

# Python Computing

```
1 print ("Hello World")
```

Outputting a String to the screen

```
1 print("What is 138 + 456?")
2 print(138 + 456)
```

Outputting a String and outputting the sum of two integers

```
1 for i in range(10):
2     print("Python is fun!")
```

A 'for loop' that repeats a string output ten times

```
1 from time import sleep
2 alien.x = 540
3 alien.y = 460
4 alien.up()
5 sleep(1)
```

Code to change the position of a sprite

```
1 from time import sleep
2 for clock in range(8):
3     print("tick")
4     sleep(1)
5     print("tock")
6     sleep(1)
```

A 'for loop' that uses the sleep command to control print output

## National Curriculum

- Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.
- Use sequence, selection and repetition in programs; work with variables and various forms of input and output.
- Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.

## Key Vocabulary

|                                |                |                                  |            |
|--------------------------------|----------------|----------------------------------|------------|
| command                        | floor division | loop                             | sleep      |
| co-ordinate                    | debugging      | modulo operator                  | sprite     |
| floating point number          | library        | logic                            | efficiency |
| Substantive- Subject Knowledge |                | Bigger Picture- Supporting Words |            |

| Intents                                                                                 | Pupil | Teacher |
|-----------------------------------------------------------------------------------------|-------|---------|
| Do I understand that Python is a text-based coding language and enter simple commands?  |       |         |
| Can I use Python to perform mathematical calculations?                                  |       |         |
| Am I able to use repetition and Python library functions?                               |       |         |
| Do I understand how Python in Pieces can be used to program a graphical user interface? |       |         |