

SCRATCH



With Scratch, you can program your own interactive stories, games, and animations — and share your creations with others in the online community.

Scratch helps people learn to think creatively, reason systematically, and work collaboratively — essential skills for life in the 21st century.

Scratch has a simple and easy to use interface. Its design allows users of all ages and experience levels to create projects. In order to do this, the program divides the different parts of Scratch into Palettes and Panes.

Session 1 - Activity 1

In this activity you will familiarise yourself with the Scratch interface. In doing so you will experiment with instructions from the following blocks:

- Motion
- Looks
- Sound
- Control

Blocks are puzzle-piece shapes that are used to create code in Scratch. The blocks connect to each other like a jigsaw puzzle, where each data type (event, command, reported value, reported boolean, or script end) has its own shape and a specially shaped slot for it to be inserted into — this prevents syntax errors. Series of connected blocks are called scripts.

Session 1 - Activity 1

Activity: We will learn to



- Animate a sprite



- Add sound to a script



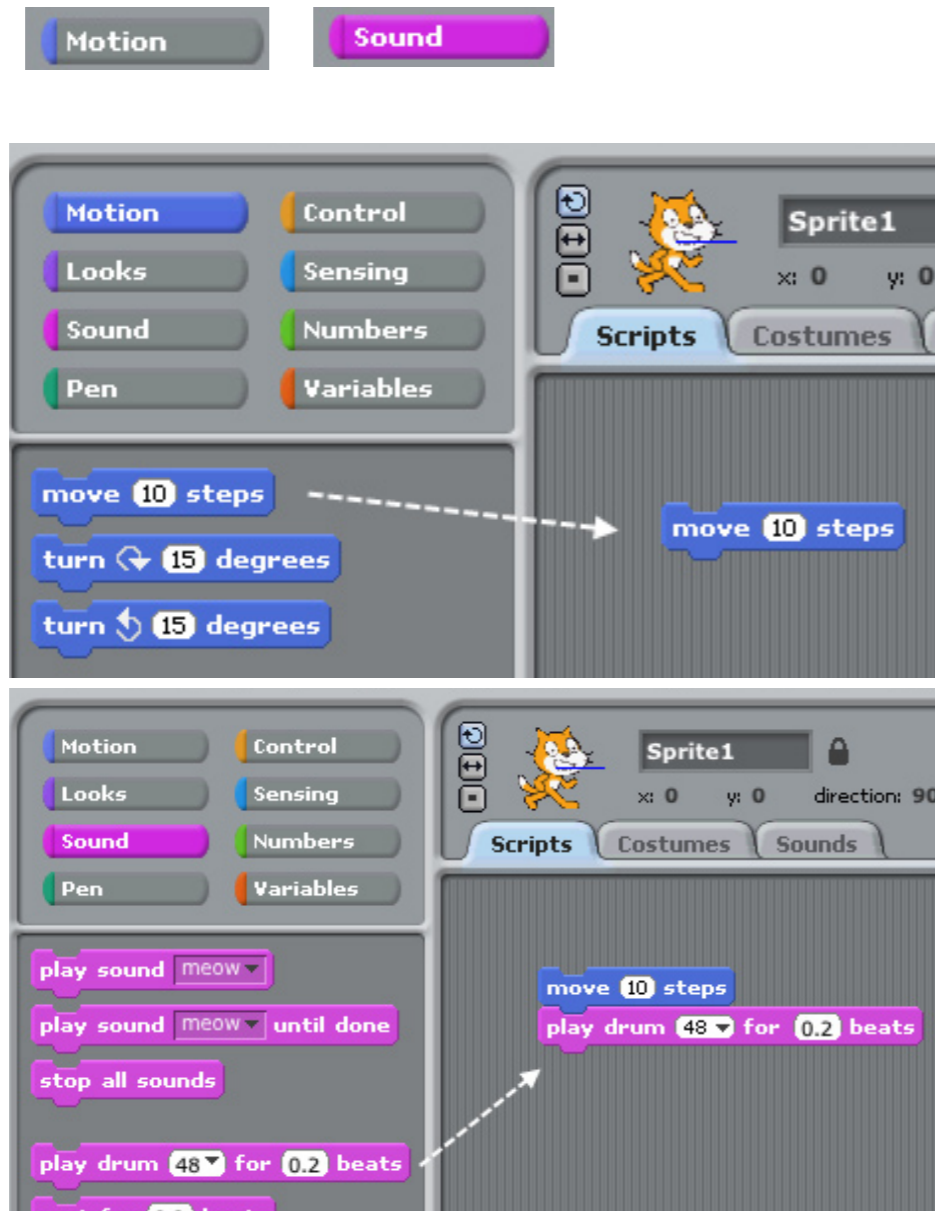
- Use the forever command to create a loop



