

KEY VOCABULARY		EXAMPLES																
Computer System	Made up of hardware and software that work together to process data.																	
Hardware	The physical parts of the computer system - the parts you can touch.																	
Software	The programs or apps that can be run on a computer system .																	
Peripheral	External hardware connected to a computer.																	
Input Device	A peripheral used to transfer data from the outside world into a computer system.																	
Output Device	A peripheral used to transfer data out of a computer system.																	
Storage Device	An item of hardware on which data is stored.																	
Cloud	The use of the Internet to store files.																	
Binary	A counting system using base-2 consisting of 0s and 1s.	<table border="1"> <tr><th>128</th><th>64</th><th>32</th><th>16</th><th>8</th><th>4</th><th>2</th><th>1</th></tr> <tr><td>0</td><td>1</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>1</td></tr> </table>	128	64	32	16	8	4	2	1	0	1	1	0	1	0	1	1
128	64	32	16	8	4	2	1											
0	1	1	0	1	0	1	1											
Denary	A number system using base-10. Also known as decimal - our every day number system.	<table border="1"> <tr><th>1000</th><th>100</th><th>10</th><th>1</th></tr> <tr><td>3</td><td>4</td><td>9</td><td>7</td></tr> </table>	1000	100	10	1	3	4	9	7								
1000	100	10	1															
3	4	9	7															

DENARY → BINARY CONVERSION

Convert the denary value 200 into 8 bit binary.

128	64	32	16	8	4	2	1	
1	1	0	0	1	0	0	0	200
								72
								8
								0

Start →

BINARY → DENARY CONVERSION

Convert the 8 bit binary value 10110001 into denary.

128	64	32	16	8	4	2	1
1	0	1	1	0	0	0	1
128 + 32 + 16 + 1 = 177							

ADDING 2 BINARY NUMBERS TOGETHER

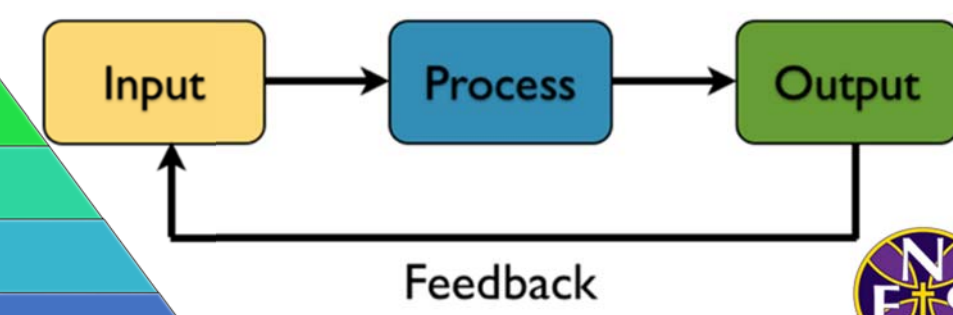
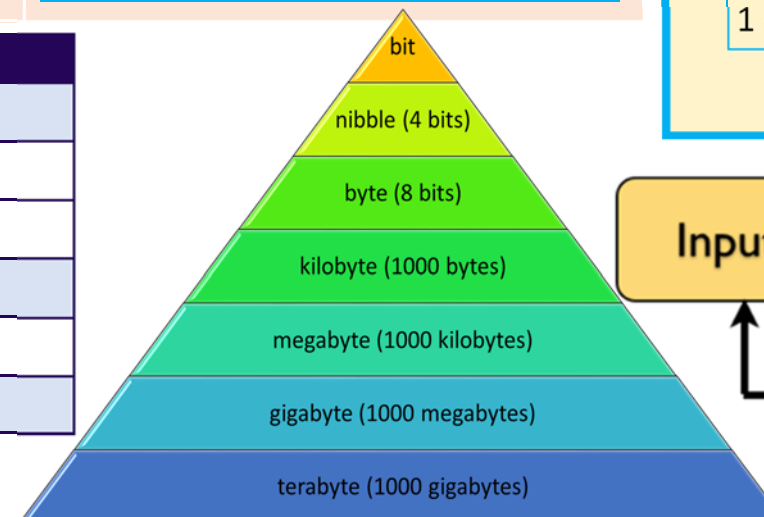
Rules
0 + 0 = 0
0 + 1 = 1
1 + 1 = 0 carry 1
1 + 1 + 1 = 1 carry 1

