

Practice Challenge - Introduction to Scratch

Challenge Outline

It is recommended that Teachers watch the Practice Challenge video with the students. Pause it where appropriate and have students follow along. Have students complete the mini challenges along the way, and share their results with their peers.

Once the video is completed, have students explore the 'Say', 'Think' and 'Turn' blocks and share with their peers what these blocks do.

If time permits, have them also explore the range of blocks in the 'Sounds' palette.

There is additional content at the end of the video for students that participated last year and are looking to increase their skill level.

Judging

The Practice Challenge is not being judged and serves as an introduction to the Scratch Programming environment. We encourage students to submit their creations for all other challenges to QMEA. Outstanding submissions will be recognised and shared with the wider community.

Upcoming Challenges

Animation Challenge

Students will be taught how to use Scratch to Create a Digital Animation. They will learn how to change backdrops and add in extra characters. Students will be given the chance to create a story that helps explain a particular process or topic

| Key Concept - Sequential Programming

Quiz Challenge

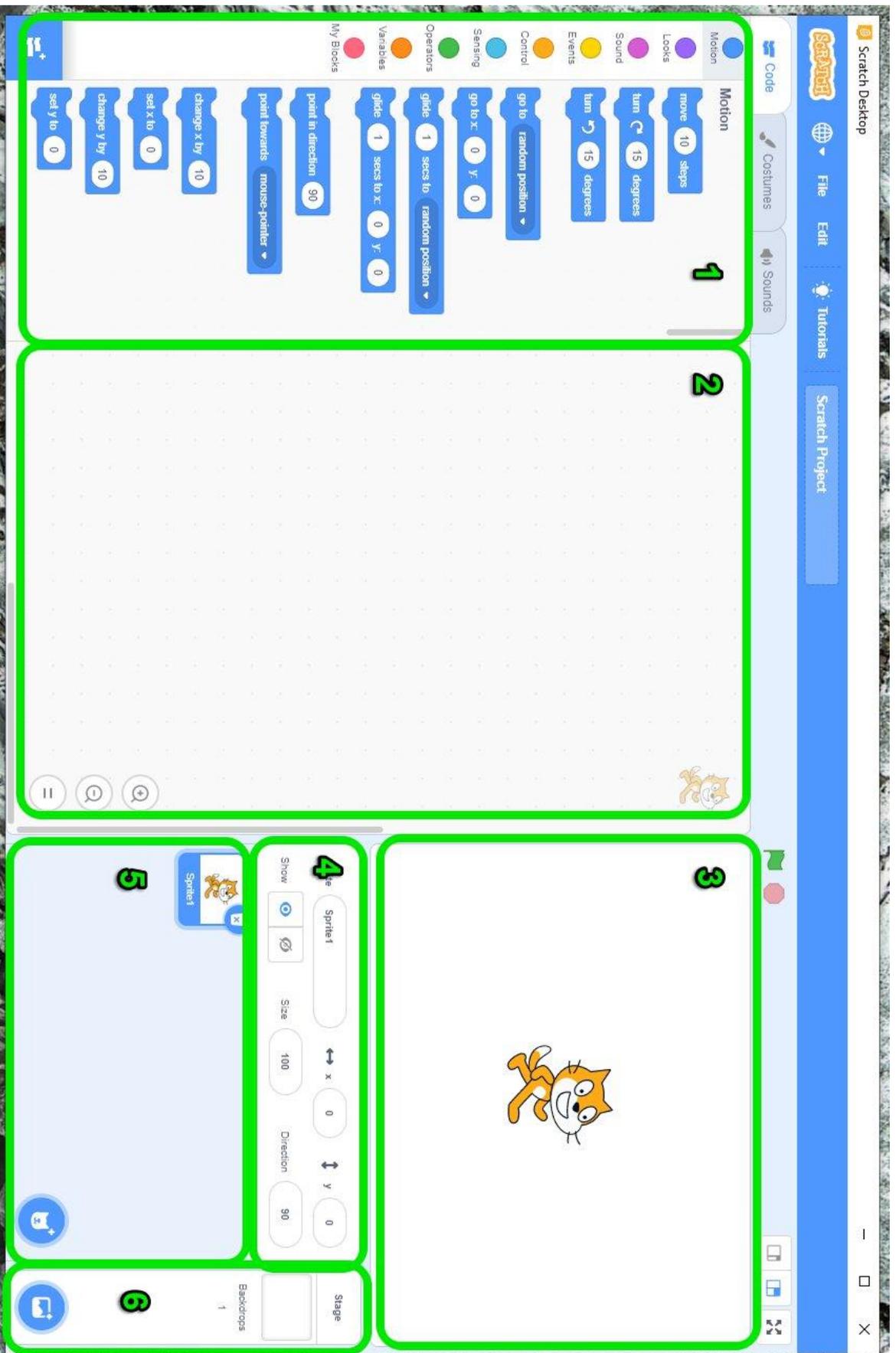
This challenge will look at how Scratch can be used to create an interactive Quiz. Students will learn how to structure an algorithm to ask questions of a participant, with relevant responses depending on their answer. Additional Scratch techniques will be introduced to help improve on the User Experience of their creation.

