



Background

LO IWBAT Create background canvases
on P5 editor in a variety of sizes

Learning Objectives:

To:

- Grow in my understanding the basic structure of p5.js
- Create background canvases on JS in a variety of sizes.
- Input a variety of colors as the background.
- Differentiate between grayscale and RGB lines of code.
- Write lines of code (arguments) to reflect goals 2&3.

What's needed to Create a Canvas?



Line of code/
Syntax

=

Function/Command() { Argument/parameters;
}

1. function setup() {
2. createCanvas(800, 400);
3. }
- 4.

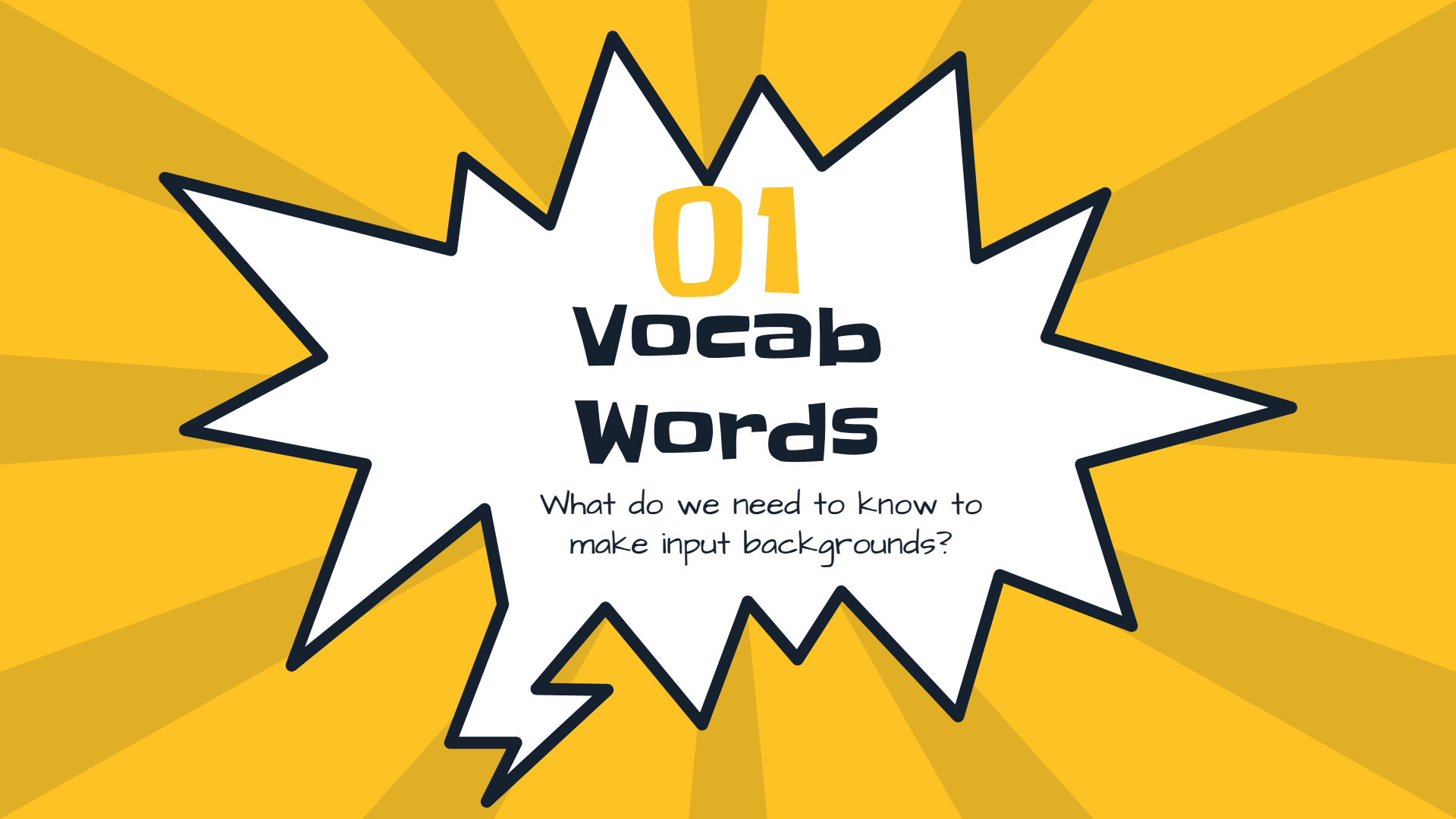


Quick Recap

Beginning

```
1. function setup({  
2.   createCanvas(800, 400);  
3. })  
4.
```

End



01 Vocab Words

What do we need to know to
make input backgrounds?

What's needed to Input a background function?



Function/command

is a block of organized, reusable code that is used to perform a single, related action.

