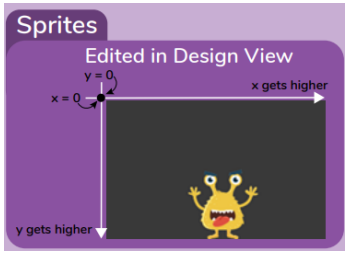
Introduction to Python

Command	A single instruction of code. In Python, this could be print ("Hello") which would print the word Hello to the screen.
Floor Division	Divides one number by another but only keeps the whole number part of the answer, ignoring any remainder or decimal.
Function	A sequence of code that you can access when you need it. In Python, the print function is an inbuilt piece of code that can be called to print something to the screen.
Loop	A way to repeat a set of instructions over and over again.
Modulo Operator	Uses the % symbol and gives you the remainder after division.
Sprite	A picture or character that can move or be controlled on screen.
String	Text or a combination of text characters and numbers: A sequence of characters, which could form words, phrases or even whole sentences.
Range	A function that lets a user get a series of numbers without having to type them all out.
Variable	A named area in computer memory. A variable has a name and a value. The program can change this variable value. Variables are used in programming to keep track of things that can change while a program is running.

Key Learning

- To understand that Python is a text-based coding language and enter simple commands.
- To use Python to perform mathematical calculations.
- To be able to use repetition and Python library functions.
- To understand how Python in Pieces can be used to program a graphical user interface.



Key Questions

- What are the benefits of using a text-based language like Python?
- What are some examples of functions available in Python?
- What is a 'for loop'?

Key Images

```
print ("Hello World")
```
Outputting a String to the screen

```
print("What is 138 + 456?")
print(138 + 456)
```
Outputting a String and outputting the sum of two integers

```
for i in range(10):
    print("Python is fun!")
```
A 'for loop' that repeats a string output ten times

```
from time import sleep
alien.x = 540
alien.y = 460
alien.up()
sleep(1)
```
Code to change the position of a sprite

```
from time import sleep
for clock in range(8):
  print("tick")
  sleep(1)
  print("tock")
  sleep(1)
```
A 'for loop' that uses the sleep command to control print output

Syntax Rules

( ) round brackets after a function name

" " quotes around a string

print lower case for function names

Maths Tips

Operator	Name	Example	Answer
*	multiply	4*2	8
/	divide (normal)	4/2	2
//	divide (integer)	5//2	2
%	divide (remainder)	5*2	1