

**Year 5 – Term 6**

**Has the time come to trust machines more than humans?**

**COMPUTING**



Sprites can be made to 'speak' using 'looks' blocks and using the 'if' block means you can set conditions for actions to be carried out.

<b>Progression in Skill:</b>
<b>Problem Solving</b> Design, write and debug a program using a block language based on their own ideas. Experiment with computer control applications.
<b>Programming</b> Use sequence, selection and repetition in programs. Write a program that accepts keyboard and mouse input and produces output on screen through speakers.
<b>Logical Thinking</b> Explain a rule-based algorithm in their own words.
<b>Creating content</b> Use and combine a range of programs on multiple devices.

<b>Long-term Memory Knowledge:</b>
Use block language to create interaction between sprites in a game. Use sequence, selection and repetition when coding. Write a program so that the user needs to use the keyboard or mouse to make something happen on the screen or through the speaker. Explain how the code they have written makes the game work, using simple language.

<b>Key Vocabulary</b>	
<b>variables</b>	a way in which computer programs can store, retrieve or change data, such as a score, the time left or the user's name
<b>block language</b>	a programming language in which blocks are used to program the computer
<b>script</b>	a computer program typically executed one line at a time through an interpreter, such as the instructions for a Scratch character
<b>sprite</b>	a computer graphics object that can be controlled (programmed) independently of other objects or the background

<b>Progression in Resources:</b>
J2code: visual (level 2/3)

<b>Relevance</b>	
<b>Now</b>	Children are increasingly confident in spotting their own mistakes and can find ways to solve them, developing resilience as they do so.
<b>Future</b>	Children can think around a complicated issue in life in order to solve a problem.
<b>Aspirational</b>	Children can become part of a team to think creatively around a problem to find a workable solution; they may consider a career in computing.

<b>National Curriculum Links:</b>
Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.

<b>Essential Prior Learning:</b>
Children should be familiar with visual coding, for example that used in Scratch or J2e. They should be able to give instructions that move a sprite around a screen using the 'motion' blocks of code and co-ordinates.