

Subject: Computing

Topic: Algorithms/ Flowcharts/ Pseudocode

Summary of key information:

•What is an Algorithm?

- An algorithm is a plan, a logical step-by-step process for solving a problem. Algorithms are normally written as a flowchart or in pseudocode.
- The key to any problem-solving task is to guide your thought process. The most useful thing to do is keep asking 'What if we did it this way?' Exploring different ways of solving a problem can help to find the best way to solve it.

•What is a Flowchart?

- A flow chart is a diagram that shows a process, made up of boxes representing steps, decision, inputs and outputs.
- It is a diagram that represents a set of instructions. Flowcharts normally use standard symbols to represent the different types of instructions. These symbols are used to construct the flowchart and show the step-by-step solution to the problem.

•What is Pseudocode?

- Pseudocode is a method of writing up a set of instructions for a computer program, using plain English. This is a good way of planning a program before coding.
- Pseudocode is not a programming language, it is a simple way of describing a set of instructions that does not have to use specific syntax.

Key terms: Algorithm, Flowchart, Pseudocode, Terminator, Decision

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



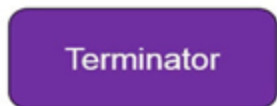
Model IT

Summary of key information:

Flowchart Symbols

Flowcharts are used to illustrate algorithms in order to aid in the visualisation of a program.

Flowcharts are to be read top to bottom and left to right in order to follow an algorithms logic from start to finish. Below is an outline of symbols used in flowcharts.



Terminator

Terminator

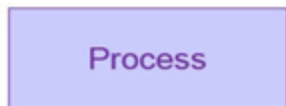
Used to represent the Start and end of a program with the Keywords **BEGIN** and **END**.



Decision

Decision

Used to split the flowchart sequence into multiple paths in order to represent **SELECTION** and **REPETITION**.



Process

Process

An instruction that is to be carried out by the program.



Input / Output

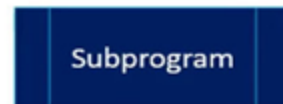
Input / Output

Used to represent **data entry** by a user or the **display** of data by the program.



Arrow

Indicates the flow of the algorithm pathways.



Subprogram

Subprogram

References another program within the program.

Tasks to complete in preparation for your end of half term multiple choice quiz are:

TASK 1:

Define key terms associated with Algorithms?

TASK 2:

Design a flowchart for a step of steps that you follow e.g. Making a sandwich.



Head over to Google classroom or use your revision guide to find other activities to help you extend and secure your knowledge.

