

VOCABULARY

Algorithm: A clear set on instructions followed in a specific order

Beebot: A small, bee like robot that can be programmed to move in different directions

Blocks: There are different types of action blocks in Scratch Junior that change your sprite (object or character) E.g motion blocks, triggering, looks, sound, control and end

Computer: An electronic device used for storing and processing data

Code: A set of instructions used for different programs

Debug: To find and remove errors from computer hardware or software.

Execute: Run a program,press go, start the algorithm or instructions

Input: data provided to a computer system, such as via a keyboard, mouse, microphone, camera or physical sensors.

Instructions: A detailed order or directions

Output: the information produced by a computer system for the person using it typically on a screen, through speakers or on a printer, but sometimes through objects

Predict: To use your knowledge to say what you think will happen next

Program: a stored set of instructions put into the computer in a language understood by the computer that does some form of thinking and then creates an outcome

Sequence: to place programming instructions in order

Sprite: An object, image or character in Scratch Jnr that can be controlled using commands



COMPUTING KNOWLEDGE MAT

YEAR 2 COMPUTER SCIENCE

MAIN IDEA

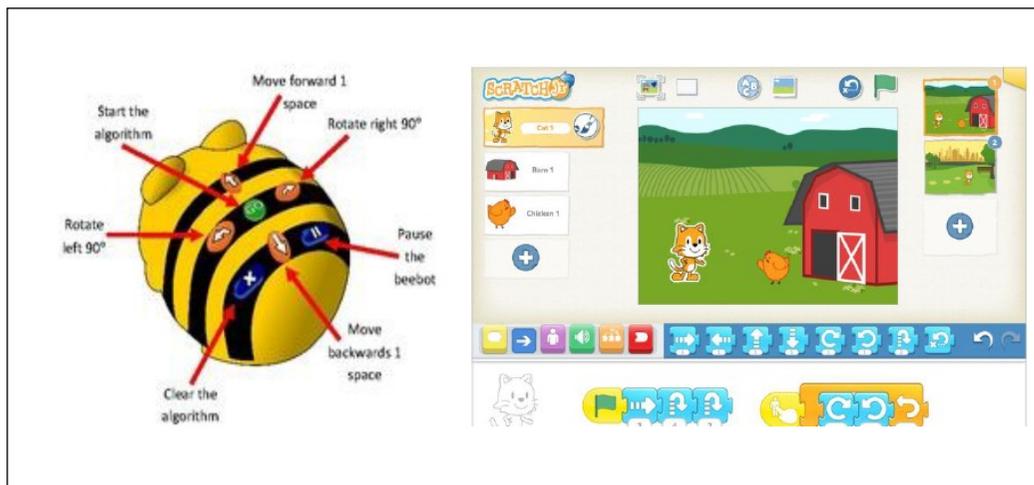
Pupils will understand that to create an accurate animation on Scratch Junior, they must use a precise algorithm that needs to be followed in a specific order. If an error occurs they will use logical reasoning to 'debug' the animation on Scratch Junior.

WHAT CAME BEFORE

Year 1—to understand the meaning of an algorithm and to follow, debug and create them

WHAT COMES NEXT

Year 3—use logical to explain how some simple algorithms work and to find and correct errors in algorithms and programs



WHAT YOU SHOULD ALREADY KNOW

- That algorithms must be followed in a specific order
- If an error occurs in a program it needs to be 'debugged'
- Can follow, create and debug algorithms to build lego structures

KEY LEARNING

An algorithm is a list of step-by-step instructions that are followed in order to get a task done. Each instruction should be very simple so that a computer can understand exactly what it needs to do.

The computer will follow an algorithm precisely so you have to think very carefully about what order you input your instructions.

Pupils will follow and create algorithms for activities that do not require computerised products and create their own algorithms for every day activities.

Pupils will follow more complicated algorithms on a beebot and create more challenging programs.

Pupils will use the software 'Scratch Junior' to create animations using algorithms and correct errors as they go.

Changing of the order of the algorithm in Scratch Junior will change the order of the animation, pupils will decide which order they prefer.

INVESTIGATE / QUESTIONS

- Is this animation running effectively?
- Which motion blocks should I use to...?
- What will happen if I change the order