- Run and Test a script



Session 1 - Activity 1



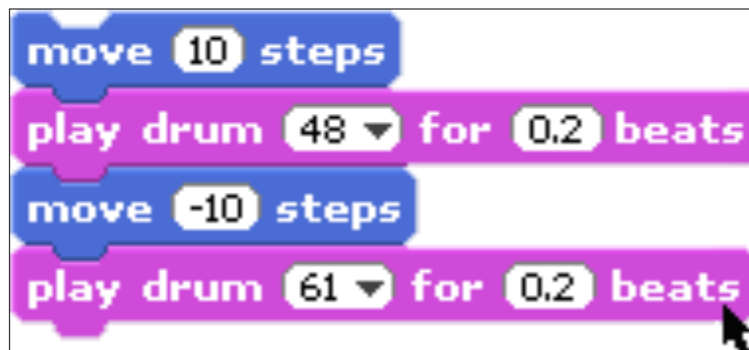
Drag a **move** block into the Scripts area

Drag out the **play drum** and put it under the **move** block

Session 1 - Activity 1

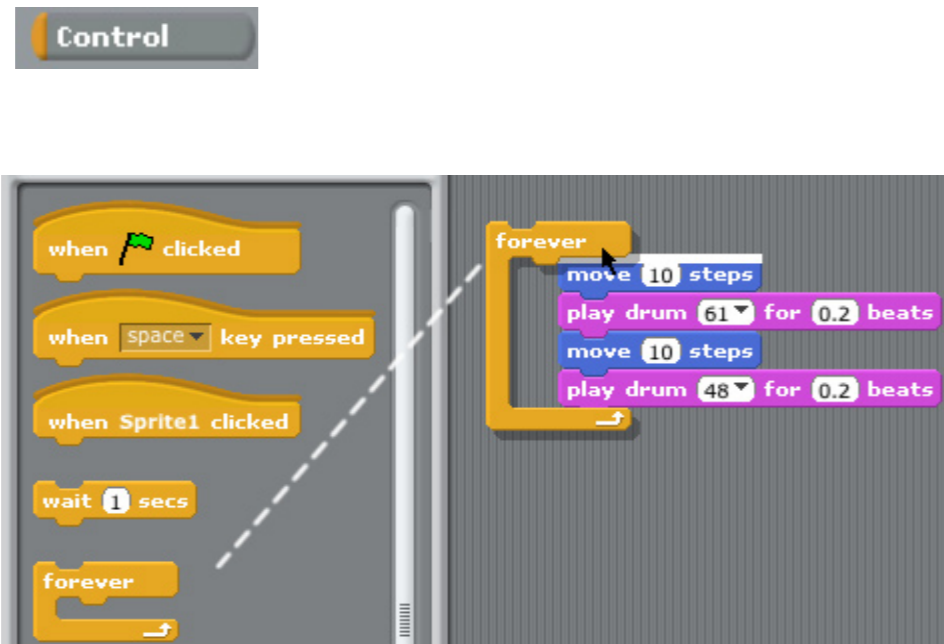


Add another **move** block, change the number to **-10**

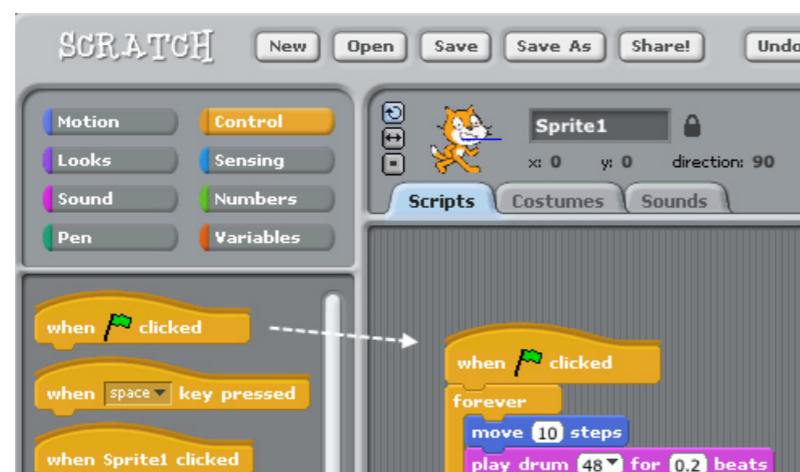


Add another **drum** block, change the number to pick a different drum beat

Session 1 - Activity 1



Drag out a **forever** block and place it at the top of stack, (this will wrap around the other blocks).



