BEGINNER EV3 PROGRAMMING LESSON

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Let's Learn Together
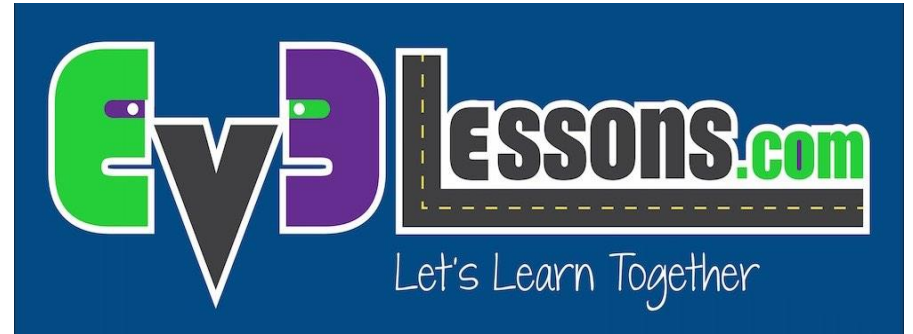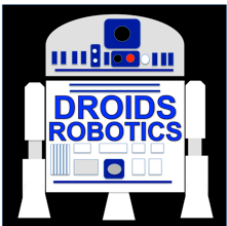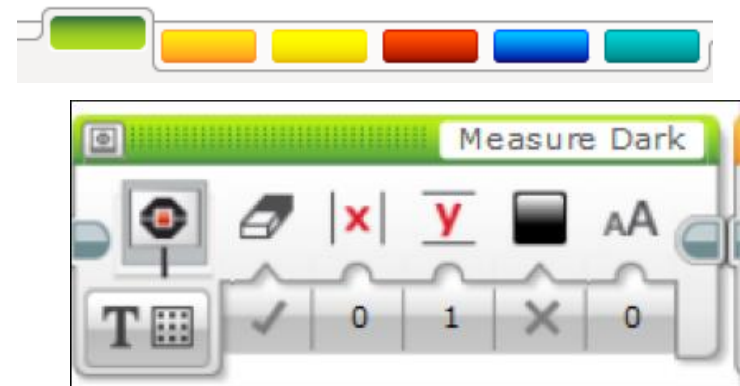
Topics Covered:
Display Block

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
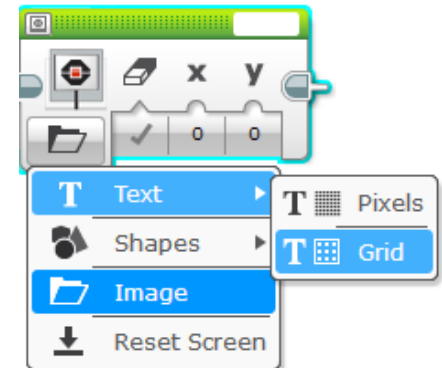
MORE ON DISPLAY BLOCKS

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
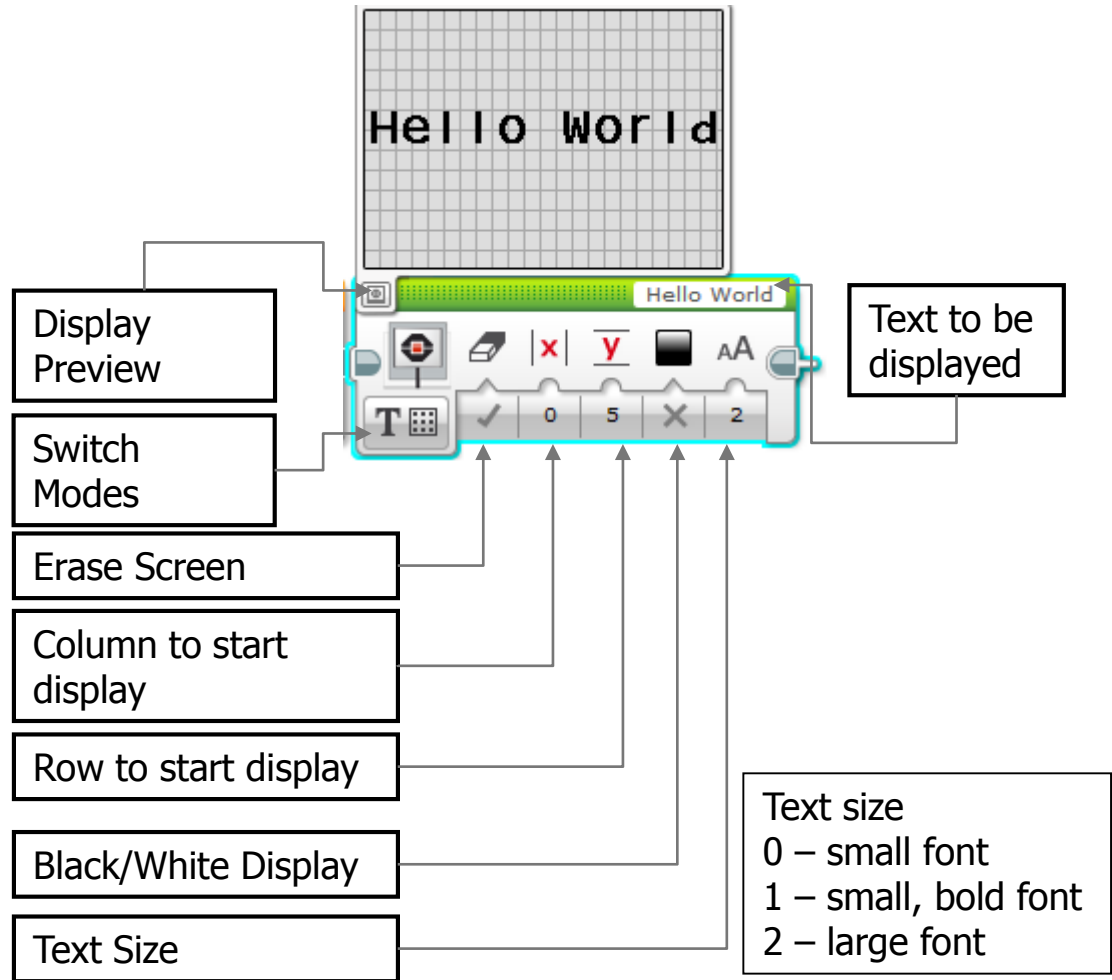
DISPLAYING TEXT IN GRID MODE