Ex:

function draw

()

Background

(220);

Name of the function

Parameters/ argument

"Placeholder" for what the values are in an function

parameter/argument

value



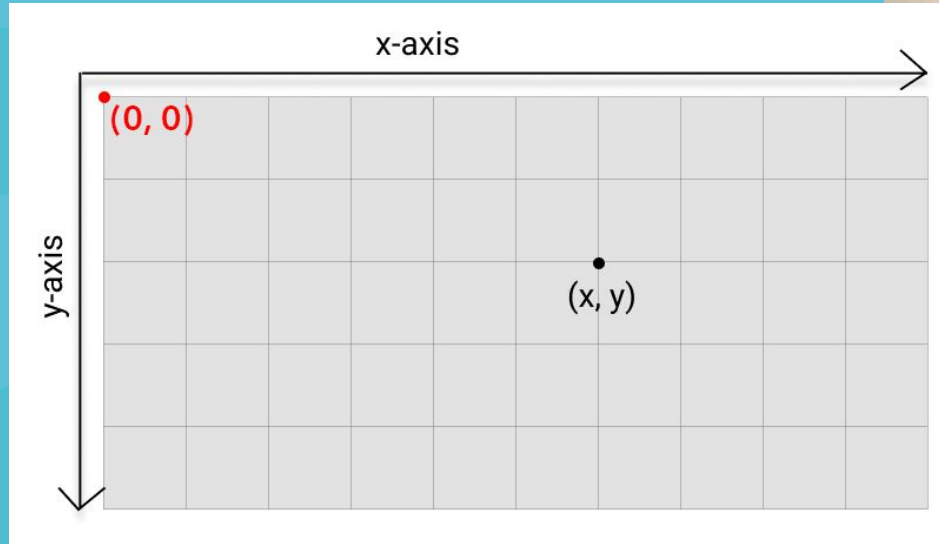
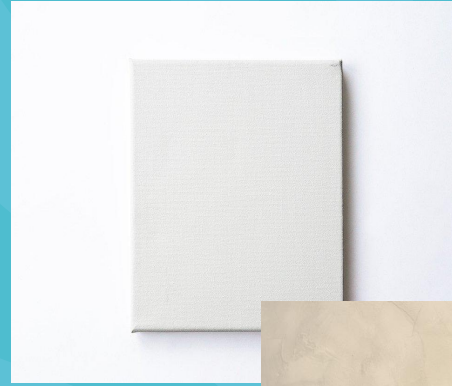


01 Input Background Color

What does math have to
do with coding P5-JS?

Canvas

To see your canvas, a background color is needed.





1. Grayscale Integer Value



// Grayscale Integer Value

```
background(50);
```

Background Info:

Default Color

Is always clear

What's the Function?

`draw()` is typically used
but you can use it within
(`set up()`) to set it just once.

cOLORS

Many color options: RGB, HSB,
or HSL. The default color
space is RGB, with each value
in the range from 0 to 255

Line of Code:

```
function draw() {  
  background(220);  
}
```



1.  // Grayscale Integer Value
`background(50);`

p5*

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English ▾




☐ Auto-refresh Fork practice 

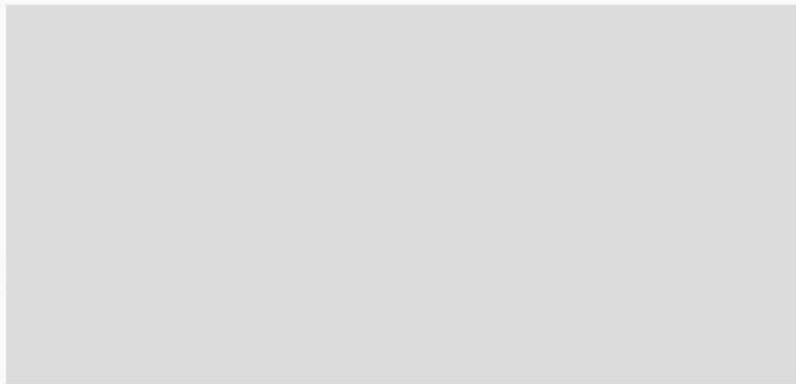


sketch.js •

```
1 function setup() {  
2   createCanvas(500, 200);  
3 }  
4  
5 function draw() {  
6   background(220);  
7 }
```



