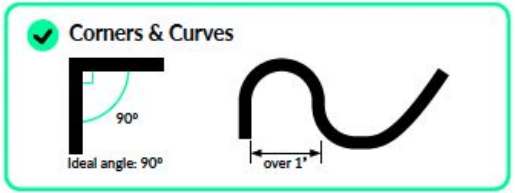
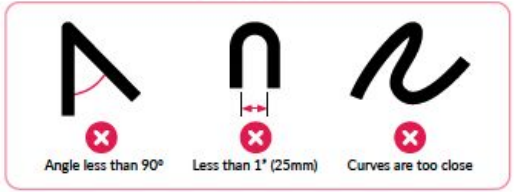
## Corners & Curves

**YES**

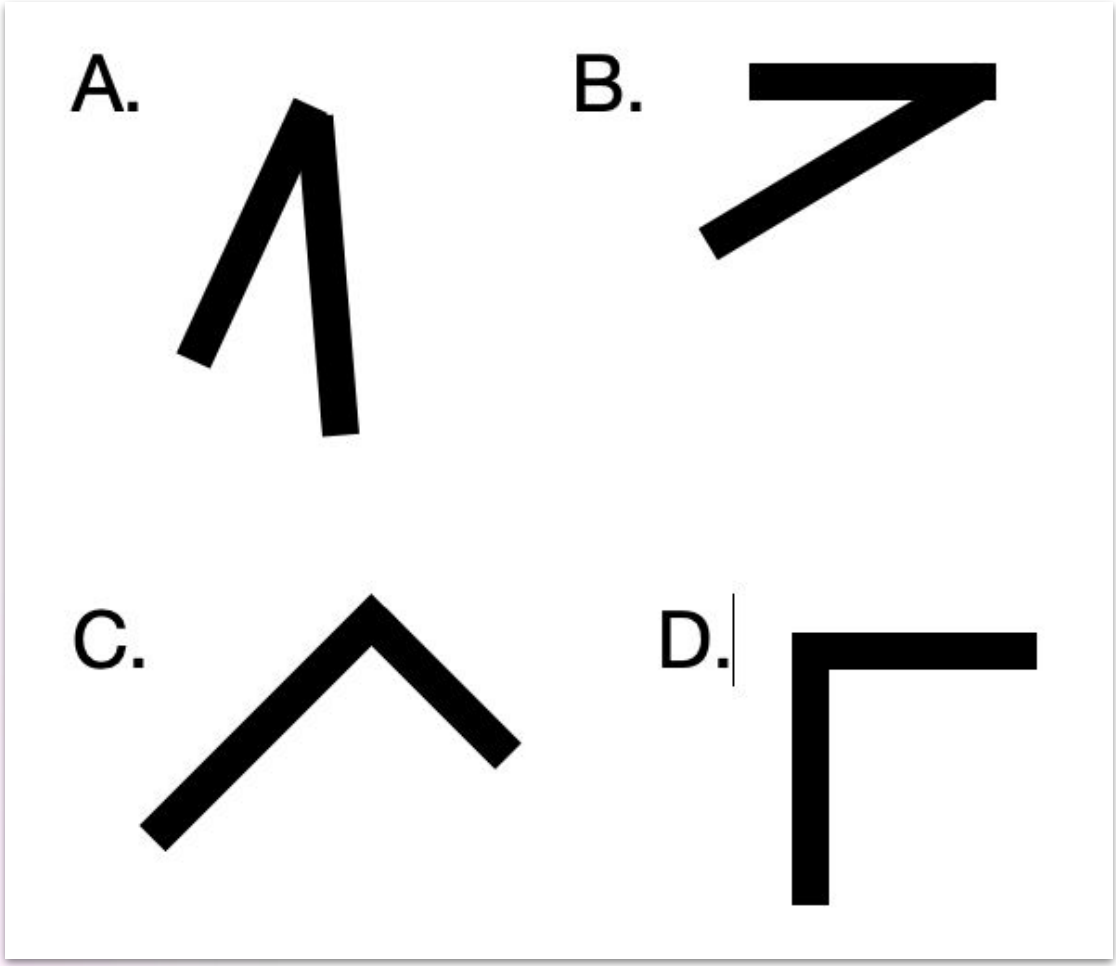



**NO**



## On which corner(s) will Ozobot be most successful?

C or D



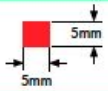
# Specifics about drawing Color Codes

Let’s use best practices !