| Key Concept - Branching Statements

Game Challenge

In this final challenge, Students will be taught how to create their very own Game. They will learn how a character can be controlled on screen, and how to have it interact with other elements within their program.

| Key Concept - Variables



Scratch Terminology

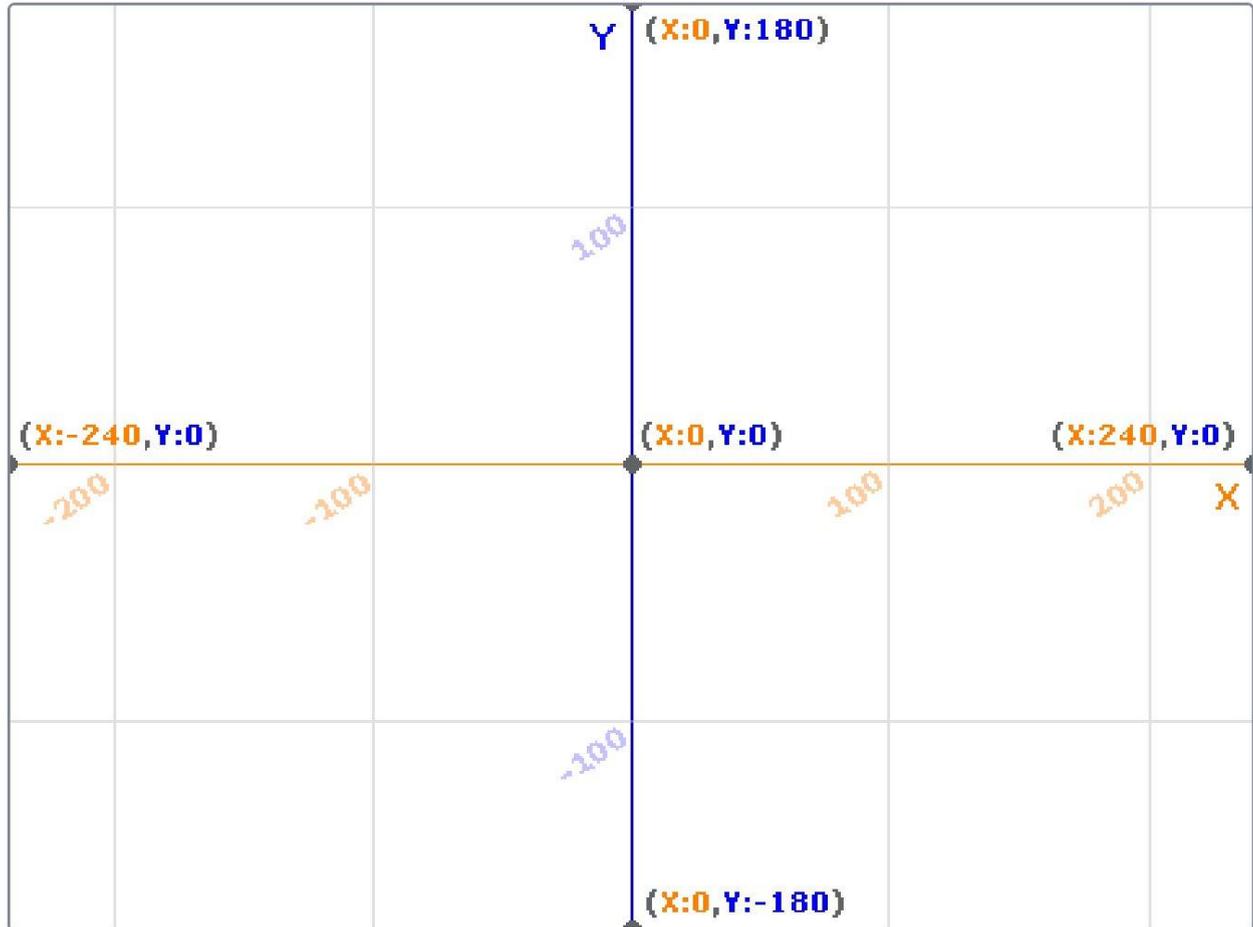
1. Code Blocks
2. Main Workspace
3. Stage
4. Sprite Properties
5. Sprite List
6. Stage Properties

