

Year 6 Summer 1 Computing – Programming



Big Question

How can code create art?

Key Vocabulary for the unit:

Algorithm: A sequence of instructions which, when followed, solve a problem.

Code (computer): A set of instructions written in programming language, to tell a computer what to do.

Computer command: To give an order or instruction to a computer, to complete a particular task.

Decompose: To break something down into smaller chunks.

Import (software): To pull another file into software, to place, edit and manipulate.

Indentation (programming): In programming (for example Python), indentation is used to define a block of code.

Loop: A repeated sequence of instructions.

Nested loop: A loop, within a loop.

Random numbers: An unpredictable sequence or reveal of numbers.

Remix: Something that has been reworked to produce a varying version of the original.

Script libraries: A series of pre-written, functional codes that can be accessed and imported into a program to save time.

Variable: This could be a number or text, that can change each time the program is run and often in combination with selection to change the end result of the program.

Powerful knowledge/skills for this unit:

To know that there are text-based programming languages such as Logo and Python.

To know that nested loops are loops inside of loops.

To understand the use of random numbers and remix Python code.

To decomposing a program into an algorithm.

To write increasingly complex algorithms for a purpose.

To debugging quickly and effectively.

To remixing existing code to explore a problem.

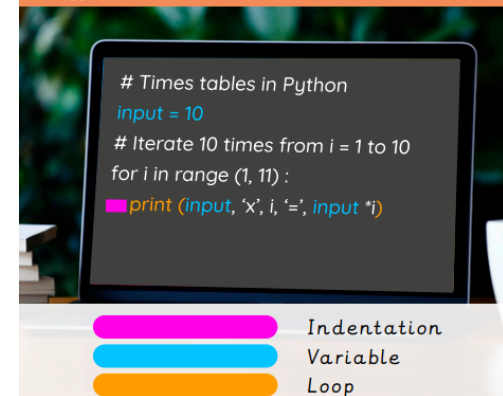
To evaluating code to understand its purpose.

What I should already know from Year 5:

- ◆ To understand the use of loops in code.
- ◆ To know how to adapt their code.
- ◆ To know what techniques to use to create a program for a specific purpose.

Useful diagrams for the unit:

Try this Python code out yourself, and change the variable (input = 'x') to display a different times table chart.



Algorithm to make a cup of tea:

The steps in the algorithm must be followed, if we ignored step one, we would have no hot water!