## Draw Color Codes

### YES

- Color Code square size:
  - Best: 0.2" x 0.2" (5mm x 5mm)
  - Range: 4.5mm – 6mm

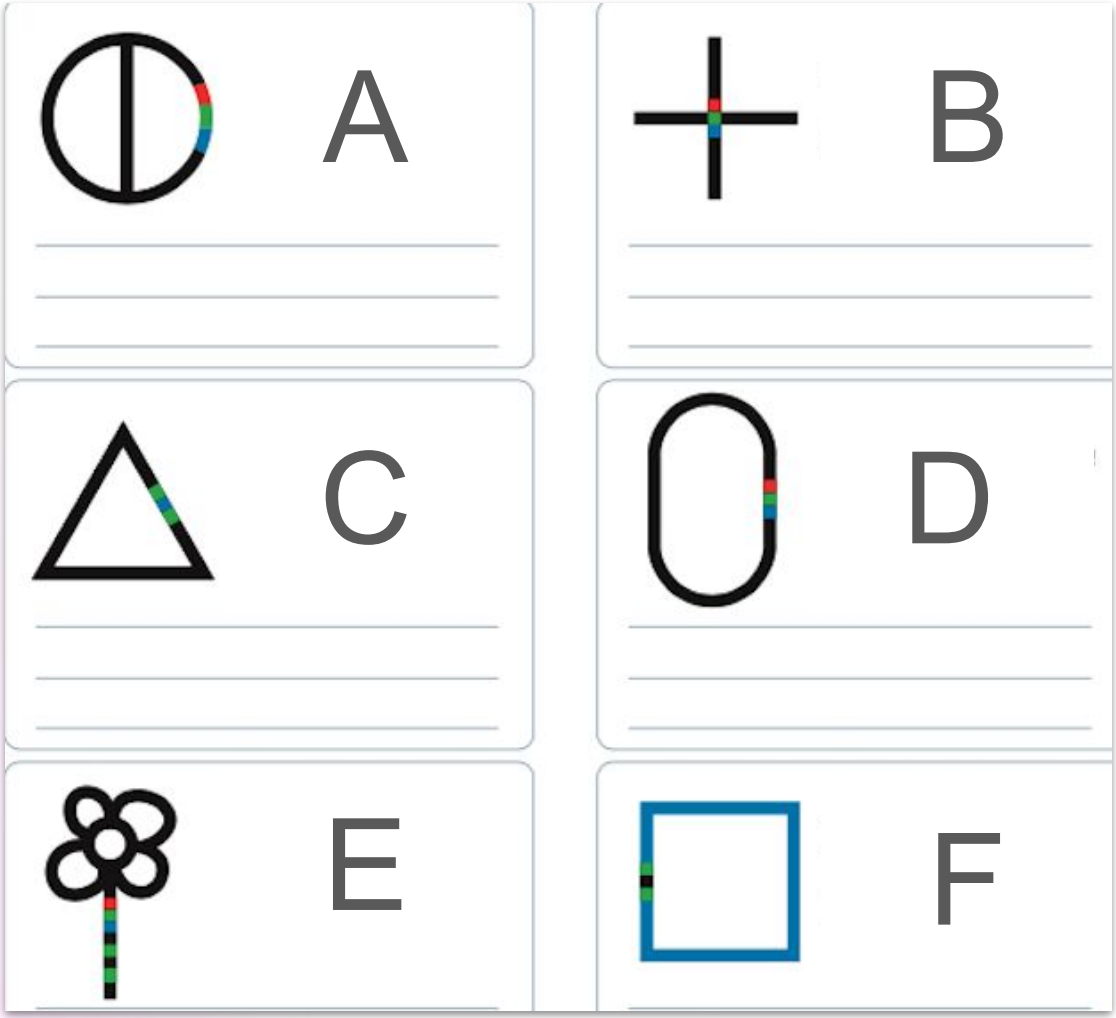



### NO

Squares should be approximately the same size

# On which of these will Ozobot be most successful?

D

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# COLOR CODE Lessons Map Guide

