



Topic: Computer Science

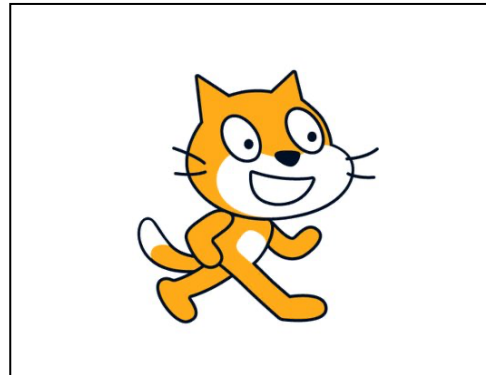
Subject: Computing

Year: 6

Term: Spring

What should I already know?

- Define and explain the term decomposition.
- Explain what a variable is and give examples of variables that would be useful in programs.
- Begin to describe the real-life uses of algorithms and uses across the curriculum.
- Confidently explain the difference between an algorithm, program as well as debugging and decomposition.
- Define sequencing, selection, variables and repetition and explain why they are needed in algorithms.



What will I know by the end of the unit?

- Confidently explain the difference between an algorithm, program as well as debugging and decomposition.
- Define sequencing, selection, variables and repetition and explain why they are needed in algorithms.

What will I be able to do by the end of the unit?

- Combine the use of repetition, sequencing, variables and selection to create complex programs by writing more complex algorithms.
- Use a variety of inputs and outputs that interact together including some external outputs.
- Use logical reasoning to de-bug a range of both pre-created and self-created algorithms including to more efficient algorithms (e.g. better use of repetition etc...)

Agreed Real-life Outcome

- Produce a completed Scratch project involving these elements.
- Produce a game based on the blocks created.

Spelling	Definition
Sequence	The order in which your algorithm is written.
Repeat	A function used for a set of coding blocks to complete the same action again.
Algorithm	A set of instructions written to achieve a specific outcome.
Program	A series of algorithms designed to achieve a specific goal.
Code	The process of writing algorithms and programmes.
Block	One part of your coding algorithm on Scratch.
Decomposition	Splitting a longer algorithm into smaller parts.
Efficient	The sequence which achieves the objective in the most organised method.
Variable	A block in an algorithm that can hold a value.
De-bugging	Changing a program to ensure it achieves the specified objective.
Selection	Choosing an algorithm based on a set of criteria.