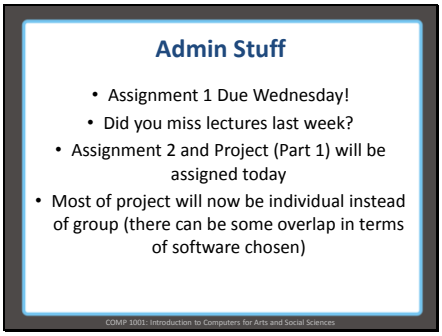
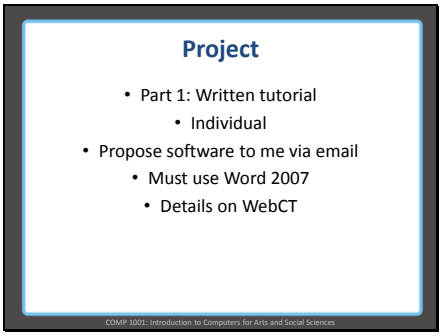
Slide 1

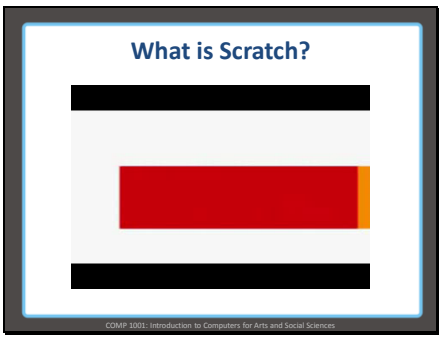
Slide 2



Slide 3

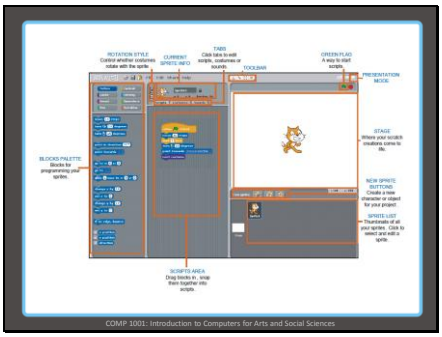


Slide 4



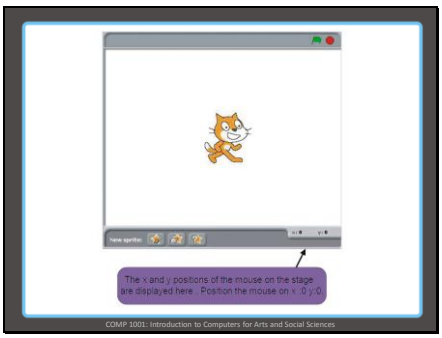
-Scratch was designed for kids – that means we should have no problem figuring it out! ;)
-Video: http://www.lero.ie/download.aspx?f=M1L1R2++intro_mitchelresnick.mpg

Slide 5



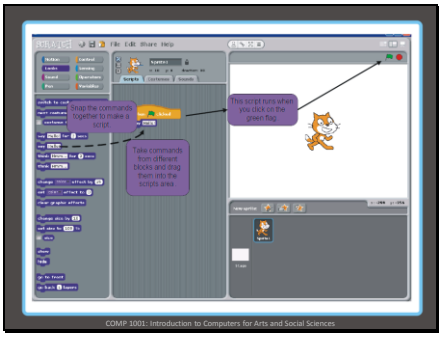
-**Note**: These slides are adapted from a lesson plan provided by The Irish Software Engineering Research Centre
-http://www.lero.ie/EducationOutreach/Secondlevel/ScratchLessonPlans/Overview.html
-The images shown are from the PDF's on that website

Slide 6



-The x,y coordinate of 0,0 are in the middle of the screen.
-X gets bigger as you go right, smaller as you go left.
-Y gets bigger as you go up, smaller as you go down.

Slide 7



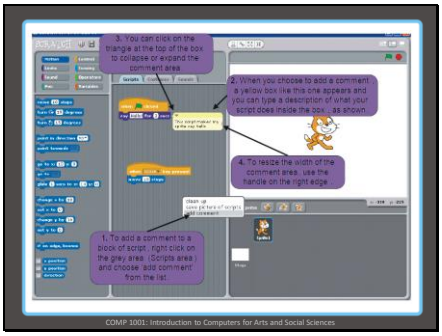
-Creating scripts and running the program:

-There is a scripts tab for each sprite.

