

We are programmers

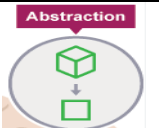
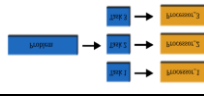
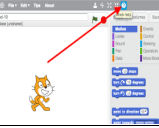
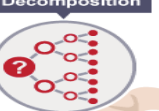
Prior Knowledge

Unit 1.1: We are treasure hunters introduced programming with Beebots.

Unit 1.5: We are rhythmic introduced ScratchJr.

In **Unit 2.1: We are astronauts** and **Unit 2.2: We are games testers**, you developed your programming skills further.

Key Vocabulary:

Abstraction:		computational thinking approach to managing complexity by simplifying things, through identifying what is important and what detail can be hidden or ignored	Output		information produced by a computer – in this case, an animation
Algorithm:		a sequence of precise instructions or steps (sometimes a set of rules) to achieve an objective	Parallel processing		when programs run (or appear to run) simultaneously
Bug:		an error or mistake in a program or algorithm, causing the computer or robot to behave in a manner that was not originally intended	Program		a sequence of instructions (or sometimes a set of rules) that can be followed by a computer
Code:		instructions (or sometimes rules) that can be understood by a computer	Repetition		programming construct which allows a group of instructions to be repeated a number of times, or until a certain condition is met
Debug:		correct mistakes in a computer program or algorithm	Scratch		simple, block-based programming language in which programs for characters are built by snapping together code blocks
Decomposition		breaking a problem down into smaller parts	Sequence		placing programming instructions in order, so that each happens one after the other
Event		something that happens within a computer program to cause some particular code to be run, such as a sprite being tapped by the user	Sprite		a graphical character in a program that can be given its own sequence of instructions
Iterative development:		A trial and improvement approach to programming, in which each successive version builds on the previous one by the fixing of mistakes or the adding of features	Storyboard		a visual representation of the key scenes or frames in a video; one way of recording an algorithm visually

Key Skills

How do I display and play audio at the same time?

How do I move a Sprite?

Key learning:



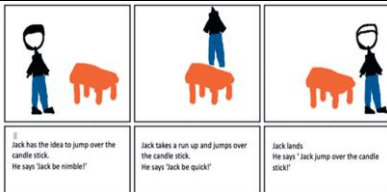
Session 1: Exploring the tools in Scratch to create *Jack be Nimble*

What is Scratch and how does it work?



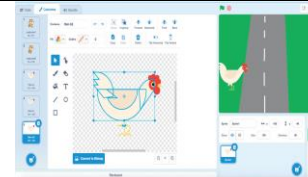
Session 4: Animating the sprites by using *Motion* blocks

What is debugging?



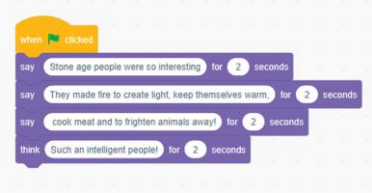
Session 2: Creating a storyboard

What is a storyboard?



Session 5: Duplicating and editing costumes

How do I make my sprite look like it is moving or talking?



Session 3: Starting to program dialogue

Why do we use decomposition?



Session 6: Adding and editing sound

What is the best source for sounds and music?

Key Applications (apps)



Next Steps

You will collect and work with data in **Unit 4.6: We are meteorologists**. You will consider broader issues around 'big data' and privacy in **Unit 6.6: We are AI developers**.