

**Have we all got a place in the world?**  
**COMPUTING**



**National Curriculum Links:**

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 simple algorithms work and to detect and correct errors in algorithms and programs.

**Essential Prior Learning:**

Children should be able to log on to J2e

A sprite is a computer graphic that can be static or animated.

Computer code is the instructions that tell the computer what to do.

Commands must be given in a certain order for an action to be completed.

**Progression in Skill:**

Know that abstraction means focusing on the key information and filtering out unimportant details.

Know that logical thinking helps identify and correct programming errors.

Know that simple selection in algorithms uses 'if' conditions to decide what actions to take.

Know that programs can produce output in many ways, such as displaying text, playing sounds, lighting LEDs, moving sprites or robots, and showing images or animations.

Design, write, implement, and debug increasingly more precise computer algorithms, using abstraction to focus on the important information in the algorithm.

Use simple selection in algorithms (if condition).

Create programs that produce different types of output (e.g. displaying text on the screen, playing sounds, lighting up LEDs, moving sprites or robots, and showing images or animations).

**Long-term Memory Knowledge:**

Use block language to code a simple interaction.

Develop a series of code that will simulate a physical process on a screen.

Include sequence and repetition when programming. Give instructions through the keyboard to make things happen on screen.

Work through a piece of code logically and systematically to identify errors.

**Key Vocabulary**

<b>block language</b>	a programming language in which blocks of code are used to program the computer
<b>command</b>	an instruction, written in a particular programming language, for the computer to execute
<b>if</b>	an <b>if</b> statement is a programming conditional statement that, if proved

	true, performs a function or displays information
<b>block</b>	a graphical representation of computer code in languages such as scratch; also used to describe a part of a computer program
<b>algorithm</b>	a set of clear steps that tell you how to do something
<b>abstraction</b>	choosing the important bits of information and ignoring the unimportant details
<b>output</b>	the result you get from a computer or program (like a sound, number, or picture)
<b>debug</b>	to find and fix mistakes in your code so it works properly

**Progression in Resources:**

J2Code Visual Level 2

**Relevance**

<b>Now</b>	Children develop their understanding of how computers work and what they are capable of; they gain confidence in their own computer use.
<b>Future</b>	Children can use computers for purposes that suit them, understanding how their input affects the computer's output; they can detect and correct errors in programs
<b>Aspiration</b>	Children can manipulate programs to perform functions they choose; they code their own programs; they pursue careers in software development and web-design.