Drag out a **when clicked** and put it on the top of the stack.

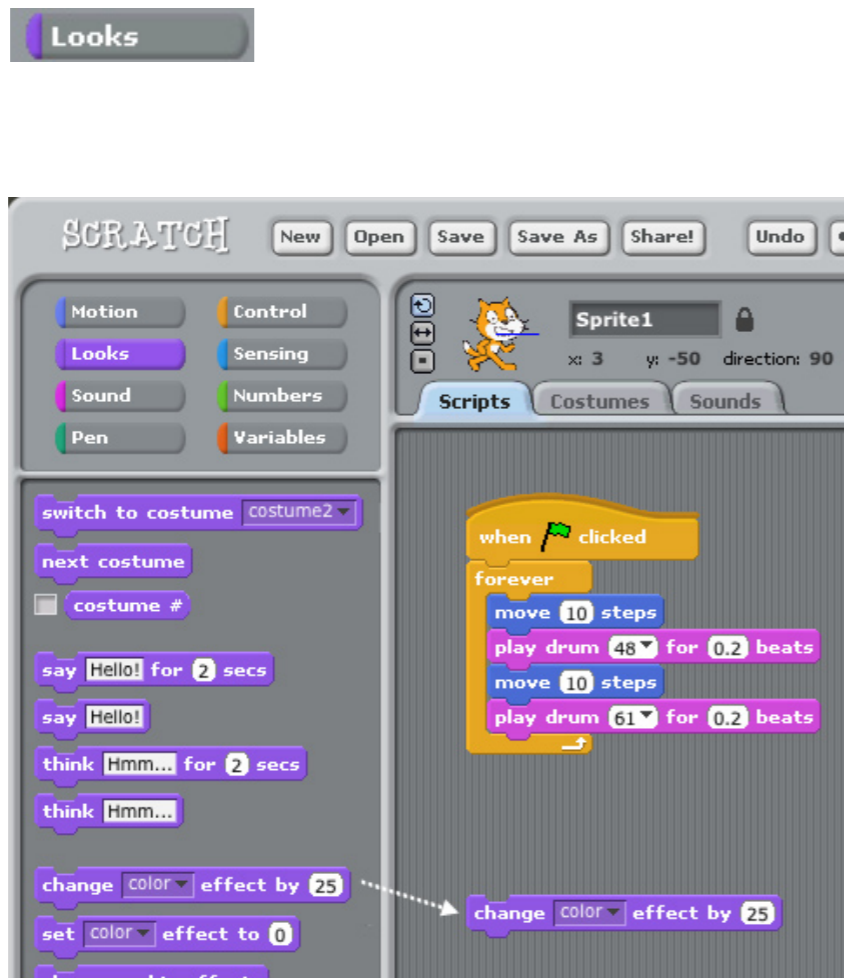
Session 1 - Activity 1

Run the script to see if it works



Click on the green flag to run the script and to make the sprite dance

Session 1 - Activity 2

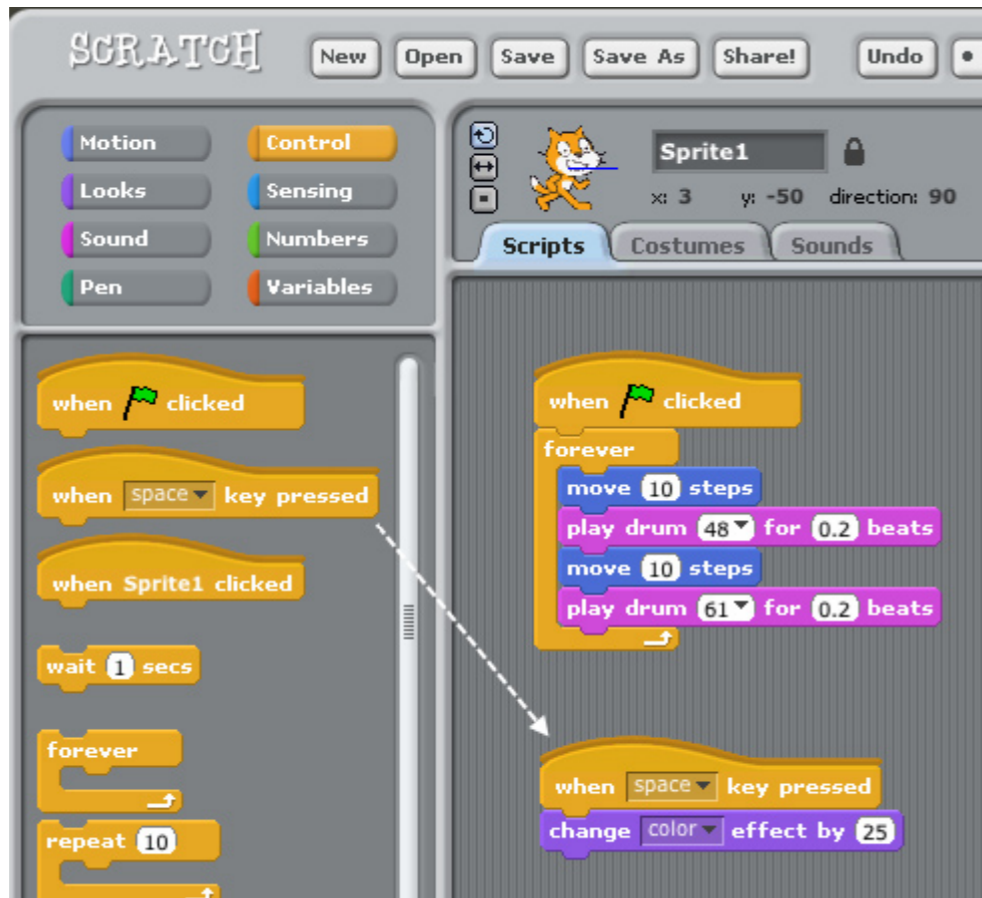


Drag out a **change colour effect** block and double-click on the block to see what it does.

Session 1 - Activity 2

Control

Add a  above the **change effect** block



Run the script again

- Click on the green flag to make the sprite dance
- Click on the space bar to make the sprite change colour.
- How can you make the cat sprite change colour automatically?

Session 1 - Activity 2

Review of progress so far.