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

Hello World

Display Preview

Switch Modes

Erase Screen

Column to start display

Row to start display

Black/White Display

Text Size

Text to be displayed

Text size
0 – small font
1 – small, bold font
2 – large font

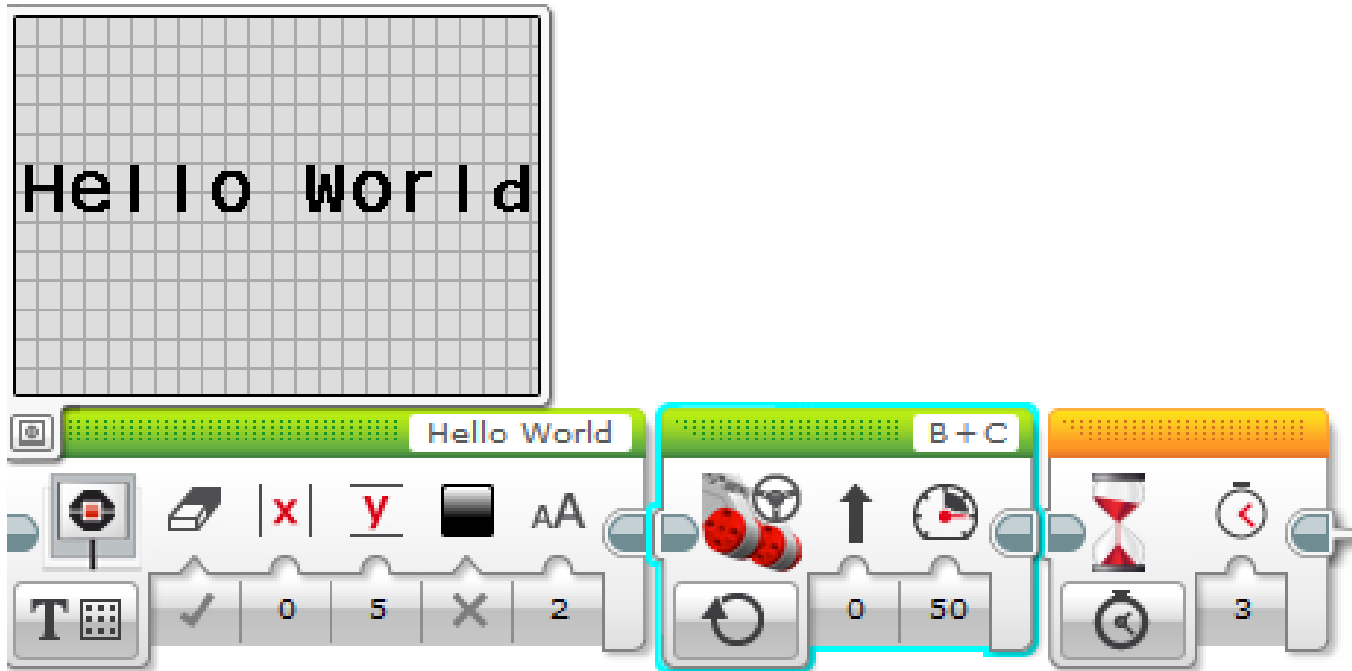# DISPLAY BLOCK CHALLENGE 1

Can you write a program to display text in the middle of the screen?
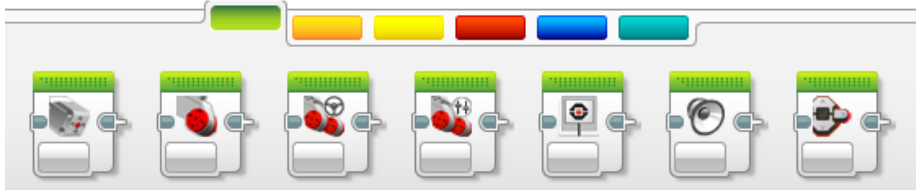
- Display "Hello World"

