

Algorithms

Year 7 | Theme 3

Knowledge Organiser

FLOWCHART SYMBOLS

| Shape | Name | Description |
|-------|-----------------------|---|
| | Terminator | Used at the start or end of a flowchart |
| | Input / Output | Used to represent the input or output of data in a process |
| | Decision | Used when a decision or choice must be made |
| | Process | Used to indicate a process or calculation being carried out |

Algorithm - a sequence of steps/instructions that can be followed to complete a task.



A set of commands are repeated a certain number of times
In programming this is known as a FOR loop



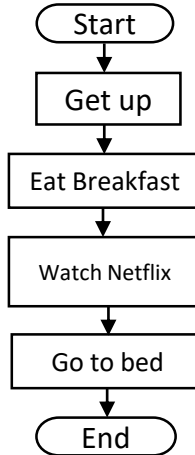
A set of commands are repeated until a condition is true.
In programming this is known as a WHILE loop

Algorithms

Sequence

In a sequence structure, an action or event leads to the next in a predetermined order.

Tasks that are carried out step by step in sequence

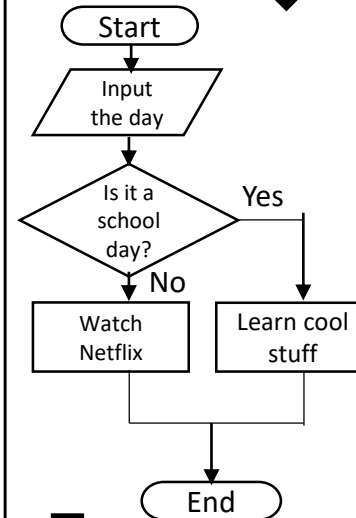


Flowcharts

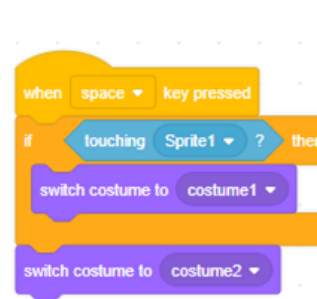
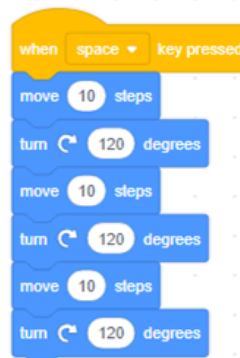
Selection

A question is asked, depending on the answer the program takes one, two or more courses of action.

A decision needs to be made before the next step can be carried out



Scratch



Iteration

A process wherein a set of instructions are repeated in a sequence a set number of times or until a condition is met.

Certain tasks are repeated until a certain condition is met.