-The scripts in this tab only act on that one sprite.

-Pressing the green flag runs the program, but a script does not necessarily automatically run. You need, as one example, a "When green flag clicked" control block to make the blocks snapped to it go.

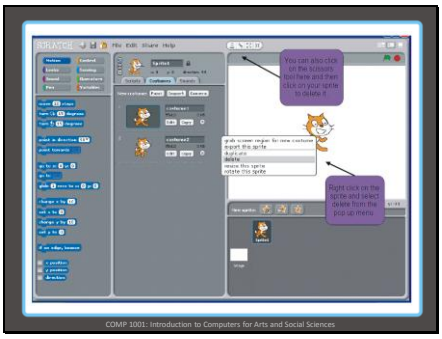
Slide 8



-Steps to add comments.

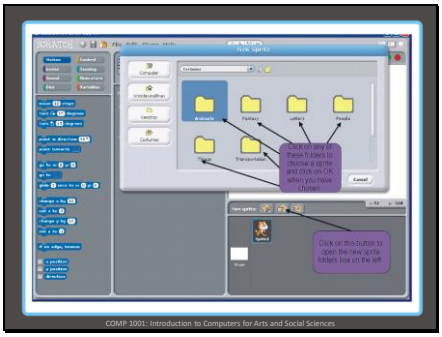
-Comments are useful so you can remember why you used certain blocks or numbers in the blocks, and can help someone else who wants to work on your project know what you did.

Slide 9



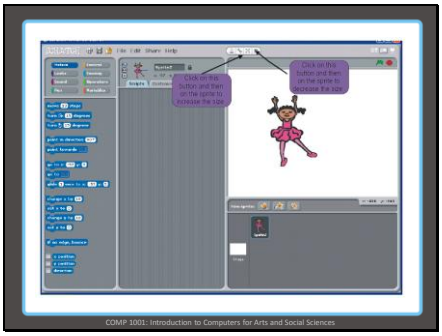
-How to delete a sprite.

Slide 10



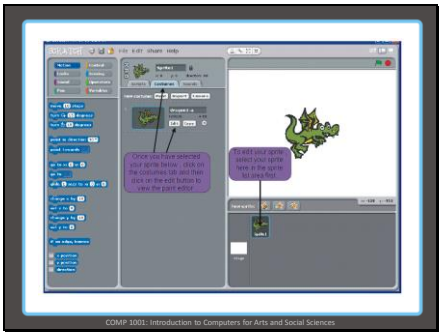
-Importing sprites from a set that comes with Scratch
-You can draw your own sprites and use other images you find online, too

Slide 11



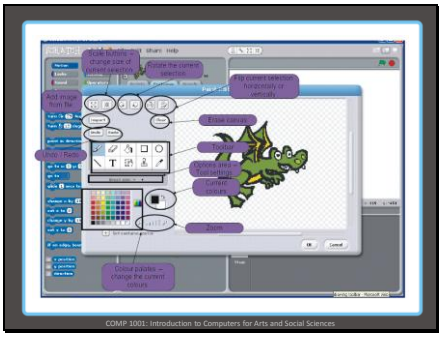
-Resizing a sprite

Slide 12



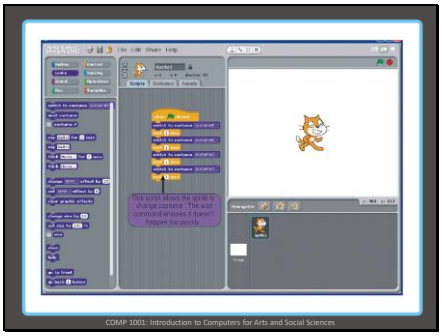
-Editing a sprite
-A sprite has several “costumes” – these are just different looks for your sprite and can be used to animate
-A sprite’s costume can be changed with certain blocks

