

Introduction to Programming and Computer Science/Electronics

Lesson 41

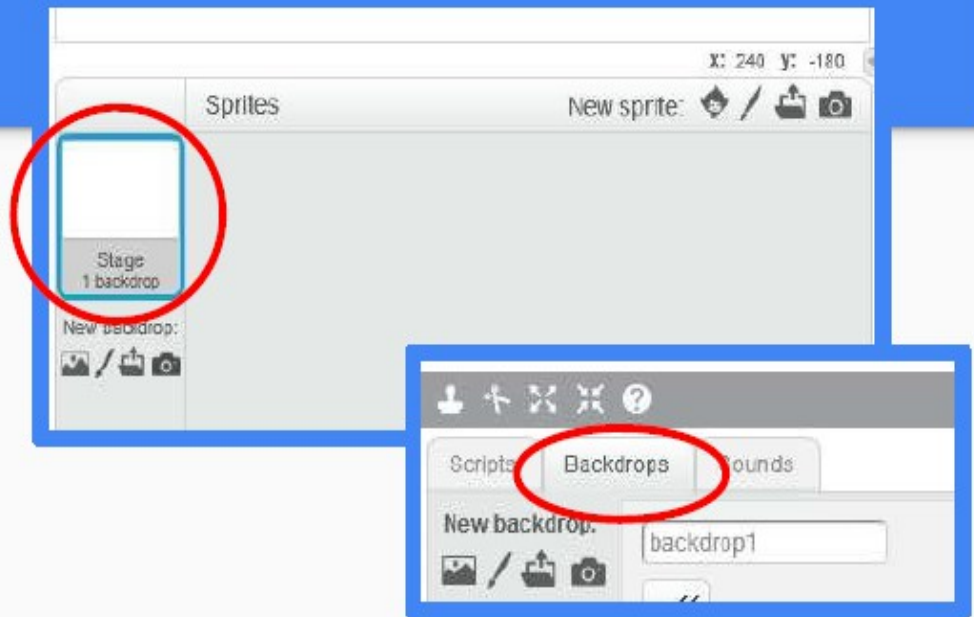


Scratch

Backdrop Preparation

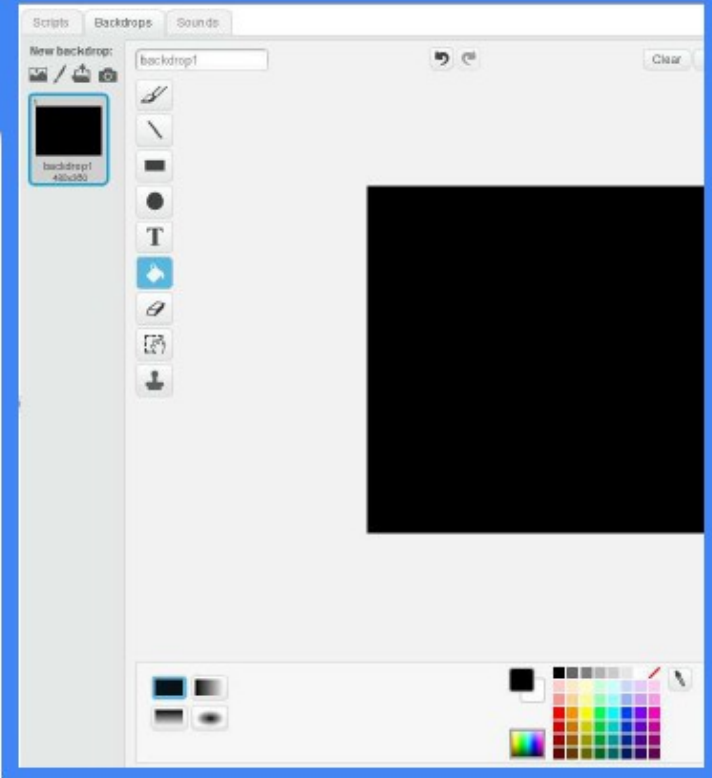
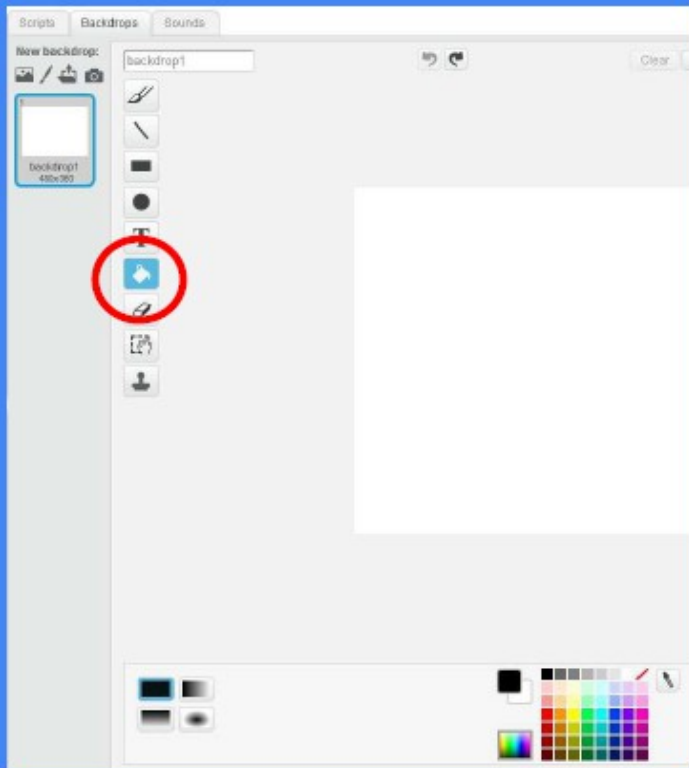
Prepare the Backdrop

