

COMPUTING CURRICULUM - Disciplinary Knowledge

EYFS	
DISCIPLINARY KNOWLEDGE	<ol style="list-style-type: none"> 1. Begin to use simple computer programs. 2. Begin to see how we can use technology to help us to find out about and record the world around us. 3. Begin to understand how adults can help us to stay safe when using technology online.
BREADTH	

KS1		
DISCIPLINARY KNOWLEDGE	<ol style="list-style-type: none"> 1. Create and debug simple programs. 2. Use technology purposefully to create, organise, store, manipulate and retrieve digital content. 3. Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies. 	
BREADTH		
Word (Year A)	Algorithms/Spheros. (Year A&B)	PowerPoint (Year B)

LKS2						
DISCIPLINARY KNOWLEDGE	<ol style="list-style-type: none"> 1. Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems. 2. Use search technologies effectively, appreciate how results are selected and ranked. 3. Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact on the internet or other online technologies. 					
BREADTH						
Word (Year A&B)	Simple Programs (Year A&B)	Algorithms/Spheros (Year A&B)	PowerPoint (Year A&B)	Sequences (Year A&B)	Various Forms of Input & Output (Year A&B)	Communication on the Internet (Year A&B)

UKS2							
DISCIPLINARY KNOWLEDGE	<ol style="list-style-type: none"> 1. Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. 2. Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content 3. Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact on the internet or other online technologies and be proactive in keeping peers technologically safe. 						
BREADTH							
algorithms/spheros (Year A and B)	simple programs (Year A and B)	PowerPoint (Year A and B)	Word (Year A and B)	Sequences (Year A and B)	various forms of input and output (Year A and B)	communication on internet (Year A and B)	collect, analyse, evaluate and present data (Year A and B)