Stage Coordinates

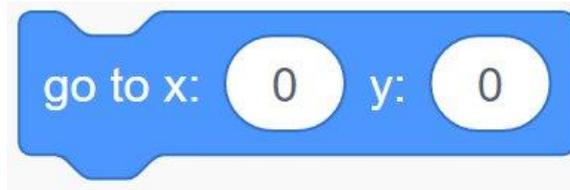
The centre of the stage is $x=0$ and $y = 0$

The X values change going from left to right

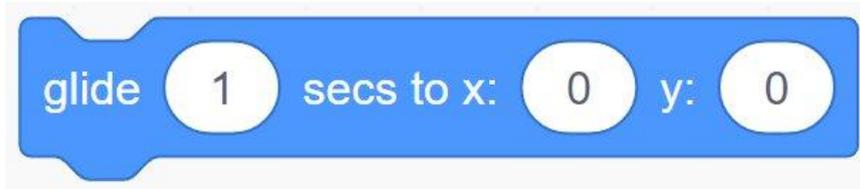
The Y values change going from top to bottom



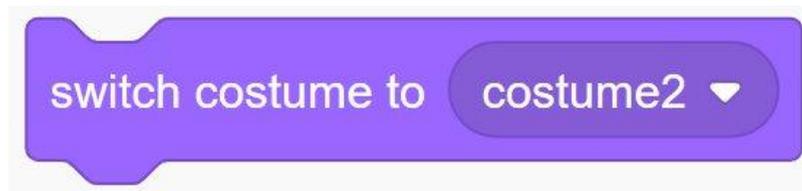
Code Blocks



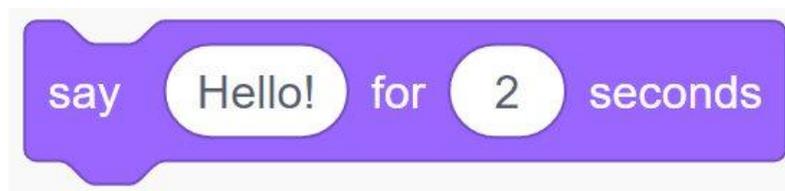
Instantly moves the sprite to a specific x,y location



Smoothly glide from the current X/Y location, to the new X/Y location. Change the number of seconds to speedup or slow down the glide.



Change the costume of your sprite. Costumes can be found in the 'Costumes' Tab above the code blocks