Click on the Stage to make sure it is selected. Click on backdrops tab to edit the backdrop.



Scratch Backdrop Preparation

Let's turn the background black

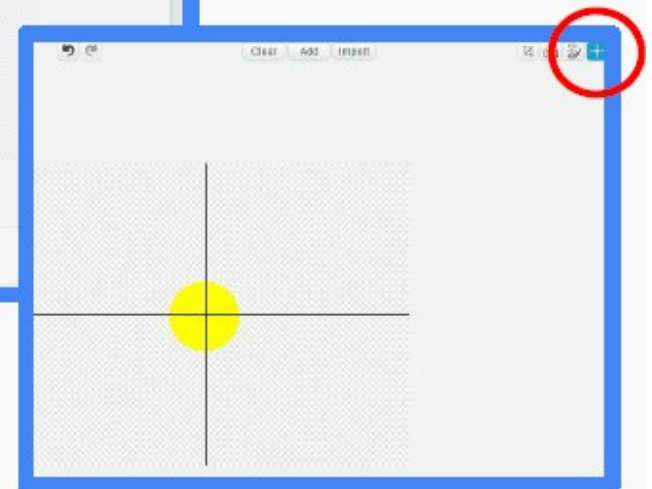
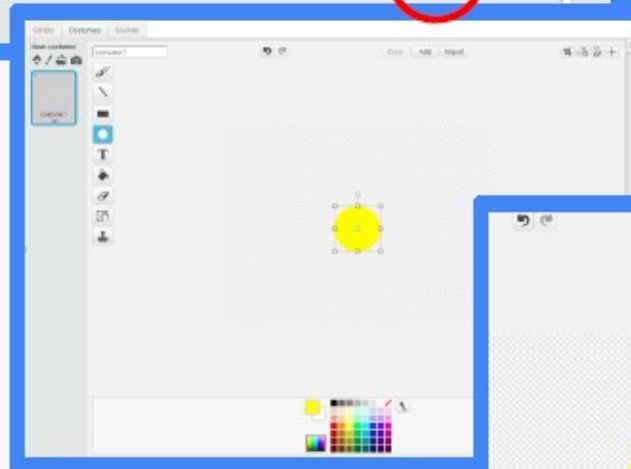


Scratch

Sprite Creation - PacMan

Let's draw our PacMan sprite

Click on the paintbrush to draw a new sprite, choose the circle tool and hold shift while you drag out a circle to make sure it's perfect. Click on the crosshairs tool then click on the center of your circle to center it.

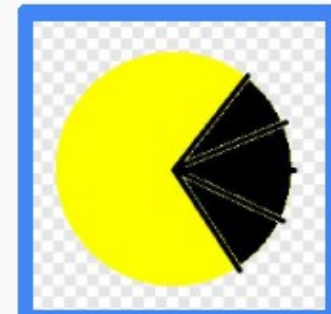
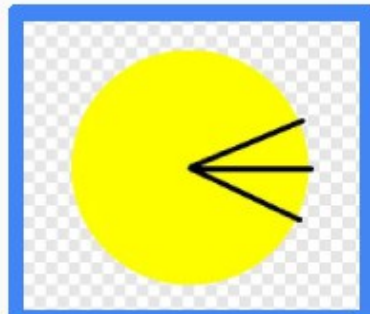
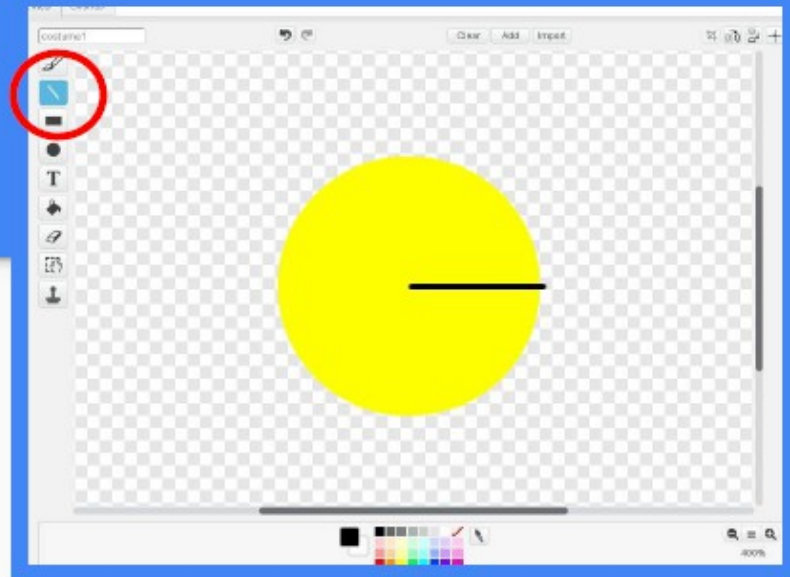