Slide 13



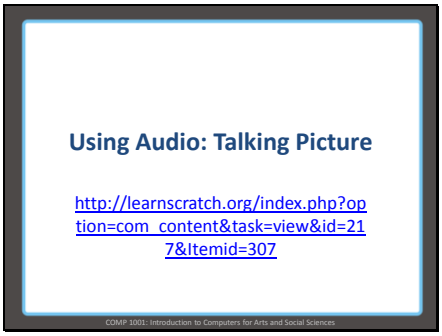
- To edit a sprite's costume, you use a built-in paint editor

Slide 14

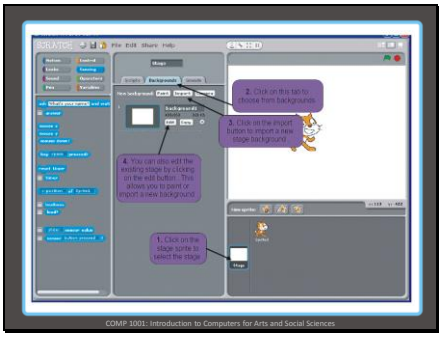


- Animating a sprite by changing its costumes

Slide 15

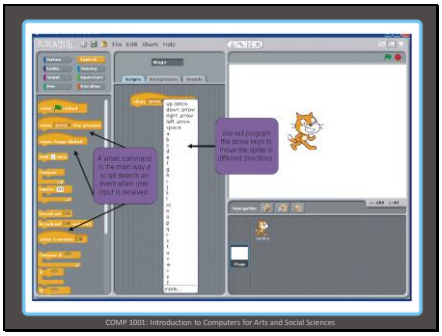


Slide 16



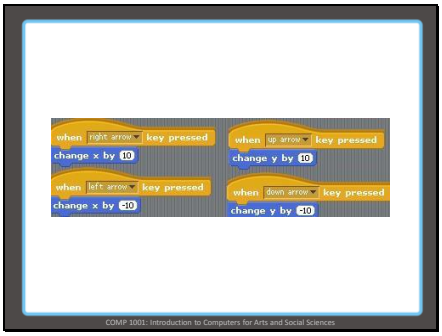
-How to change the background
-Notice that the “stage” also has scripts; these can be used to swap backgrounds with code

Slide 17



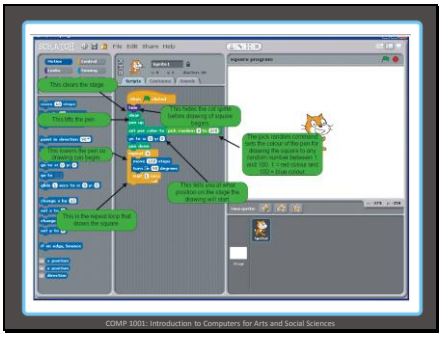
-How to make sprites move with the arrow keys

Slide 18



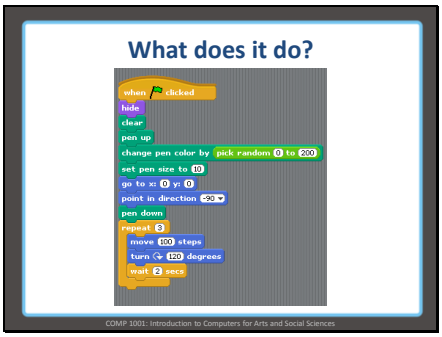
-Note the amount x and y are being changed by
-Recall that we subtract x to go left since we are making it smaller, and add x (make it bigger) to go right

Slide 19



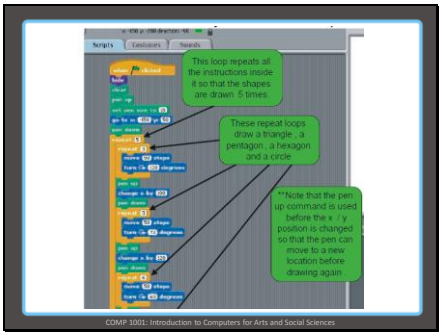
-Let's analyze this program, then build it
-What does it do?