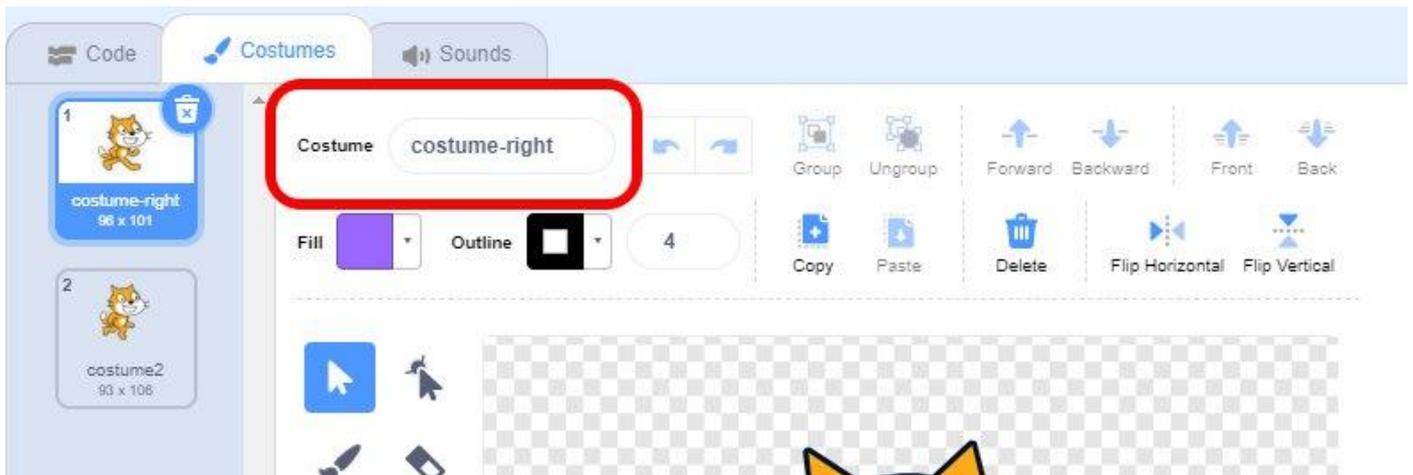
Create a speech bubble for your character and control how long the speech bubble stays visible



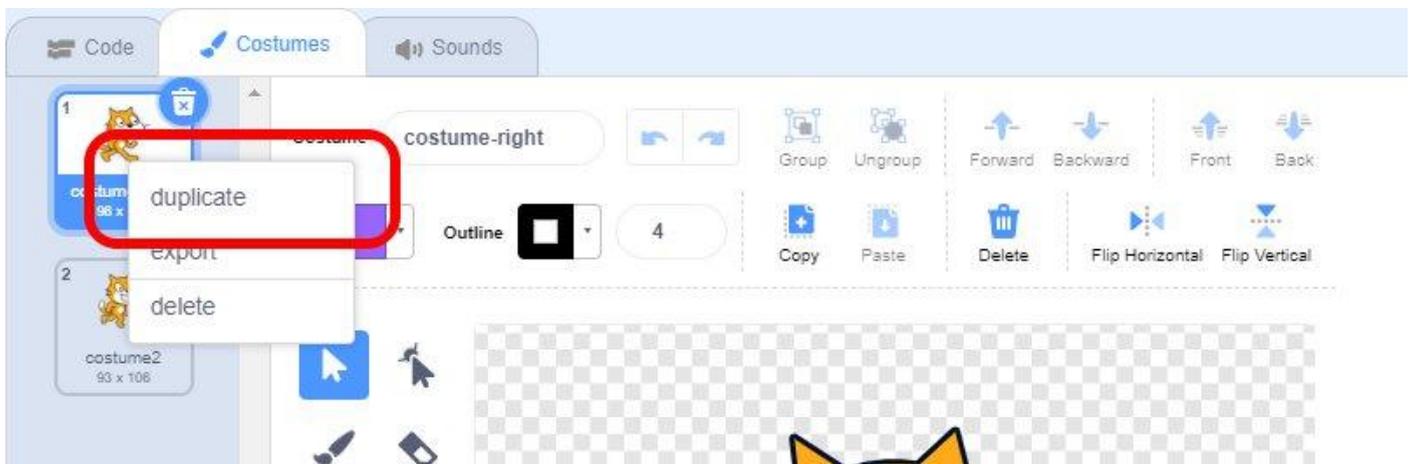
Green Flag starter block. All blocks that are connected underneath will be run once the green flag above the Stage is pressed

