

Year 6 - Intro to Python - Term 3

Key Vocabulary

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.

Did you know?

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

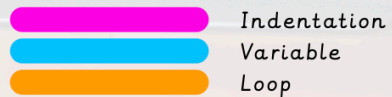
This is sometimes known as artificial intelligence (AI) or machine-learning.

They can learn skills such as speech recognition.

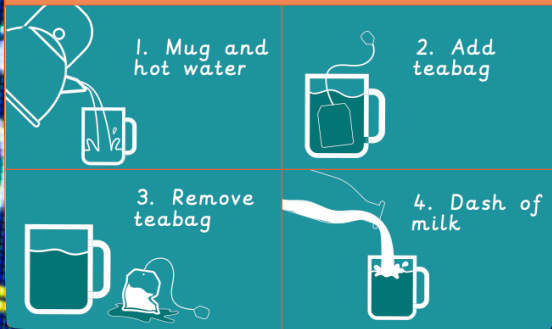


Python program to display times tables:
Try this Python code out yourself, and change the variable (input = 'x') to display a different times table chart.

```
# Times tables in Python
input = 10
# Iterate 10 times from i = 1 to 10
for i in range (1, 11) :
    print (input, 'x', i, '=', input *i)
```



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!



To know statements	✓ X
I know how to iterate ideas, test and change throughout the lesson and explain what the program does independently.	
I know how to use nested loops in designs and explain why two repeats are required.	
I know how to draw a house using Python commands using comments to show a level of understanding around what code does.	
I know how to use loops in Python and explain what the parts of a loop do and suggest an appropriate place to use a loop	
I know that computers can choose random numbers; decompose the program into an algorithm and modify a program to personalise it.	

What can you remember from previous units?
What is a loop? How have you used them previously?
How can you test a program? How can you debug it?
How did you code a piece of music?

Anything else you have learnt? What have you enjoyed?