In this activity you familiarised yourself with with the Scratch interface

You experimented with instructions from the following blocks

- Motion
- Looks
- Sound
- Control



You created, ran and tested a script
You added actions to a sprite

Session 1 - Activity 3

Activity 3

We Are Learning To...

Motion

- Animate a sprite by switching costumes

Looks

- Add speech bubbles to a script
 - and have a conversation between two sprites

Control

- Use a 'broadcast to' 'call' another script

Session 1 - Activity 3

Select a suitable sprite



Click to open
sprite



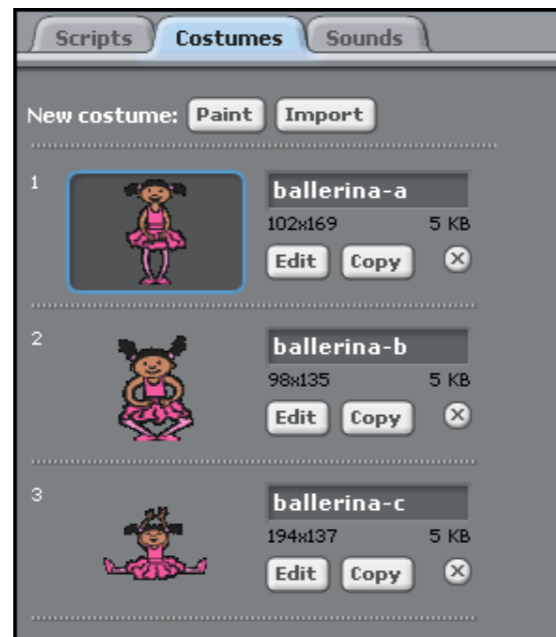
In this example,
from the people
folder, select a
sprite which clearly
has similar sprites
of the same style.
e.g. ballerina-a

