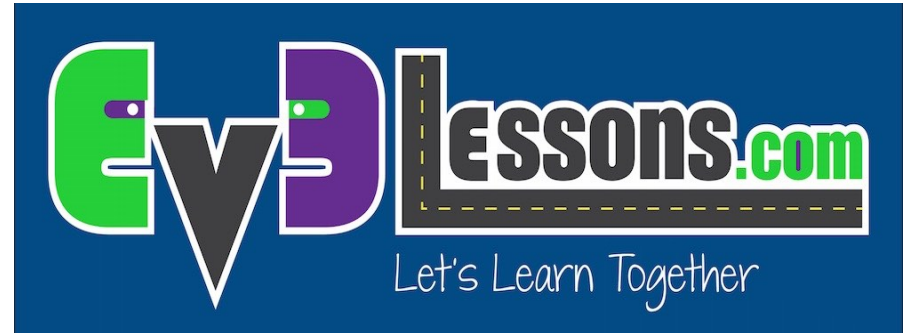
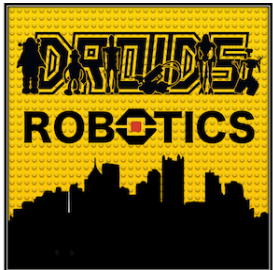


BEGINNER EV3 PROGRAMMING LESSON



Topics Covered:
Display Block



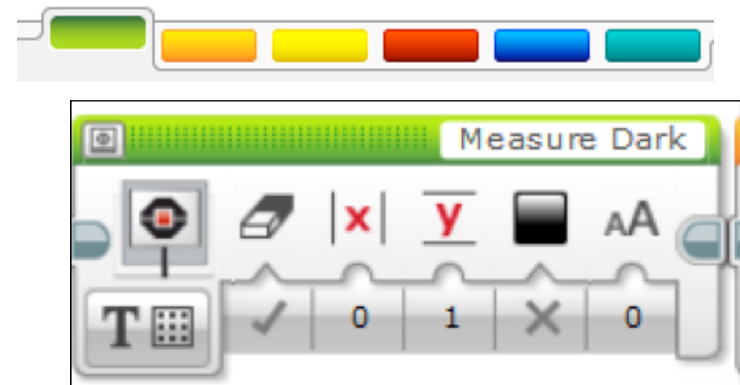
By: Droids Robotics

LESSON OBJECTIVES

1. **Learn to use the Display Block to display text and images**
2. **Understand why the Display Block can be useful in programming**

DISPLAY BLOCK

- The Display Block to show information and pictures on the screen
- You can control the location and size of text
- You can use this same block to display sensor readings and instructions.
- Located in Green Tab



MORE ON DISPLAY BLOCKS

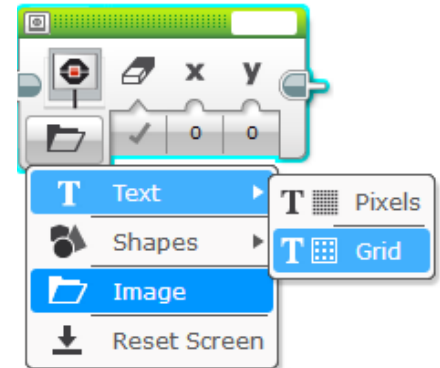
Two modes to display

Pixel mode (Use for displaying images or text)

- 178 pixels left and right
- 128 pixels up and down

Grid mode (Easier to use, only works for text mode)

- 22 columns of 8 pixels each
- 12 rows of 10 pixels each
- Small characters are 1 row and 1 column
- Large characters are 2 rows and 2 columns



DISPLAYING TEXT IN GRID MODE

Step 1:

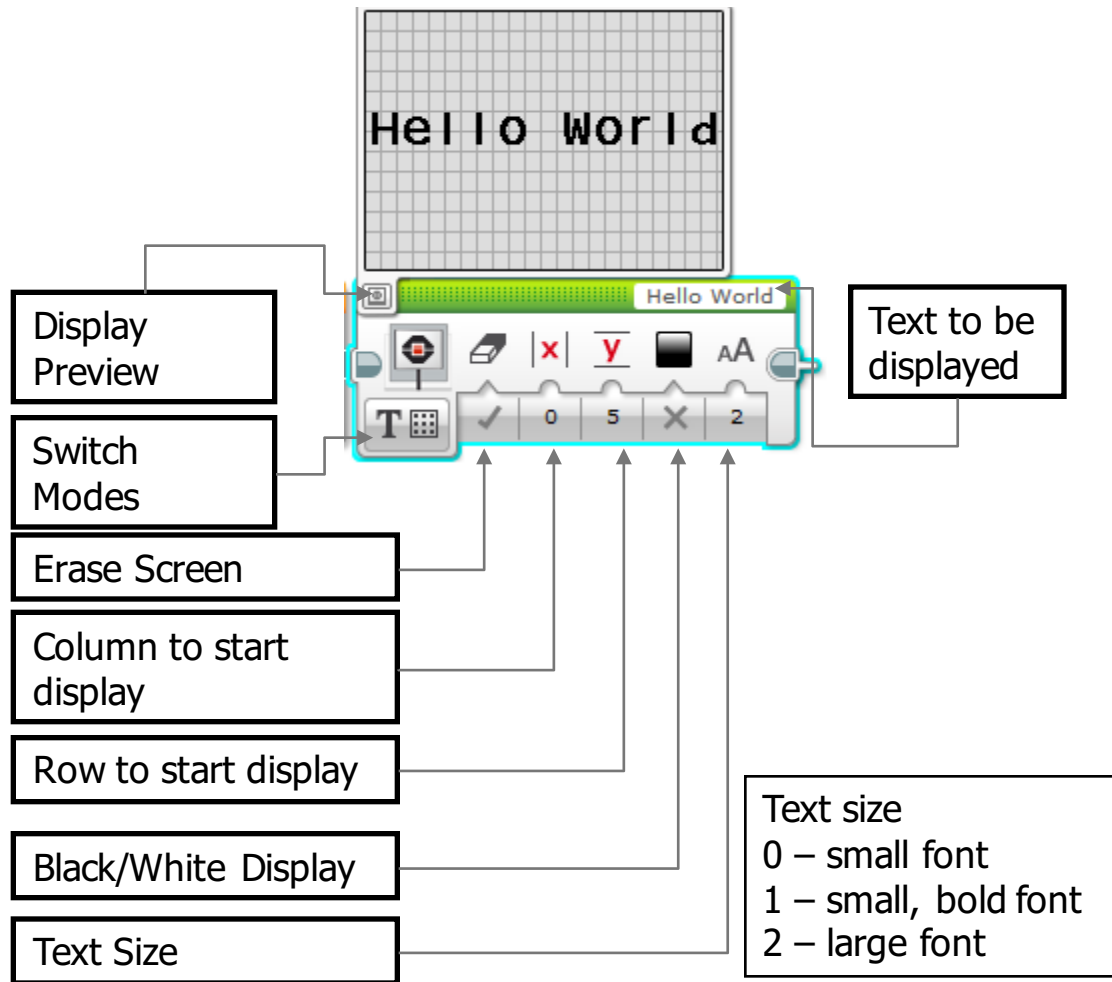
Pick Display Block

Step 2:

Click on “Switch Modes” icon and hover over “text”. Then click on “grid”. The icon will change into a square with dots.

Step 3:

Use the box on the top right to enter the text you want to display



DISPLAY BLOCK CHALLENGE 1

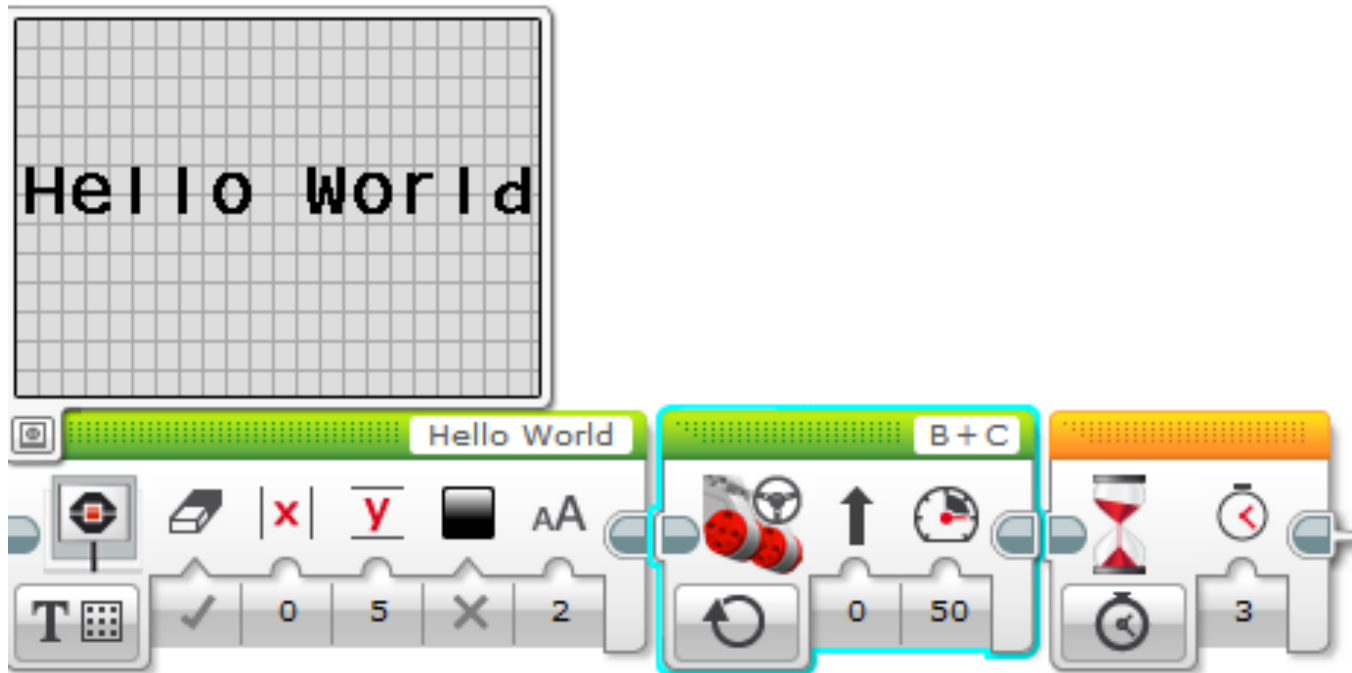
Can you write a program to display text in the middle of the screen?

- Display “Hello World”

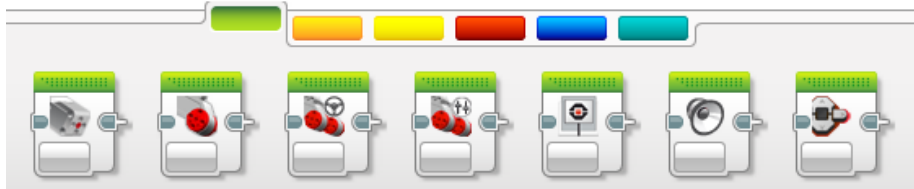
Make the display block run for 3 seconds

Can you also move while doing this?

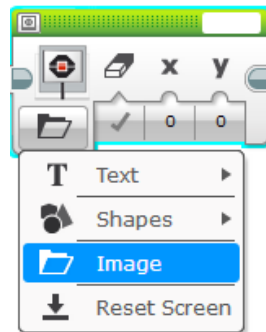
CHALLENGE 1 SOLUTION



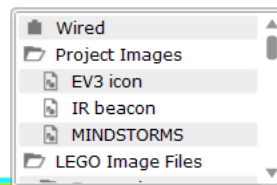
DISPLAYING AN IMAGE IN PIXEL MODE



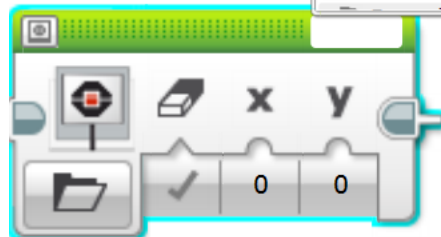
Step 1:
Pick Display Block



Step 2:
Click on the “Select Mode” which has a folder icon and pick “image”