Make the display block run for 3 seconds
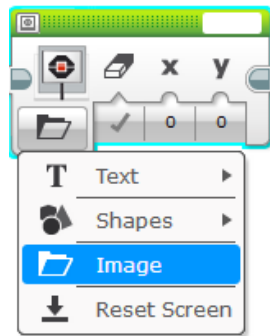
Can you also move while doing this?
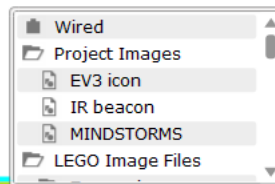
CHALLENGE 1 SOLUTION

DISPLAYING AN IMAGE IN PIXEL MODE
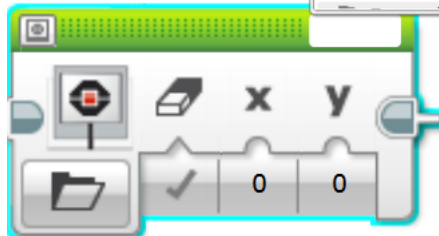

Step 1:
Pick Display Block

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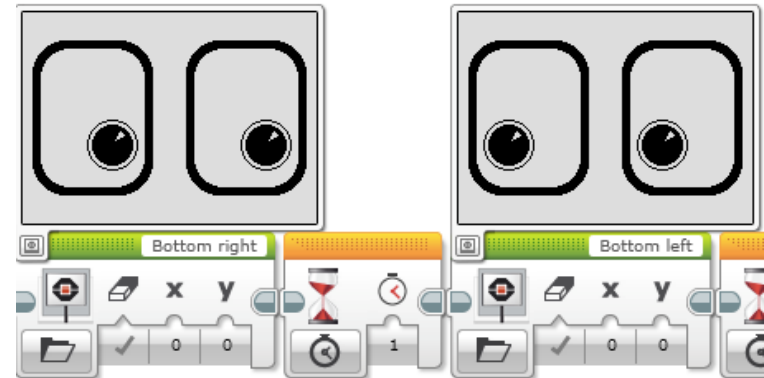Click on the "Select Mode" which has a folder icon and pick "image"

Step 3:
Use the empty box on the top right to pick the image you want to display
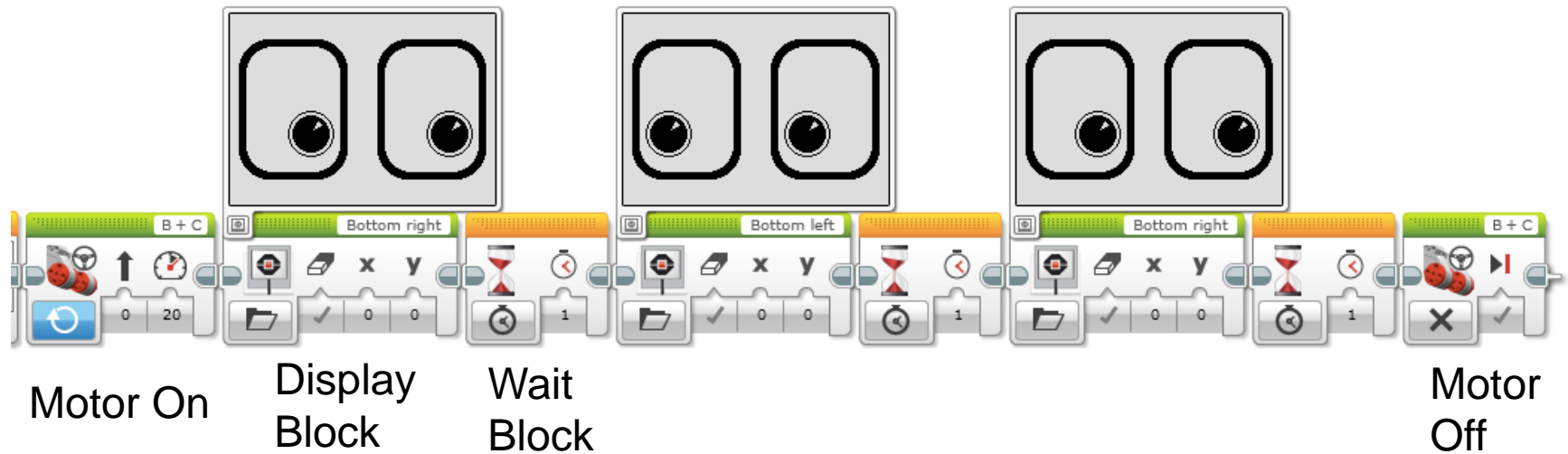
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DISPLAY BLOCK CHALLENGE 2

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

Motor On

Display Block

Wait Block

Motor Off

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**

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