Session 1 - Activity 3

Import Costumes

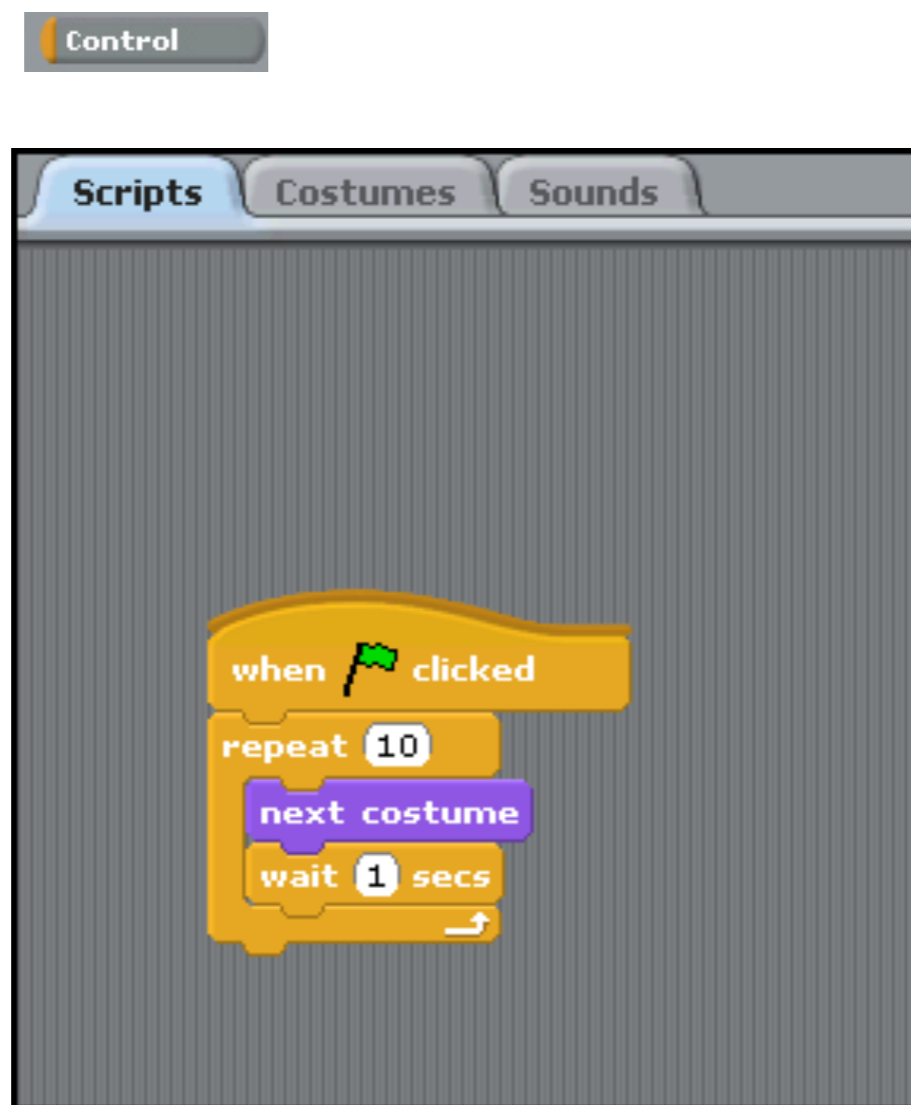


Click on the Costumes tab where you should be able to see your sprite (ballerina-a).



Click on Import and import the rest of the (ballerina) costumes that will make up your animation.

