



CAROLINE HASLETT KNOWLEDGE ORGANISER

COMPUTING

YEAR 6 AUTUMN 2

PYTHON PROGRAMMING



VOCABULARY

Programming language	A set of rules for instructing a computer to perform specific tasks
Interpreter	A program which translates high level language code to machine code and executes it
Program execution	One of the actions performed by an interpreter. Execution means doing the actions specified by the machine code
Programming environment	The tools humans use to create programs
Variable	A storage location with a name. The data in a variable can be changed after being initially set
Assignment	A statement in a programming language used to set or reset the data stored in a storage location identified by a variable name
Syntax error	An error that has occurred because the programmer has not followed the rules of the programming language, they're using
Logical error	When a program does not behave in the way that it should, even though the programmer has followed the rules of the language
Arithmetic expression	A mathematical operation, for example, 10+5
String	A sequence of characters, for example "Hello world"
Iteration	One of the three basic programming constructs. A selection of code that can be repeated either a set number of times (count-controlled) or a variable number of times based on the evaluation of a Boolean expression (condition-controlled).
Comparison operator	Used to compare two expressions

SKILLS

- Use block based python programming.
- Use text based programming.
- 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.
- Use variables in programming.

```

1 print("Heyo guys!")
2 import time
3 time.sleep(2)
4 print("Wanna try and role 2 dices?")
5 import time
6 time.sleep(2)
7 print("Slay or may?(yes or no?)")
8 import time
9 time.sleep(2)
10 print("Well alrighty!That was a good choice!")
11 import random
12 import time
13 min=0
14 max=20
15 dice=random.randint(min,max)
16 dice2=random.randint(min,max)
17 import time
18 time.sleep(2)
19 print("I am a virtual dice...I will let you know your dice fate. loading dice....")
20 import time
21 time.sleep(4)
22 print("The dice is just finishing its load.Please wait for your roll to finish")
23 import time
24 time.sleep(4)
25

```

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Heyo guys!
Wanna try and role 2 dices?
Slay or may?(yes or no?)
Well alrighty!That was a good choice!
I am a virtual dice...I will let you know your dice fate. loading dice....
The dice is just finishing its load.Please wait for your roll to finish
You have rolled a 4and a15
You're total is ...
19

By Aroush

KEY FACTS

- Python is a popular programming language.
- It is used for:
 - web development (server-side),
 - software development,
 - mathematics,
 - system scripting.
- The print function is used to write output to the screen. print takes one or more arguments (strings or variables between the brackets) and writes the data to the screen.
- Variable assignments are not equations. Variable assignments are instructions for the computer. This means that the data stored in a variable can change throughout the runtime of the program.
- When you want to generate a random number in your program you can make use of the random library.
- An if statement can be used to implement selection in Python. It is optionally followed by an elif and/or and else statement.
- A while statement can be used to repeat a section of code until a condition becomes false.