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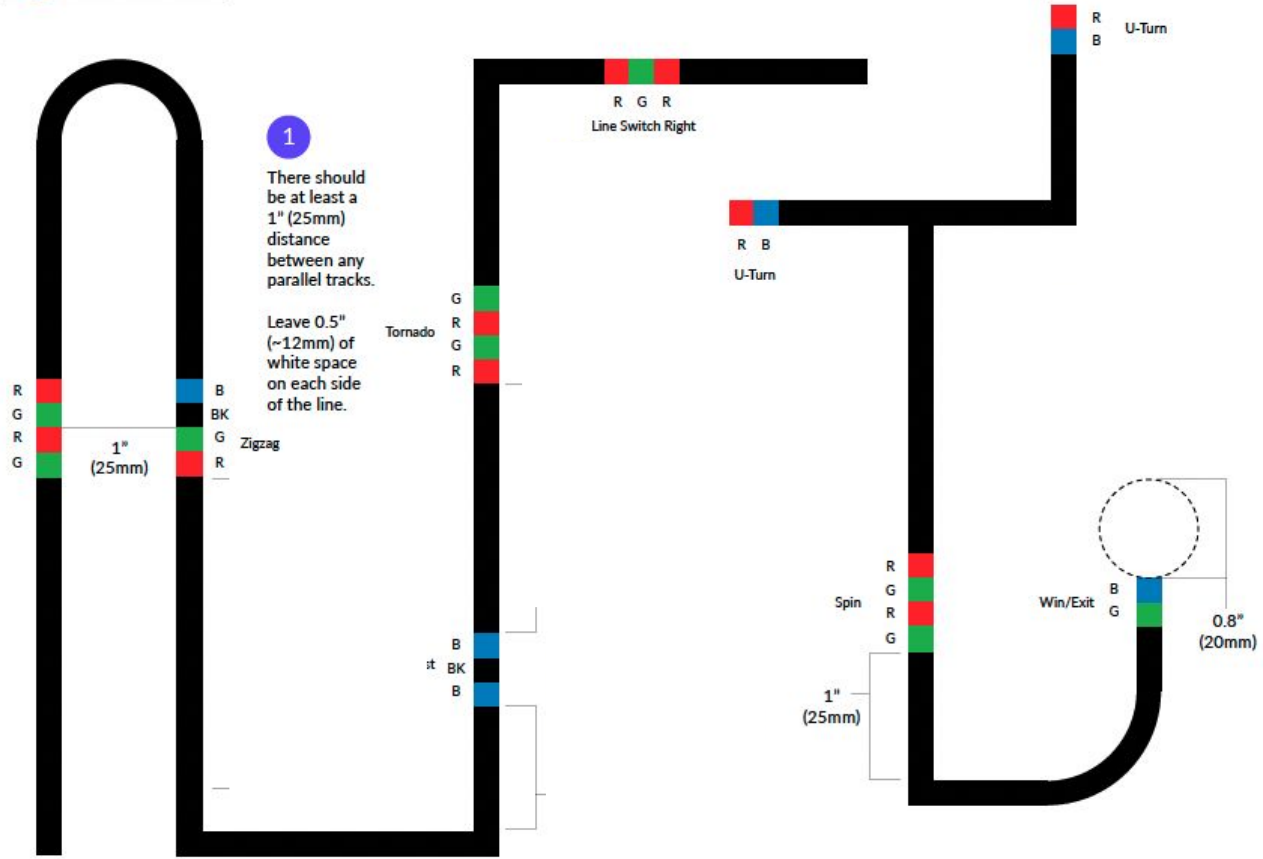

