Lesson 11

Set Up

On Screen Button:

* Using knowledge of if statements, craft a complex if statement that defines a button being pressed.

Project Goal:

1) Generally, what should the project look like?

A rectangle that moves across the screen, creating a gradient of colors. Use a counter to calculate the area of the space the color fills, updating every time the color starts on a new line

2) What skill(s) are being learned/ practiced?

3) What concept are students gaining insight on?

Programming/ Math Vocabulary:

Column/Row - Columns are oriented vertically versus a row which is horizontal.

Width/Height - Width describes the linear extent/measurement of a shape along the x-axis. Height describes the space a shape takes along the y-axis.

Area - the extent or measurement of a surface or shape.

Lesson 11

Outline

Introduction to Topic:

“Today we are going to be using a counter to calculate area.

Project Breakdown:

1) Draw a rectangle
2) Have the rectangle move across the screen, moving down once it reaches the end of the row.
3) Change the color, so there is a gradient
4) Make a counter
5) Have the counter calculate the area using a math expression inside of the if statement that moves the rectangle down a column
6) Make the counter appear on the screen, using the text command

Example Projects/ Basic Source Code:

```
var x = 0;
var y = 0;
var speed = 7;
var g = 255;
var r = 255;
var b = 255;
var counter = 0;
draw = function () {
 //changing color
   noStroke();
   g=g - 0.05;
   r = r - 0.5;
   b = b - 0.01;
fill(r,g,b);
//moving rectangles and counting area
rect(x,y,50,50);
x = x + speed;
if(x>800){
   y = y + 50;
   x = 0;
   counter = counter + (800 * 50);
}
//counter appear
fill(255);
rect(875, 0, 100, 100);
fill(0);
textSize(25);
text(counter, 875, 50);
};
```