

# Key Stage 3 Computing and ICT.

All knowledge organisers are hosted in the ICT and Computing department website which can be accessed directly via the link http://exmouthcollege.moodle.webanywhere.co.uk/

# Year 9

Effective digital working practices Knowledge Organiser Data representation Knowledge Organiser Block structured programming Knowledge Organiser Software Knowledge Organiser Hardware Knowledge Organiser Boolean logic Knowledge Organiser Text based programming Knowledge Organiser Computational thinking Knowledge Organiser Spreadsheets Knowledge Organiser Networks and website design Knowledge Organiser Computer Graphics Knowledge Organiser



# **APPLICATION SOFTWARE**

An *application* is any program, or group of programs, that is designed for the end user.

x	P	w
Microsoft	Microsoft	Microsoft
Excel	PowerPoint	Word



Google

Chrome

# SYSTEM SOFTWARE

*System software* helps run and maintain the computer. It includes the operating system, drivers and utility software.



SPREADSHEETS					
'*' multiply	AUTOSUM	Format	Row		
'/' divide	AVERAGE	Formula	SUM		
'-' subtract	Column	Labels	Validation		
'+' add	COUNT	MAX	VLOOKUP		
'=' equals	COUNTIF	MIN	Workbook		
Alignment	Data	Number	Worksheet		

•	
	•••

**KEYWORDS** 

Digit	Interactive	Output
Digital	Interface	Processor
Environmental	Internet	Programming
Ethical	jpeg	program
Gigabyte	Kilobyte	Scanner
Graphic	Legislation	Server
Hardware	Megabyte	Software
lcon	Memory	Spreadsheet
Input	Network	Terabyte
	Digital Environmental Ethical Gigabyte Graphic Hardware Icon	DigitalInterfaceEnvironmentalInternetEthicaljpegGigabyteKilobyteGraphicLegislationHardwareMegabyteIconMemory





MULTIPLES	OF BY	TES	Boolean
Decimal	Binary		Used whe
<b>Bit</b> Short for binary digit. a single binary value	Kibibyte (KiB) A measure of storage equal		only two Yes/no, 1
of either 1 or 0	to 1024	bytes (10 <sup>3</sup> )	Condition
Nibble Half a byte,	Mebibyte (MiB) A measure of		Somethin being TRI
4 bits		ge equal 4 KB (10 <sup>6</sup> )	Data Typ A classific
Byte A measure of storage equal 8 bits	<b>Gibibyte (GiB)</b> A measure of storage equal to 1024 MB (10 <sup>9</sup> )		tells the o program data (e.g. Integer o
equal 8 bits	to 1024	MB (10 <sup>2</sup> )	ELSE
Kilobyte (KB) A measure of storage equal to 1000 bytes	<b>Tebibyte (TiB)</b> A measure of storage equal to 1024 GB (10 <sup>12</sup> )		Code to r selection
			Float (or
Megabyte (MB) A measure of	Numbers		Used for fractiona
storage equal to 1000 KB	Binary	Denary	
	0000	0	
Gigabyte (GB)	0001	1	IF (IF THE
A measure of	0010	2	Using que
storage equal to 1000 MB	0011	3	TRUE or F
Taughuda (CD)	0100	4	Integer A whole r
<b>Terabyte (GB)</b> A measure of	0101	5	negative
storage equal to 1000 GB	1111	15	zero

# PROGRAMMING

## Iteration

d where data is restricted to / two values: True/False, /no, 1 or 0

#### dition

nething that is evaluated as ng TRUE or FALSE

## a Types

assification of data which the computer how the grammer intends to use the a (e.g. interpret binary as an ger or String)

e to run when none of the ctions match

## at (or Real)

d for number that contain a tional part

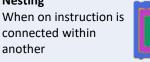
## F THEN // IF THEN ELSE) ng questions that evaluate to IE or FALSE

#### ger

hole number. Includes ative whole numbers and

## Uses a loop in a program to repeat something or execute a set of statements multiple times

## Nesting



# Selection

A question to decide which branch of code to execute

## Sequence

An action leads to the next ordered action in a predetermined order

#### String

Alpha-numeric characters from the alphabet of the machine: characters can be letters – ABC, digits – 123 and special symbols - !^ etc

## SWITCH (//CASE) Using a value to decide what code to follow or not

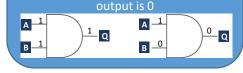
# **COMPUATIONAL LOGIC**

#### **Logic Gates**

Logic gates have one or two inputs that can be turned on or off, the output from the gate will vary depending on the type of logic gate

## AND Gate

An AND gate usually has two inputs. AND tells us that both Input A AND Input B have to 1 (or ON) in order for the output to be 1. Otherwise



## **OR Gate**

An OR gate has two inputs. OR tells us that EITHER input A OR Input B has be to 1 (or ON) in order for the output to be 1. Otherwise the output is 0



## **NOT Gate**

A NOT gate has just one input. NOT tells us that Input A has to 0 (or OFF) in order for the output to be 1. Otherwise the output is 0



and Definitions and Computing/ Keywords <u>C</u>  $\sim$ Year