

Year 6 Spring 2 Computing – Programming (Python)



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.

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.

Did you know?

Python is used to teach computers how to think for themselves!

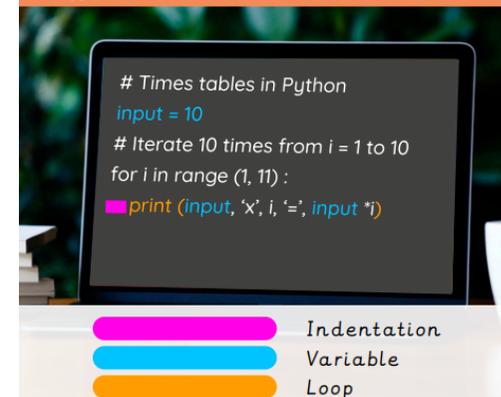
This is sometimes known as artificial intelligence (AI) or machine-learning.

They can learn skills such as speech recognition.



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!