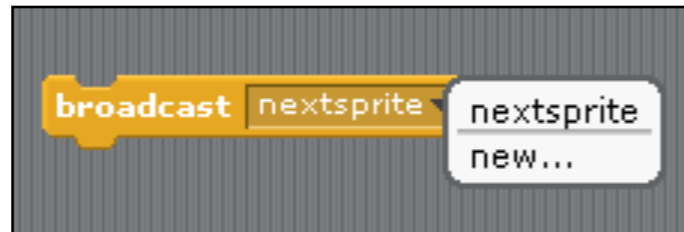
Session 1 - Activity 3



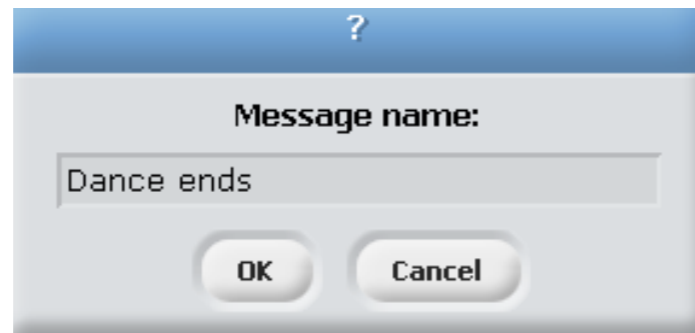
Click on the Script tab and add the blocks shown. What do you think each block does?

Session 1 - Activity 3

Making a broadcast (to 'call' another script)



Select the Broadcast block from the Control section and select New.



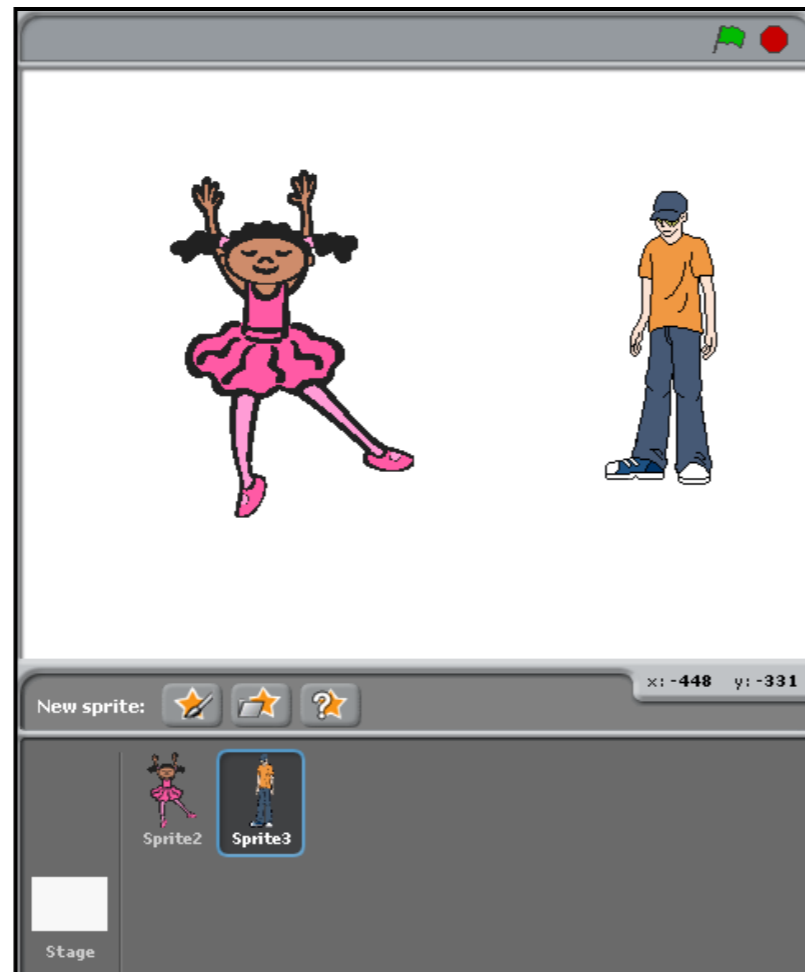
Give the broadcast a name.