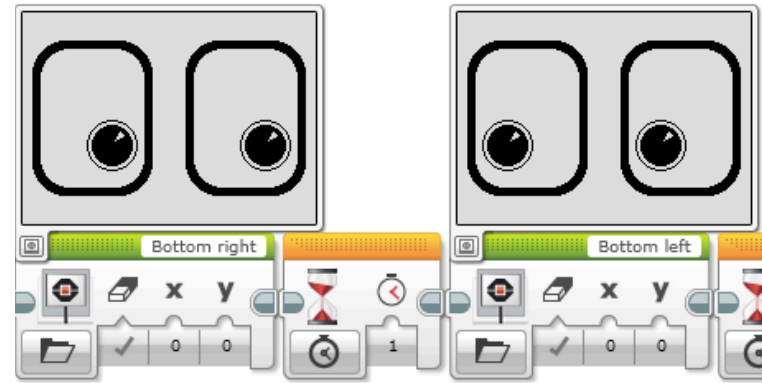
Step 3:
Use the empty box on the top right to pick the image you want to display



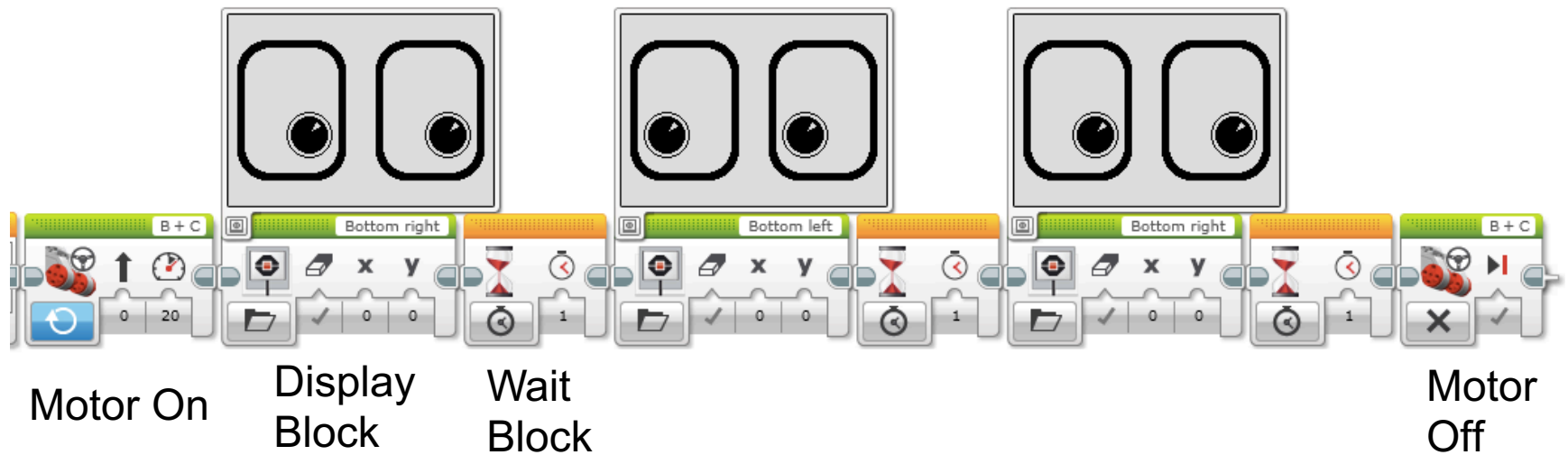
DISPLAY BLOCK CHALLENGE 2

Can you display eyes on the screen while moving? Alternate eyeballs that look left and right.

- Use the Display Block, Motor On and Wait Block
- Feel free to have fun with this challenge and make it yours!



CHALLENGE 2 SOLUTION



DISCUSSION GUIDE

Why might you want to know how to use the display block?

- You might want to know what the sensor value your robot is seeing
- You might have to program a robot to stop when the robot reaches a red line but it stops before
 - Does the robot see the same thing you see?
 - You can display the value on the screen and check

It's a great debugging tool. You can learn more about debugging code in one of our Intermediate lessons.

CREDITS

- This tutorial was created by Sanjay Seshan and Arvind Seshan from Droids Robotics.
- More lessons are available at www.ev3lessons.com
- Author's Email: team@droidsrobotics.org



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