# Color Code Magnets



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# Ozobot Classroom

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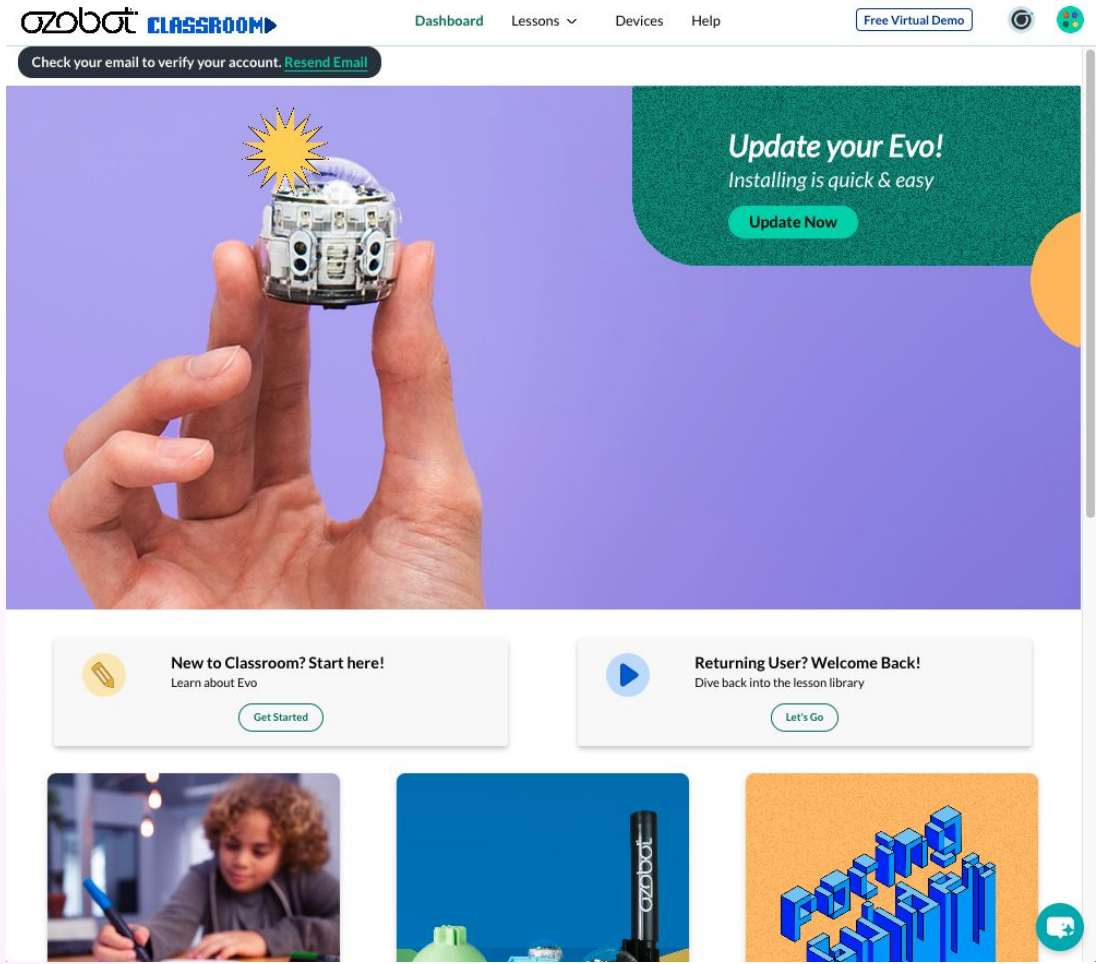


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Our support team's goal is to help you and your students be **successful** and feel **confident**.

# Tell your friends!!

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# Q&A

Write your questions in the chat!

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# Thank you!

Please complete the 5-minute survey that will appear when the webinar is closed.

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