Attach the Broadcast block to your script

Session 1 - Activity 3

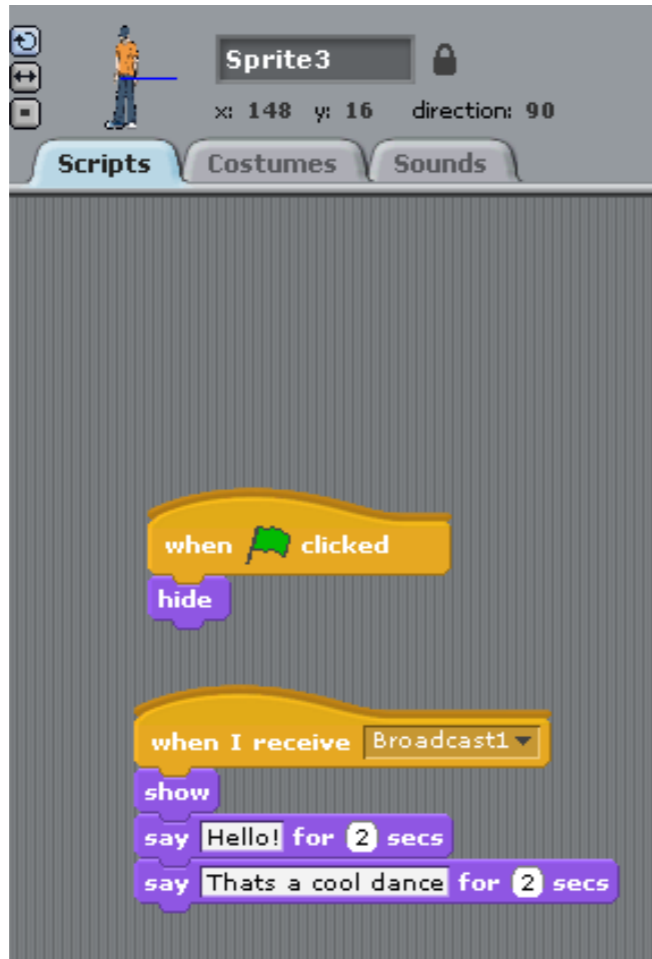
Add another sprite



Add a 2nd sprite for the conversation.
The blue border shows you which sprite you are working on.

Session 1 - Activity 3

Controlling the new sprite



We do not want the 'boy' to appear at the start so hide him by using the script shown.

Something needs to happen for the boy to appear and do something.

