



Subject: Computing
Topic: Python

Summary of key information:

Operator	Definition		
Exponentiation	Raises a number to a power eg: 2**3 or 2 ^3		
Quotient/DIV	Gives a whole number after division		
Remainder/MOD	Gives the remainder after division		
==	Is equal to	!=	Is not equal to
<	Is less than	>	Is more than

Data Type	Definition
String	Text eg: "Hello"
Integer	Whole number eg: 32
Float/ Real	Decimal number eg: 1.2
Boolean	Two values eg: true or false
Character	A single character eg: b

KEYWORDS	
Word	Meaning/Description
Python	Python is a text based programming language that allows you to create programs and applications.
Variable	Variables are containers for storing data.
Comments	Programmers used comments to help explain the code. The symbol for comments is #
For loop	A for loop is used to repeatedly execute a set of statements until the end of sequence is reached.
If statement	If statements are used for decision making programs. An if statement will run the code only when the IF condition is true.
Logic errors	Logic Errors occur when the program runs without crashing, but produces an incorrect result. The error is caused by a mistake in the program's logic.
Run time error	It is an error that occurs when the wrong data type is used in a program.

Key terms: IDE, Library, Shell, IDLE, Loop, Iteration, Variable, Identifier

Homework this half term - to help prepare for your end of half term multiple choice quiz.

How do I use this to help me revise? Guidance and advice on how to use your knowledge organiser!



COLLECTIVE MEMORY



Model IT

Summary of key information:

Syntax Errors occur when the translator doesn't understand something because you haven't followed the rules of the programming language

Logical Errors occur when the translator is able to run the code, but the program does something unexpected

Final testing occurs after the program has been developed. It is checked against the customer's requirements and, if successful, is signed off.

Iterative testing occurs as the program is being developed to ensure that the final product meets the user needs

Types of Validation

Range check	Checks that a value is not too big or too small
Presence check	Checks that data has been entered
Look-up Table	Checks that a value appears in a list of accepted values
Length Check	Checks that the data is the correct length

Design Conventions

Comments	Useful for explaining what key features of a program do
Indentation	Used to separate different statements in a program
Readability	Variables and Function should have sensible names

Programming Constructs

Sequencing	Selection	Iteration
Lines of code, which run one after another without branching or looping	Code which branches as a result of logical conditions	Code which is repeated a set number of times or until a condition is met