

Computing Year 7 Autumn Term 1: E-Safety



Read



Quiz

*** Passwords

Safe password should have:

Number

Symbol

Letters

Certain number of characters

Spreadsheet

Use: For doing calculations

Works: Using cell referencing such as B4

Formulas: always start with Equals =B5+C6

Advantage: Calculations are done quicker and numbers in can be updated formulas

	A	B	C	D	E	F
1	/	Division	50	/	10	7.5
2	*	Multiplication	10	*	8	80
3	+	Addition	50	+	10	60
4	-	Subtraction	10	-	5	5
5						



Key Terms

Digital Footprint: refers to the trail of data you leave when using the internet

Social Networks: a website that allows people with similar interests to come together and share information, photos and videos

Cyber Bullying: bullying online and any form of anti-social behavior over the internet or via a mobile device

PowerPoint: Software that allows you to create digital presentations







Word: You use a word processor for documents that are mainly text such as letters, essays and reports.

You can change fonts, text sizes, emphasise headings, highlight text or make it bold, italic or underlined

Excel: Spreadsheet software that allows you to perform calculations and graphs



Shortcuts

 Open CTRL + O	 Save CTRL + S	 Print CTRL + P
 Cut CTRL + X	 Copy CTRL + C	 Paste CTRL + V

How Stay Safe



ZIP IT

Keep your personal stuff private and think about what you say and do online.



BLOCK IT

Block people who send nasty messages and don't open unknown links and attachments.



FLAG IT

Flag up with someone you trust if anything upsets you or if someone asks to meet you offline.



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Watch

Computing Year 7 Autumn Term 2: Data Representation

Quiz



Data Rep.

Data Representation refers to the form in which data is stored, processed, and transmitted. Devices such as smartphones, iPods and computers all create files (pictures, audio and video) in digital formats which can then be processed by electronic circuitry on the device to store it and access when the use requires



Units

8 bits	1 byte
1024 bytes	1 kilobyte
1024 kilobytes	1 megabyte
1024 megabytes	1 gigabyte
1024 gigabytes	1 terabyte
1000 Terabyte	1Petabyte



Key Terms

Bit: the smallest unit of data that a computer can process and store

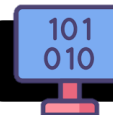
Byte: a unit of data that is eight binary digits long. A byte is the unit most computers use to represent a character such as a letter, number

Kilobytes: A 1,000 bytes of information can be saved in the folder or that is how big the document is

Binary: a number system that only uses two digits: 1 and 0. All information that is processed by a computer is in the form of a sequence of 1s and 0s. Therefore, all data that we want a computer to process needs to be converted into binary.

Denary: Normal Base 10 numbers

ASCII: A character set where each key on a Keyboard is given a binary value so the computer understands what to do when the key is pressed.



Binary

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

$$1000110 \\ = 64 + 4 + 2 = 70$$

ABC

ASCII

Binary Number	ASCII	Binary Number	ASCII
33	!	76	L
46	.	77	M
63	?	78	N
64	@	79	O
65	A	80	P
66	B	81	Q
67	C	82	R
68	D	83	S



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Watch

Computing Year 7 Spring Term 1: Graphics

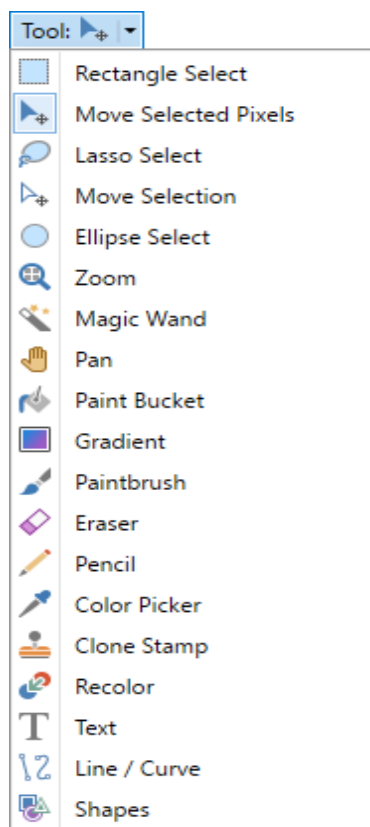
Quiz



Graphics

Graphic design is the art or skill of combining text and pictures in advertisements, magazines, or books.