Slide 20



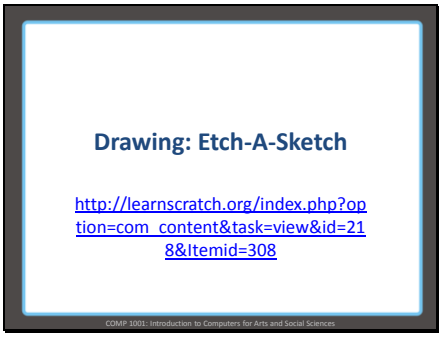
-Answer: Draws a triangle (different from code in previous slide)

Slide 21

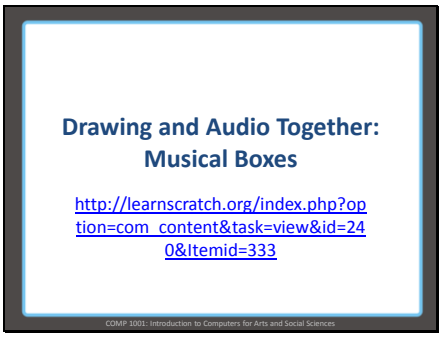


-Result is in http://www.lero.ie/download.aspx?f=M2L3R2+Drawing+4+Shapes+Pattern.sb
-This is just the first bit of the script

Slide 22



Slide 23

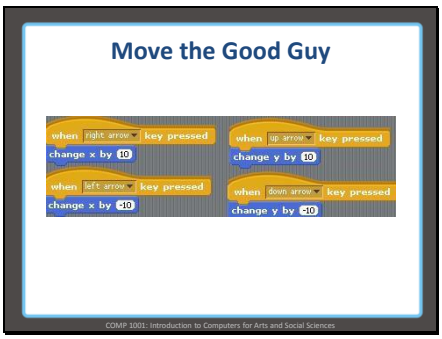


Slide 24

-These slides are again adapted from The Irish Software Engineering Research Centre

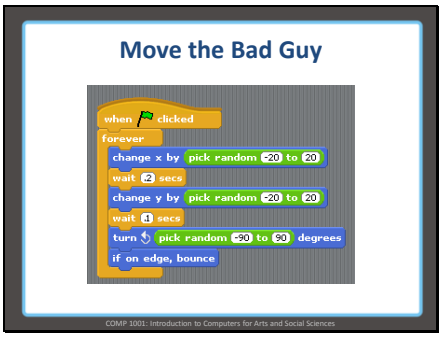
-http://www.lero.ie/EducationOutreach/Secondlevel/ScratchLessonPlans/Overview.html

Slide 25



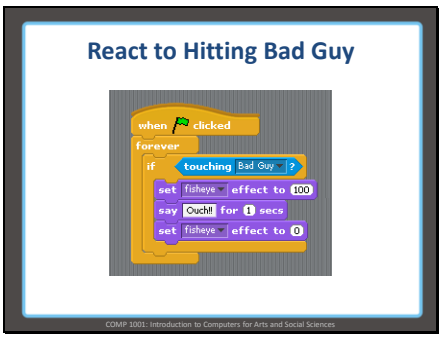
- We want to move the good guy using arrow keys

Slide 26



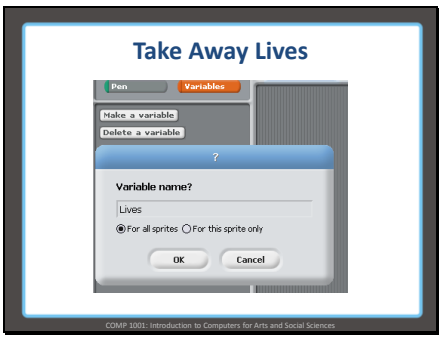
- The bad guy should move around randomly

Slide 27



-We need to keep checking whether we are touching the bad guy, hence the "forever" loop
-Stuff inside the "if" block only happens when the value after "if" is true (in this case, when our good guy sprite is actually touching the Bad Guy sprite)
-Setting the fisheye effect just makes our sprite look different so the player knows when something bad happened – there are many graphics effects that could be used here.