1	0	1	1	0	0	0	1
0	0	1	1	1	1	0	0
1	1	1	0	1	1	0	1
	1	1					

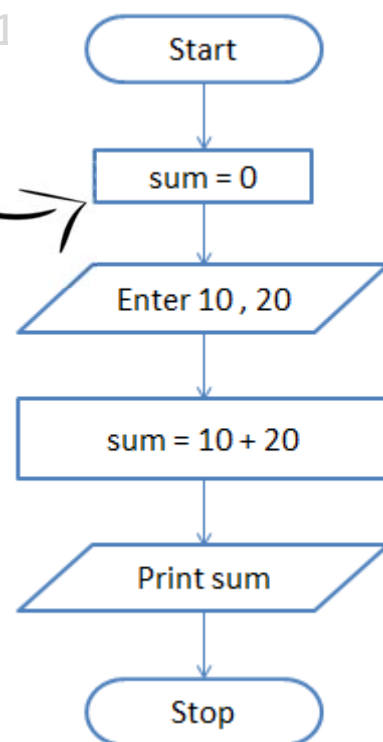
← Start

Key Objectives

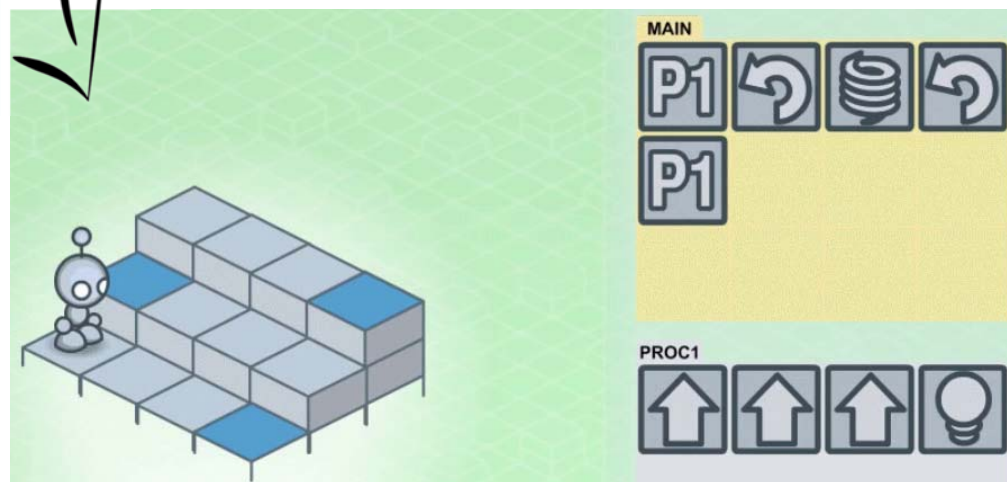
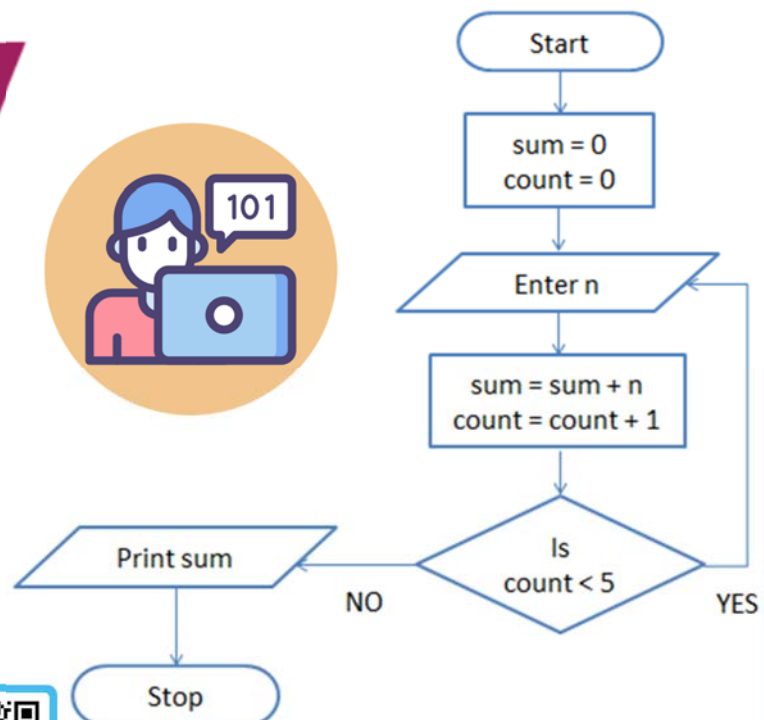
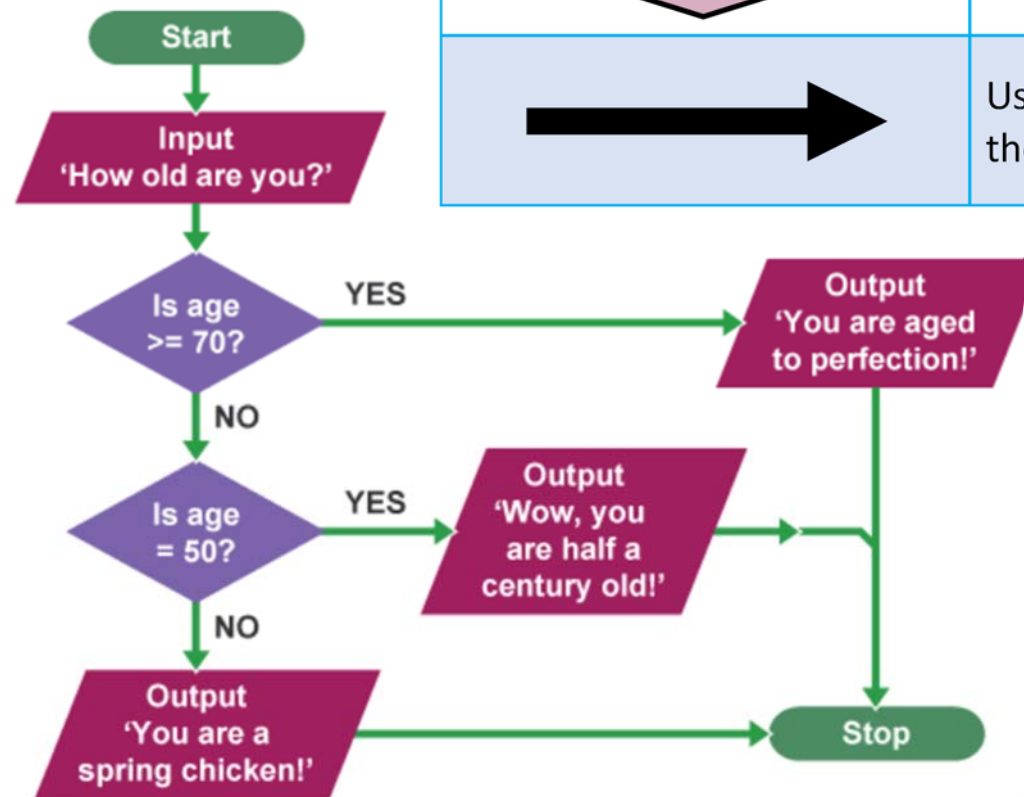
Identify a number of input, output and storage devices.	
Describe the difference between hardware and software.	
Describe the units of storage from a bit to a megabyte.	
Be able to convert denary numbers into binary numbers.	
Be able to convert binary numbers into denary numbers.	
Be able to add up two binary numbers together.	



Key Vocabulary	
Algorithm	A set of rules or instructions to be followed.
Flowchart	A graphical way of showing an algorithm.
Mimic	In Flowol, a simulation of a real world environment.
Selection	Deciding what code to run based on a decision or answer to a question. E.g. an IF statement.
Sequence	A set of instructions that are completed in the exact order that they are written.
Iteration	Where a set of instructions is repeated . E.g. a WHILE loop, FOR loop and REPEAT UNTIL loop.
Instruction / Statement	A command that the programmer gives to the computer.
Input	Data that is given to the computer or program to then use.
Output	Information that is provided by the computer or program.
Procedure	A group of instructions grouped together that can be used by the main program.
Variable	A name given to a value in a program that can change when the program is running.



Flowchart Symbols	
	Used at the start and end of a flowchart.
	Controls all the inputs and outputs.
	General instructions and calculations carried out by the computer.
	Where a question/decision is asked. Must have a 'Yes' and 'No' output.
	Used to connect flowchart symbols to show the direction of flow in the program.



Key Objectives	
Identify and describe the use of the 5 flowchart symbols.	
Follow and draw a simple flowchart involving a decision.	
Follow and draw a flowchart involving a loop.	
Follow a written algorithm, arriving at the correct result.	