Tools



Key Terms

Bitmap: An image made up of pixels. This type of image loses quality if its width and/or height are increased.

Vector: Vector graphics are based on mathematical relationships with control points that make up the image. Vectors are used for cartoon images or logos

Pixel: One individual unit or dot which makes up an image

Editing: Changing the way an image looks

Composition: Different parts of images put together, putting images onto one image

Audience: Who your graphical work is designed for

Layout: How the page is set out

Mood board: A group images put together about a topic

Repurpose

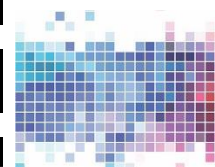
This is changing or editing an image in some way. This could either be hanging the colour, making it black and white, adding things to an image or changing something within the image.

Bitmap v Vector

Bitmap images are real digital images they are made up of pixels which are tiny coloured dots.

Vector images are used for cartoon images and logos they are made by mathematical co-ordinates.

When a Bitmap image is resized it goes blurry when a vector image is resized the quality remains the same.



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Read

Computing Year 7 Spring Term 2: Computers

Quiz



Inputs

Allow the user to interact with a computer system.

e.g. Mice, Keyboard, Touchscreens and Touch Pads, Microphones, Cameras, Webcams and Scanners.

Any device that sends data to a computer is an input device.

Outputs

These devices are responsible for returning the processed data back to you.

e.g. Monitors, Printers, Buzzers, Speakers.

Output devices do more than just display information visually – some can output sounds and some can move.



Key Terms

Hardware: The physical parts of the computer which you can touch they include mouse, printer and motherboard

Software: The programs that run on a computer, this might be PowerPoint, Word, Roblox or your internet browser Google Chrome

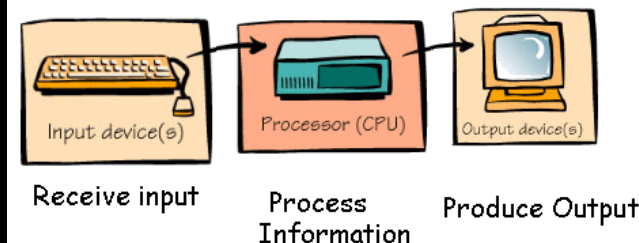
Peripheral: Is anything that you can add onto a computer system such as a Mouse, Keyboard or Printer

Computer: A computer is a machine or device that performs processes, calculations and operations based on instructions provided

Storage: This is the place where you save you work on a computer, it can be in many different formats such as Hard Drive or USB Flash drive. Different storage devices have different sizes

Computer

What Computers Do



Units of Data

Data is stored in Bytes...

Bit - A single binary digit (1 or 0)

Nibble - 4 bits

Byte - 8 bits

Kilobyte - 1000 Bytes

Megabyte - 1000 Kilobytes

Gigabyte - 1000 Megabytes

Terabyte - 1000 Gigabytes



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Try

Computing Year 7 Summer Term: Programming

Quiz



Scratch

Scratch is an example of a visual programming language. It's designed to be accessible to people who have never done any programming before, and it's very useful for making simple games.

To start creating code, select what you want the code to apply to (usually a sprite), click the code tab and start dragging the blocks from the block palette. Each joined up bit of code is called a script. You can click on a script to run it. A script should normally start with a hat block that says when to run it



Key Terms

Programming: writing computer code to create a program, to solve a problem

Visual Programming: Programming using graphical blocks rather than text

Script: The set of instructions that is used to program in Scratch is called a script

Sequence: Sequence means to set down instructions one after another for the computer to run

Algorithm: This sets out a sequence of steps, that, when ran, will carry out a specific task.

Loop: Repeatedly doing a piece of code

Selection: Choosing between possible actions

Variable: A piece of data that you can alter

Blocks of code



Code is repeated 10 times



Sprite moves forward



Sprite turns around



Sprite goes to a certain point



When Green flag is clicked Script will run

Errors

If there is an error in your code it will either not work, or work but not in the way that you want it to. This could be the smallest of errors



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