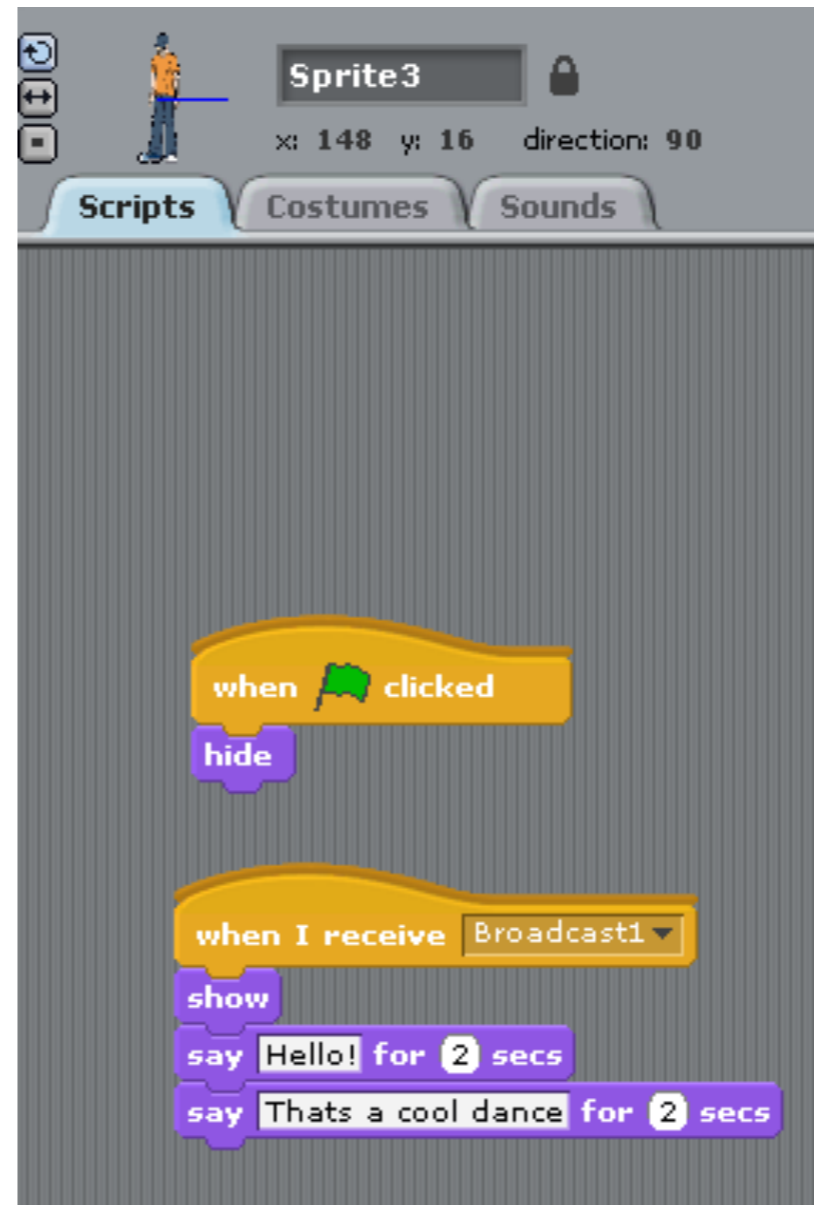
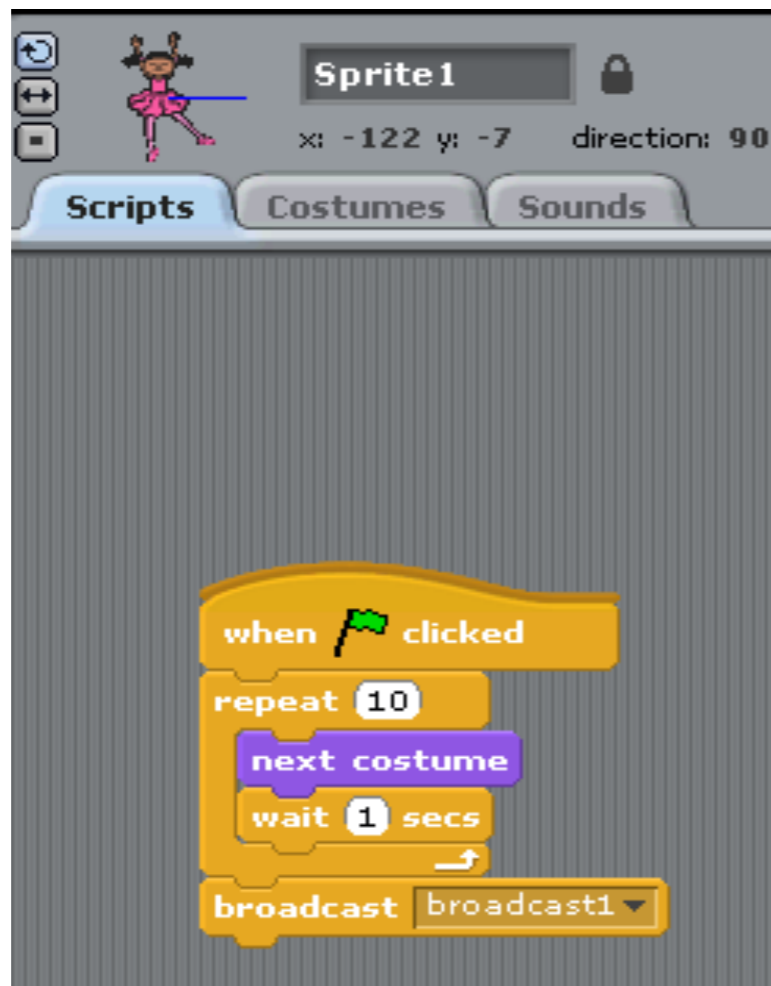
This is called 'calling' - in Scratch it is called a broadcast.

Select **Dance Ends** from the dropdown list.

Add some commands from the looks section (e.g. as shown).

Session 1 - Activity 3

Run the program



Session 1 - Activity 3

Challenge: How could we get the ballerina to say “**Thank You**” (in a speech bubble) **after** the boy has finished speaking?

Session 1 - Activity 3

Challenge: How could we get the ballerina to say “Thank You” (in a speech bubble) **after** the boy has finished speaking?



The image shows the Scratch script editor for the 'Boy' character. The character's name is 'Boy', and its coordinates are x: 148, y: 16, with a direction of 90 degrees. The script is as follows:

```
when green flag clicked
  hide

when I receive Broadcast1
  show
  say Hello! for 2 secs
  say Thats a cool dance for 2 secs
  broadcast Broadcast2
```



The image shows the Scratch script editor for the 'Ballerina' character. The character's name is 'Ballerina', and its coordinates are x: -75, y: 12, with a direction of 90 degrees. The script is as follows:

```
when green flag clicked
  repeat 10
    next costume
    wait 0.5 secs
  broadcast Broadcast1

when I receive Broadcast2
  say Thank You
```

End of Session 1