

Introduction to P5.js

How to Make a PBJ

Day 1

**How do we tell the computer
to do something?**

Day 2

How do we tell the computer to draw? →



computer

programming language

Syntax

JavaScript

has it's own library

p5.js

created by

The Processing Foundation
not-for-profit, Open Source

also grew out of a program called

Processing

Java

another programming language

Other Languages:

Python

C

C#

C++

etc, etc...

```
1 ▼ function setup() {  
2     createCanvas(400, 400);  
3 }  
4  
5 ▼ function draw() {  
6     background(220);  
7 }  
8  
9
```

How to add comments

```
1▼ function setup() {  
2  createCanvas(400, 400); //this is how you make a comment  
3 }  
4  
5▼ function draw() {  
6  background(220); //using the two forward slashes won't mess up your code  
7 }  
8
```

Talk it **out**
Draw it **out**
//Write it **out**



5:00

Names **on the deliverable, please**

Demo & Discussion



5:00

TEST IT OUT!

- In your teams, open the p5.js interface on your own device.
- Work collaboratively to make changes and experiment with the code.
-

Deliverable:

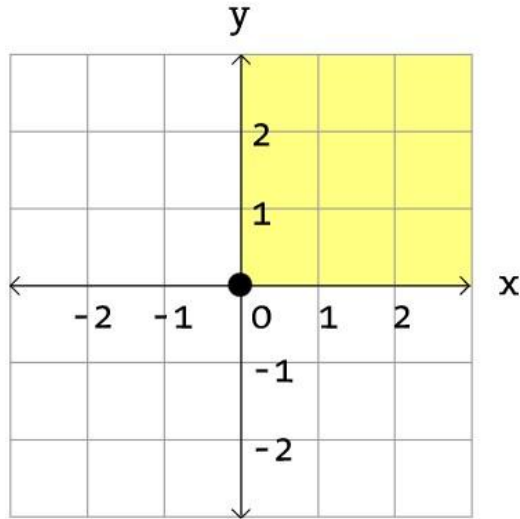
- Create a program that makes a canvas 500 pixels high, 700 pixels wide.
- Comments in the code should reflect your understanding of which argument controls which.

Challenge: create a background that is purple

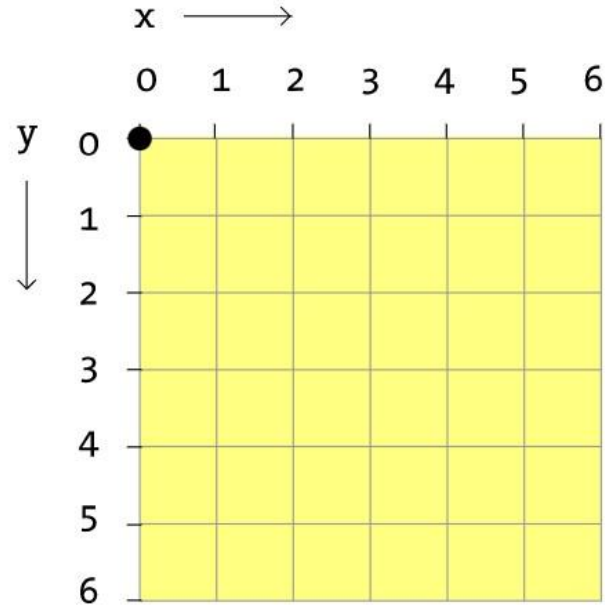
Share your discoveries!