Slide 28

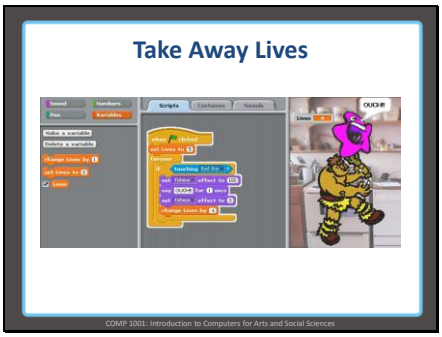


-Variables are like containers that we can put useful information in

-We can check what's in the containers as needed

-We're going to keep track of the number of lives our player has in the game

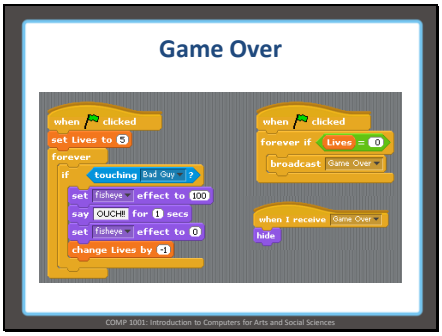
Slide 29



-Now when we hit the bad guy, we will subtract one life from the total

-Notice that we have to put something in our lives container before the forever loop. If we didn't, there wouldn't be anything in there to subtract one from.

Slide 30



-While we are checking forever whether we are touching the bad guy, we want to also check forever whether we are out of lives.

-We do this in a separate little script because we want both of these checks to be happening at the same time.

-When we reach zero lives, we broadcast that the game is over

-We can name our messages anything; in this case, it will be "Game Over"

-Broadcasting is like shouting out to the rest of the program "Hey! I have a message!"

-The rest of the program can decide to do something about it or just ignore it

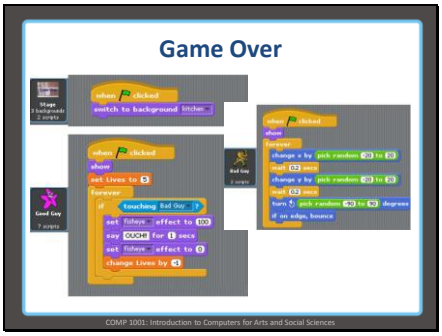
-Program both sprites to hide themselves when they receive the message “Game Over”

Slide 31

-We’ll make a new background for the stage (duplicating the regular background and adding the words Game Over)

-Write a script for the background to change when the “Game Over” message is received

Slide 32



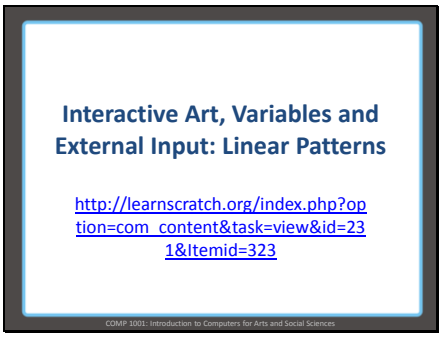
-Now that we are hiding some of the sprites when the game is over, we need to also be sure we show them when the game starts

-Use the show block right after the green flag is clicked

Slide 33

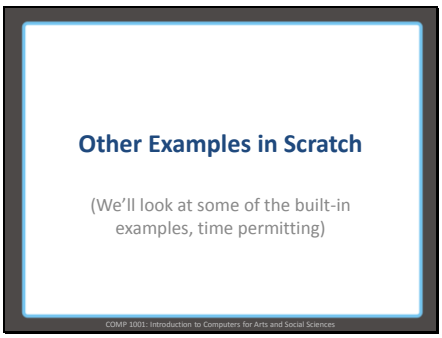
- Watch video tutorial

Slide 34

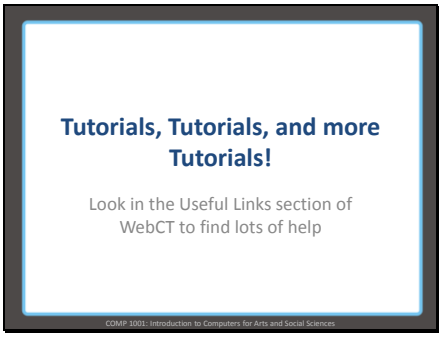


-Watch the video tutorial

Slide 35



Slide 36


Tutorials, Tutorials, and more Tutorials!
Look in the Useful Links section of WebCT to find lots of help
COMP 1001: Introduction to Computers for Arts and Social Sciences