Creating new Costumes

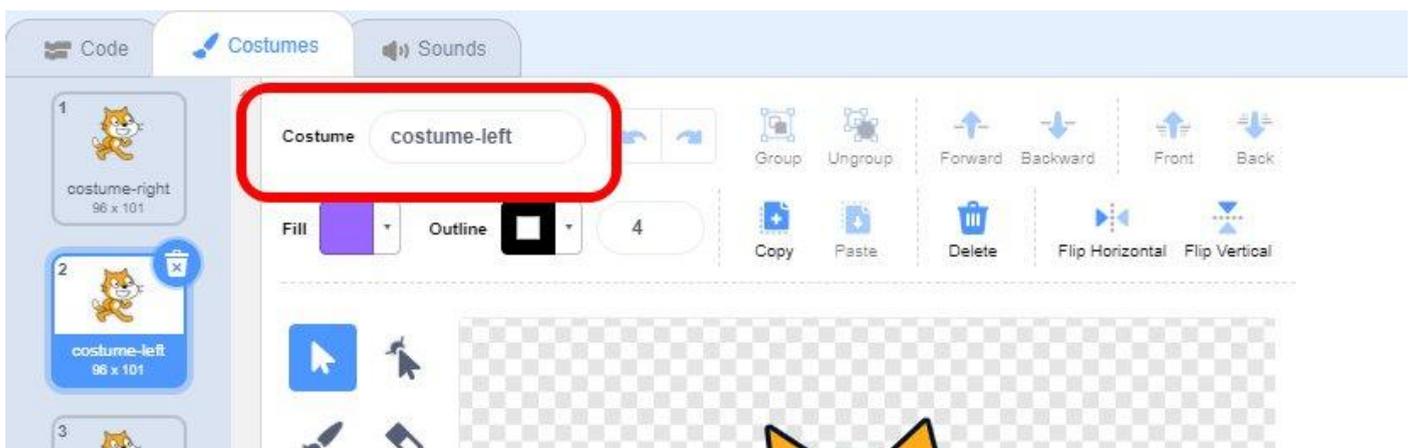
Rename costume1 to costume-right



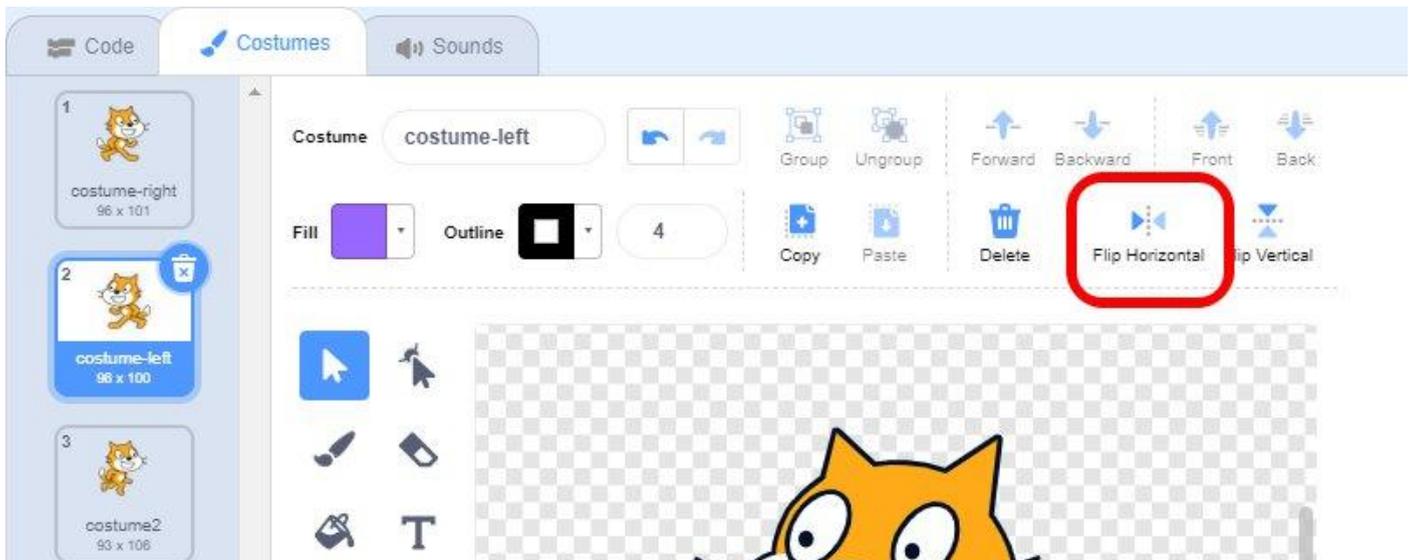
Duplicate costume-right (mouse -> right click)



Rename the new costume (costume-right2) to costume-left



Flip the new costume so it faces left



Example Program

