What should I already know?

* How to plan the solution to a problem by decomposing into smaller parts.
* Be able to investigate how algorithms work and identity the purpose of the different parts of an algorithm.
* To make programs which use sequences, repetition, inputs and outputs when necessary.
* How to improve a program by debugging systematically.

Key Vocabulary and Definitions:

|  |  |
| --- | --- |
| Code | A set of instructions |
| Complex systems | A system made of lots of different parts that all work together |
| Decompose | When you break a complex system into easier, manageable parts |
| Logic | Simple instructions used in computing (yes or no) |
| Physical systems | Smart algorithms that adapt to their surrounding |
| Sequencing | A list of actions that MUST be followed |
| Simulations | The way a computer can model and predict an outcome |
| Syntax | The spelling and grammar required to create an algorithm |
| Testing | A way to find out how well something works |

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Computing Skills:

* Make programs using more complex algorithms, selecting when to use sequences, selection, (if, then), repetition and a range of inputs and outputs.
* Improve code by systematically testing and debugging it, with an understanding of logic and syntax bugs.

Teaching Sequence

1. To create a program that uses repeated actions.
2. To create a program that responds to the ‘if’ command or the ‘if/else’ command
3. To use a variable to create a visual timer.
4. To go through the design, code, execute, refine process.
5. To create a program that controls or simulates a physical system.

Blooms Taxonomy – Specific Verbs to Use in Lesson Aims

Knowledge: Describe, find, identify, list, locate, name, recognise, retrieve Comprehension: Classify, compare, explain, infer, interpret, paraphrase, summarise Application: Carry out, implement, use Analysis: Deconstruct, Organise, outline, structure Synthesis: Construct, design, devise, invent, make, plan, produce, Evaluation: Appraise, assess, choose,

Concept Cartoon

