River Bank Primary Knowledge Organiser	Year 3	Spring Term 1	We are programmers- music

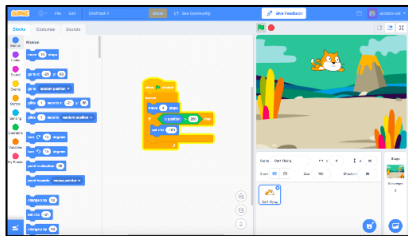## What we will learn

Sequencing in Scratch

Programming is when we make a set of instructions for computers to follow.

Scratch is a program that we can use in order to code our own stories and animations.

We use **algorithms** (a set of instructions to perform a task) to sequence movements, actions and sounds in order to program effective animations.

Scratch basics

What is Scratch?

https://scratch.mit.edu/

Scratch is a website that lets us code our own stories, games and animations.
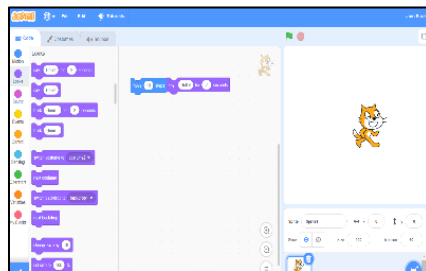
Scratch helps us to learn how to use programming language, whilst also being creative and using problem-solving skills.

Staying Safe online

SMART

Stay Safe Don't give out your personal information to people / places you don't know.

Don't Meet Up Meeting someone you have only been in touch with online can be dangerous. Always check with an adult you trust.

Accepting Files Accepting emails, files, pictures or texts from people you don't know can cause problems.

Reliable? Check information before you believe it. Is the person or website telling the truth?

Tell Someone Tell an adult if someone or something makes you feel worried or uncomfortable.

Follow these SMART tips to keep yourself safe online!

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SMART tips based on resources from www.thinkuknow.co.uk

## Scratch areas

There are three main areas in Scratch:

The Blocks Palette (on the left) contain all of the different blocks: puzzle piece commands which control the animation.

Code Area (in the middle) is where the blocks are placed to create a program.

Stage with Sprite (right) is where the output of the program is presented. The sprite is the character.

Using Scratch	Sequencing & Algorithms	Programming using blocks
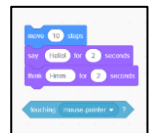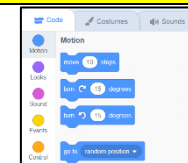
Using Scratch
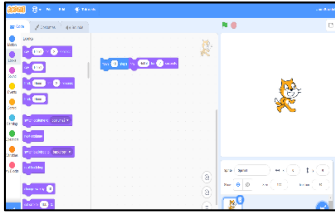
Adding/Removing Sprites: This can be done at the bottom of the stage. There are many sprites to choose from.

Attributes: There are three attributes of the sprite which we can change to make our animation: Code, Costumes, Sounds.

Background: Background can be added by clicking on this icon (bottom right of the screen, below the stage).

Sequencing & Algorithms

A **sequence** is a pattern or process in which one thing follows another.

In Scratch, blocks can stack vertically on top of one another to create sequences.

Event blocks are used to start sequences. They are orange and have a curved shape at the top.

Designing an **algorithm** (set of instructions for performing a task) will help you to program the sequence that you require.

Programming using blocks

Basic Programming: Make sure that the feature of the stage that you want to program (e.g. sprite, background) is selected by clicking on it. Drag the block command that you want onto the code area. Blocks can be deleted by right-clicking on the block and selecting 'delete block.'

Block Editing: White areas on blocks can be edited. Click on them and type in the preferred value.

Running the Code: You can run your animation by performing the action stated in the event block (e.g. clicking the event block).

If this does not work, you may need to **debug** your animation (find errors and fix them).