Day 3

Coordinate System

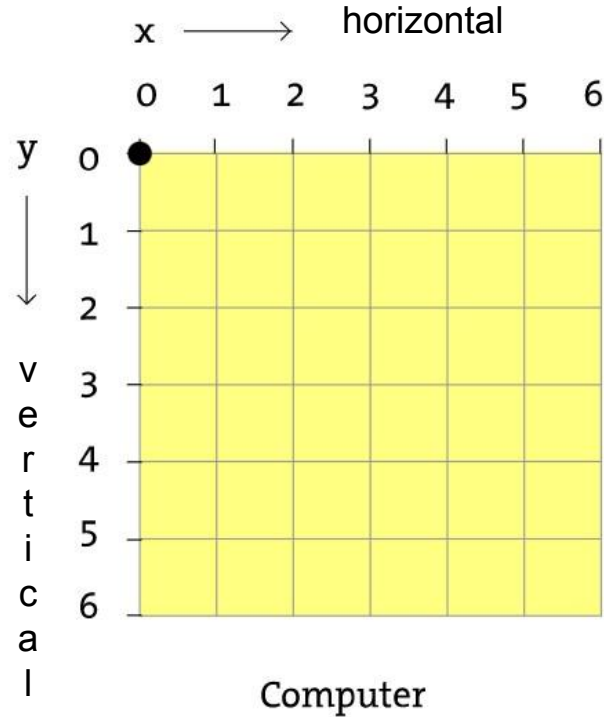


Eighth Grade



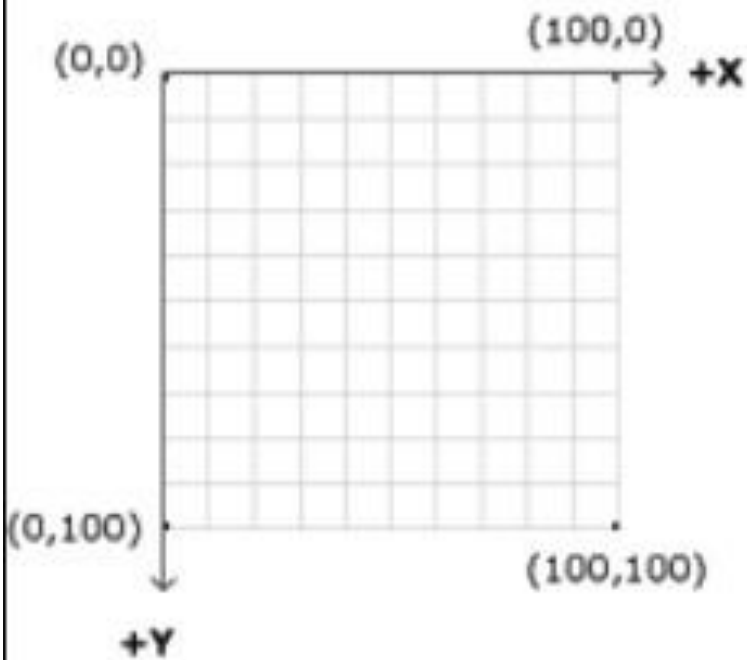
Computer

Coordinate System



Drawing a rectangle

```
rect(x, y, w, h);
```



To draw a rectangle on the computer screen, we need to create a command that gives instruction to the computer.

This is called a **function**. We've already seen the `createCanvas()` and `background()` functions.

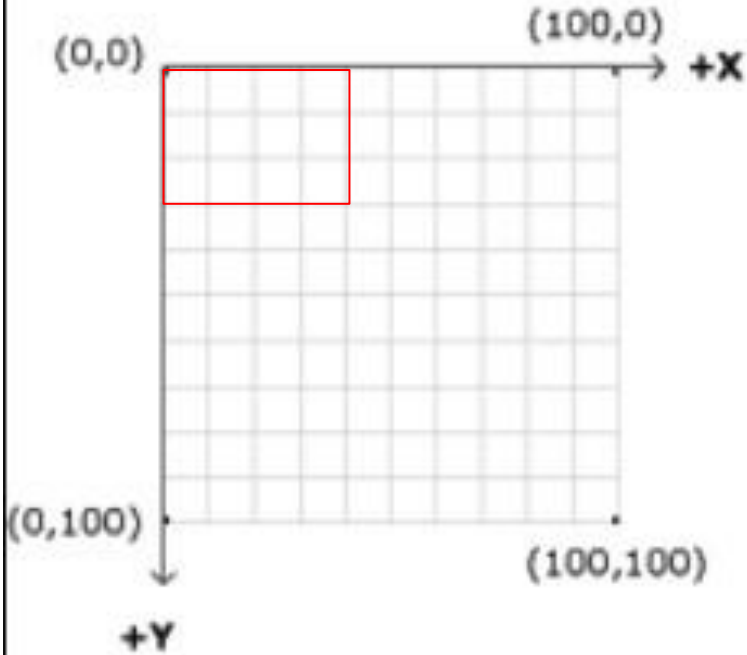
It includes:

Name (parameters, parameters);

To draw a rectangle in p5.js, you would write:
`rect(x coord, y coord, width, height);`

Drawing a rectangle

`rect(x, y, w, h);`



The rectangle drawn on the grid is written in the function like this:

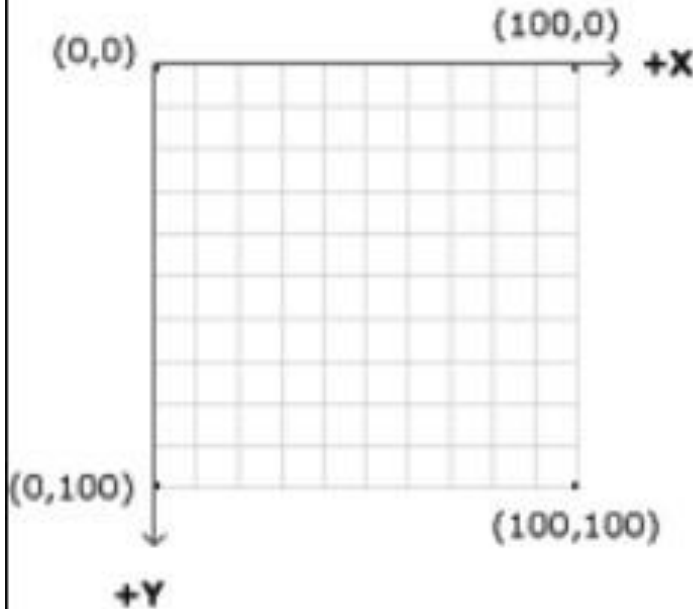
`rect(0, 0, 40, 30);`

The x and y coordinates are located at the top left corner of the rectangle.

You try!

`rect(x, y, w, h);`

10:00



1. Find a partner.
2. Each person should have two grids: one to use for “design and describe”, and one to use for “listen and draw”.
3. Independently, draw a rectangle on the grid.
4. Write the function for `rect()`; using the syntax to add the parameters. Don't let your partner see your code.
5. Decide order.
6. Take turns driving and navigating.
7. Given: each square is 10 pixels. The total size of the canvas (grid) is 100 x 100.

Time to Code

1. Write `rect(x, y, w, h);` into the draw function and experiment with variations.
2. Decide how to create a circle/oval using ellipse.

DELIVERABLE:

- Create a design using both shapes.
- It can be a picture (like a self-portrait, a robot or a vehicle) or it can be abstract (like a design or pattern).
- Make comments in the code to keep track of what's happening.
- Also make comments to track discoveries.
- Be prepared to share these discoveries tomorrow.