



Python Programming Knowledge Organiser



? What are we learning about programming in Python?

Python is a type of programming text-based language and allows you to program short commands quickly. It is a powerful language used by many famous services, such as Google (to program Youtube), Netflix, Facebook, Instagram and NASA. Python code is written in syntax, which is a rule on a line. Each new line stops the previous rule and starts a new one.



National Curriculum Content

Design, write and debug programs that accomplish specific goals; solve problems by decomposing them into smaller parts. Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, presenting data and information. Use a textual programming language to solve a variety of computational problems.

Key knowledge

- Know how to use a Python editor to print text and use special functions (new line and speech marks).
- Know how to use Python to program sums and answers (calculator)
- Know how to program a loop to repeat text.
- Know how to program inputs to create an interactive program (typing answers to questions).
- Use the send message function to create a chat program.



Quick tips

- Type Python text carefully, any tiny mistake will stop the program working.
- When writing text, some punctuation such as “ and \ is part of the Python code so you need to put a \ before it (“ is \” and \ is \\).
- You can program a calculator in Python but you need to use different characters for the operations (/ is divide and * is times).



Important Vocabulary

Syntax	This is the set of rules that decides how the Python code will be written. Each rule is written on a line and a new line starts a new rule. Rules could be text, inputs or messages.
Print	Print is used in python to add program text, such as type your name or ask a question.
Range	Range is used to tell the program which numbers you would like to use. For example, putting (1,11) is all the numbers between 1 and 11.

Programming in Python

```

1 here.moveDown()
2 here.moveLeft()
3 here.moveRight()
4 here.moveUp()
5 here.moveUp(2)
6

```

```

1 # Grab all the gems
2
3 here.moveRight()
4 here.moveDown()
5 here.moveUp(2)
6

```

```

1 n = int(input("Input a number: "))
2 for i in range(1, n+1):
3     print(n, 'x', i, '=', n*i)

```

Print text

```

1 print("Question: Why did the banana go the doctors?")
2 print("\nAnswer: Because it wasn't peeling well.")

```