Scratch

Sprite Creation – PacMan

Details

Use the line tool to draw the closed mouth, right click and duplicate the costume and use the line tool and paint bucket to make a few more costumes like so.

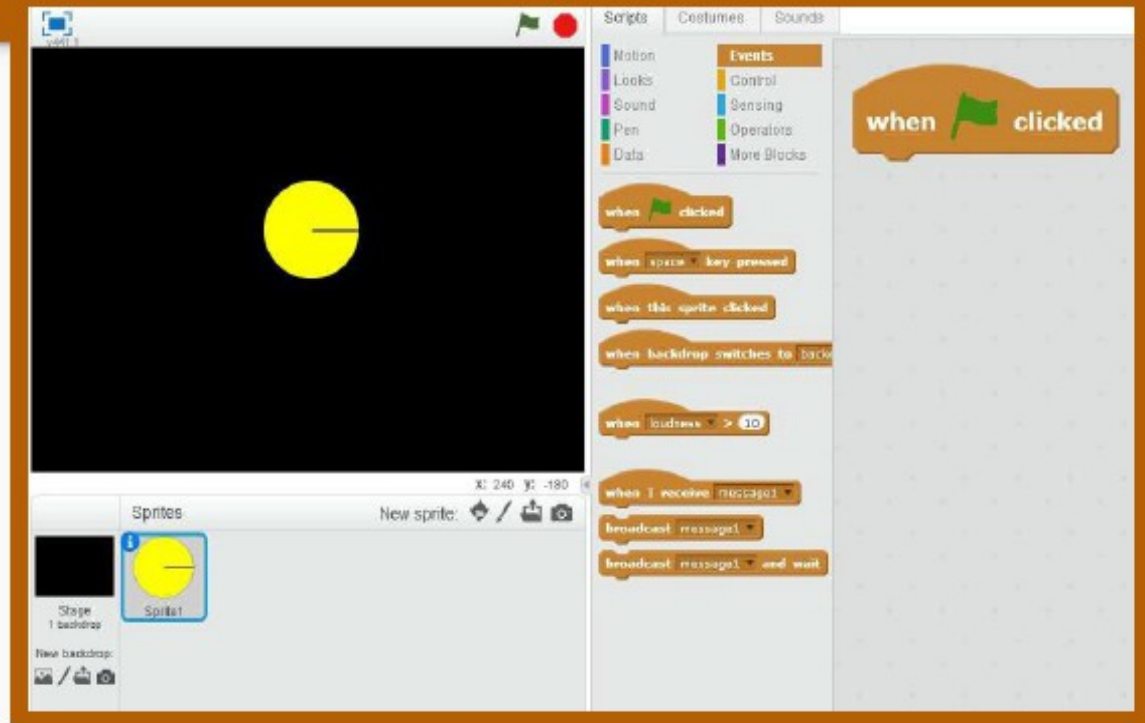


Scratch

Coding - PacMan

Add the scripts for PacMan

We start with the “when flag clicked” block to begin our game (drag the block from the events menu into the workspace)

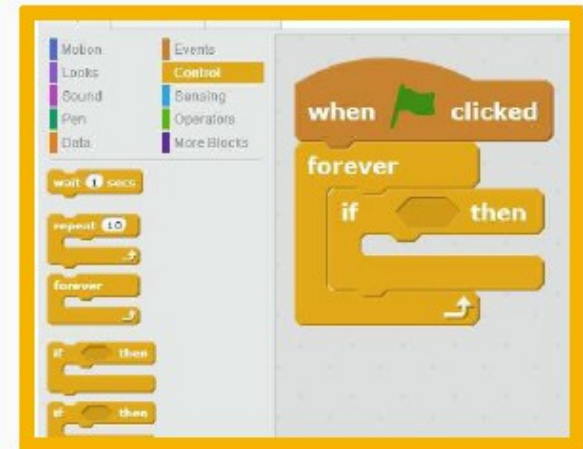


Scratch

Coding – PacMan

Smooth Movement

We can use some blocks from the Control menu to tell the computer to constantly check if the arrow keys are being pressed. If they are, then we will have PacMan respond appropriately by pointing in the correct direction, cycling through his costumes and moving however many steps we program.



Scratch Coding – PacMan

Duplicate and Modify

Right click on the “if-then” block and duplicate it, then do it again so you have all four directions covered. Change the keys and the directions and test it out, debugging where necessary.

You now have four conditional statements nested within a forever loop.