Preview



Let's Try it Out



```
function draw() {  
  background(220);  
}
```

1. Using the range 0-255?
2. What colors appear?
3. Describe the color nearest 0.
4. Describe the colors nearest 255.

2. R, G, B Integer Value



```
// R, G, B Integer Value
```

```
background(249, 102, 255);
```

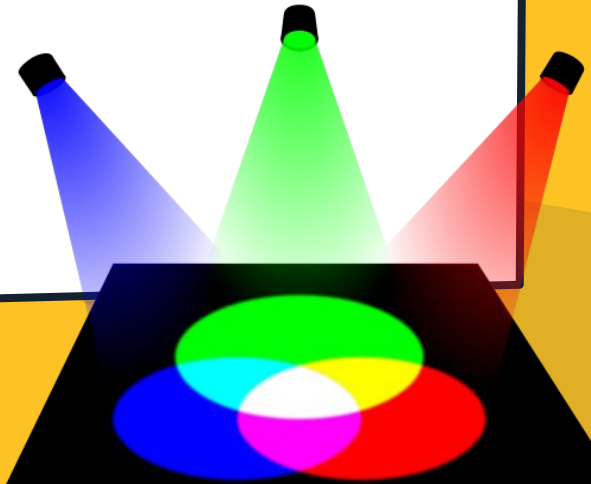


**Let's
Add RGB**

In order to see a range of colors, we will need to input RGB.

What do the R, G, and B represent?

Red
Green
Blue





// R, G, B Integer Value

`background(249, 102, 255);`



p5'

Show apps

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Fork practice



sketch.js

Preview

```
1 function setup() {  
2   createCanvas(500, 200);  
3 }  
4  
5 function draw() {  
6   background(420, 134, 927);  
7 }
```

RGB values range from
0-255.



Let's Try it Out



```
function draw() {  
  background(51, 51, 251);  
}
```

```
function draw() {  
  background(251, 151, 401);  
}
```




02

Tasks

Step 1

Let's Try it OUT

Step 2

Task 1 click me: With your partner, change the values of RGB to find a blue, yellow, and a green.

Task 2 click me: Create 3 different RGB colors. Complete the RGB Explore Chart.

Task 3 click me: Create 4 different canvases with grayscale/RGB colors. Complete Explore Chart.



Spin the wheel to discover your task



Bonus: Write an algorithm that builds a canvas using your favorite colors.

Task 1 RGB Table:

Task 1: With your partner, change the values of RGB to find a blue, yellow, and a green. Input values into the [P5-editor link](#) to verify.

		Value	Value	Value
Shade	sample	255	153	204
	Red	#	#	#
	Blue	#	#	#
	Green	#	#	#
	Bonus	#	#	#

Task 1 Grayscale Table:

Task 1: With your partner, change the values of the grayscale to find shades of white, black, & gray. Input values into the [P5-editor link](#) to verify.

		Value	Value
Shade	sample	255	153
	Black	#	#
	Gray	#	#
	White	#	#

Task 1 Table:



Exit Slip

Task 2 RGB Table:

Task 2: Create any 3 shades RGB colors. Complete the RGB Explore Chart. Input values into the [P5-editor link](#) to verify.

		Value	Value	Value
Shade	color:	255	153	204
	color?	#	#	#
	color?	#	#	#
	color?	#	#	#
	Bonus	#	#	#

Task 2 Grayscale Table:

Task 2: With your partner, change the values of the grayscale to find shades of white, black, & gray. Input values into the [P5-editor link](#) to verify.

		Value	Value
Shade	sample	255	153
	Black	#	#
	Gray	#	#
	White	#	#

Task 2 Table:

☐ Exit Slip

Task 3 **RGB** Table:

Create 2 different canvases with RGB colors.
Insert a picture of the color. Input values into
the P5-editor link to verify.

Then, complete Explore Chart.

```
function setup() {  
  createCanvas(value, value);  
}  
  
function draw() {  
  background(value, value, value);  
}
```

Insert picture here.

Task 3 **RGB** Table:

Create 2 different canvases with RGB colors.
Insert a picture of the color. Input values into
the P5-editor link to verify.

Then, complete Explore Chart.

```
function setup() {  
  createCanvas(value, value);  
}  
  
function draw() {  
  background(value, value, value);  
}
```

Insert picture here.

Task 3 Grayscale Table:

Create 2 different canvases with RGB colors. Insert a picture of the color. Input values into the P5-editor link to verify.

Then, complete Explore Chart.

```
function setup() {  
  createCanvas(value, value);  
}  
  
function draw() {  
  background(value);  
}
```

Insert picture here.

Task 3 Grayscale Table:

Create 2 different canvases with RGB colors. Insert a picture of the color. Input values into the P5-editor link to verify.

Then, complete Explore Chart.

```
function setup() {  
  createCanvas(value, value);  
}
```

```
function draw() {  
  background(value);  
}
```

Insert picture here.

Task 3 Table:

☐ Exit Slip

Let's Create Algorithms



End

```
1. function setup() {  
2.   createCanvas(800, 400);  
3. }  
4. function draw() {  
5.   background(120);  
6. }
```

Beginning

 Exit Slip