Computing: Progression of Skills and Techniques

	KS1	LKS2	UKS2
E-SAFETY	<p>Think before you share (Be Internet Sharp)</p> <ul style="list-style-type: none"> recognise what your personal details are and know that personal details should be kept private. <p>Check it's real (Be Internet Alert)</p> <ul style="list-style-type: none"> understands that the internet is populated by people; people can lie in person but can also lie on the internet. <p>Protect yourself (Be Internet Safe)</p> <ul style="list-style-type: none"> understands the dangers or strangers and that strangers may lie about their identity on the internet. Understands that at their age, parents should know what websites, apps and software children are accessing online as some are not safe. <p>Respect each other (Be Internet Kind)</p> <ul style="list-style-type: none"> Knows and practises the importance of kindness in everyday life and is beginning to understand this is just as important online. <p>When in doubt, discuss (Be Internet Brave)</p> <ul style="list-style-type: none"> can identify trusted adults to share their worries or concerns with. if they are informed of a concern or worry by a friend, they know to share it with an adult. knows to tell a trusted adult if they see anything scary or worrying on the internet. 	<p>Think Before You Share (Be Internet Sharp)</p> <ul style="list-style-type: none"> understand the term 'digital footprint', knowing that what is posted on the internet can be seen by all and remains for the future. <p>Check it's for real (Be Internet Alert)</p> <ul style="list-style-type: none"> understands that online content isn't always honest or reliable and is sometimes even deliberately designed to steal personal information <p>Protect yourself (Be Internet Safe)</p> <ul style="list-style-type: none"> Understands that information put online or accessed online is not always safe and/or private Knows that the caution we employ in reality, is also applicable to online relationships. <p>Respect each other (Be Internet Kind)</p> <ul style="list-style-type: none"> Knows and practises the importance of kindness and empathy online. Knows how to respond to negativity and hurtful behaviour. <p>When in doubt, discuss (Be Internet Brave)</p> <ul style="list-style-type: none"> can identify trusted adults to share their online worries or concerns with. If they are informed of an online concern or worry by a friend, they know to share it with an adult. knows to talk to a trusted adult if they come across anything that is 'confusing', 'tricky' or unkind. Recognises signs that their account may have been hacked and knows what to do if this occurs. Recognises signs of overfriendliness on the internet. 	<p>Think Before You Share (Be Internet Sharp)</p> <ul style="list-style-type: none"> understands the term 'digital footprint', knowing that what is posted on the internet can be seen by all; remains for the future understands that 'digital mistakes' can have a lasting impact on how others see them or their online reputation. <p>Check it's real (Be Internet Alert)</p> <ul style="list-style-type: none"> understands that online content isn't always honest or reliable and is sometimes even deliberately designed to steal personal information. knows ways to stay safe online by spotting the clues that sometimes may be suspicious, misleading or a scam. <p>Protect yourself (Be Internet Safe)</p> <ul style="list-style-type: none"> Understands how to build a strong password Knows to always adjust the settings of apps and software to control what information they are sharing. Knows that some users are not trustworthy and will try to 'trick' or 'bribe' you into trusting them. <p>Respect each other (Be Internet Kind)</p> <ul style="list-style-type: none"> Knows and practises the importance of kindness and empathy online. Demonstrates ways to build positive and healthy online relationships <p>When in doubt, discuss (Be Internet Brave)</p> <ul style="list-style-type: none"> Knows to talk to a trusted adult if they are unsure if something is a scam, or suspect that they have fallen for one. Knows to talk to a trusted adult if they receive a message from a stranger or 'acts of kindness' from a familiar person. Knows to tell an adult if they think they have shared something online that they shouldn't have.
WORD	<ul style="list-style-type: none"> Two hands typing Enter key to start a new line when appropriate Shift for capital letters Shift for symbols Save work Backspace to edit work Delete button to edit work Arrow keys to move around work Saving a document using file and save as 	<ul style="list-style-type: none"> Undo and redo buttons Select a single word/ section of work using a mouse and/or keypad Select a section of text using the keyboard (Shift and arrow keys) Change to style, size and colour of font accordingly Use bold, italics and underlining appropriately Positioning text using the L, R and centre icon Using the automatic spell checker to edit spellings Positioning a text box Using the shape tool to resize a variety of images and pictures Opens and saves word independently Chooses suitable names for pieces of work To use control c to copy and control v to paste Use control and S to save work 	<ul style="list-style-type: none"> Insert and manage tables within a document, adding titles colour and distributing columns and rows as required. Change the orientation of the page Adjust margins appropriately Add columns into a document Insert images and shapes into the text. Draw simple diagrams e.g. flow charts or Venn diagrams Select the correct tool to change document from landscape to portrait To be able to use the correct tool for wrapping text Insert bullet and number points wherever appropriate Use control key to insert a variety of symbols £!
SIMPLE PROGRAMS	<ul style="list-style-type: none"> Clicking on images to move them around the screen Typing a password and keeping it confidential Open and close documents Saving a document using file and save as 	<ul style="list-style-type: none"> Using the automatic spell checker to edit spellings Inserting a picture into a document and resizing it Using the shape tool to resize a variety of images and pictures Opens and saves word independently Chooses suitable names for pieces of work 	<ul style="list-style-type: none"> Using a variety of drop down menus to format work Use control + alt + delete when there is a programme error e.g. if the programme has frozen for task manager. Use logical reasoning to predict the behaviour of simple programs
ALGORITHMS	<ul style="list-style-type: none"> Typing a password and keeping it secret Direct using arrows to give instructions to an object Saving a document using file and save as Understand what algorithms are Create simple programmes 	<ul style="list-style-type: none"> Open and close programme independently Chooses a suitable name to name their work Can explain to an adult or peer how they have made their algorithm Understand that algorithms are implemented as programs on digital devices 	<ul style="list-style-type: none"> Create multistep instructions within an algorithm Understand that programs execute by following precise and unambiguous instructions Design programs that accomplish specific goals
POWERPOINT	<ul style="list-style-type: none"> Clicking on images to move them around the screen Change font type and colour Change background and slide style Alter size of images and text 	<ul style="list-style-type: none"> Positioning text using the L, R and centre icon Using the automatic spell checker to edit spellings Positioning a text box Using the shape tool to resize a variety of images and pictures 	<ul style="list-style-type: none"> Create a page layout suitable for the task and the reader Use tools to format text in all ways: changing colour, font, size, bold, underlined and italic. Insert bullet and number points wherever appropriate
SEQUENCES		<ul style="list-style-type: none"> To understand how search engine results are ranked 	<ul style="list-style-type: none"> To understand how search engine results are ranked and understand the appropriateness of each article. Select on articles which are trusted and relevant.
VARIOUS FORMS OF INPUT AND OUTPUT		<ul style="list-style-type: none"> Work with some forms of input e.g. keyboard, mouse, camera and microphone Work with some forms of output e.g. speakers and printer Use a variety of software to accomplish given goals 	<ul style="list-style-type: none"> To work with a range of forms of input devices to enhance learning e.g. keyboard, mouse, camera, microphone or physical sensors. To work with a range of forms of output devices e.g. printer, speaker or control of motor in physical systems.
COMMUNICATION ON THE INTERNET		<ul style="list-style-type: none"> Using the mouse to copy and paste images from other sources, such as google images and websites. Decide if a source is reliable before using the information Use relevant key words or "" to find specific information Recognise acceptable/unacceptable behaviour 	<ul style="list-style-type: none"> Understand the opportunities computer networks offer for communication Identify a range of ways to report concerns about content Recognise acceptable/unacceptable behaviour and know the procedures to report inappropriate content
COLLECT, ANALYSE, EVALUATE AND PRESENT DATA			<ul style="list-style-type: none"> Create a page layout suitable for the task and the reader Analyse a range of information using a range of programmes relevant to given task Evaluate a range of information using a range of programmes relevant to the given task. Record results using charts, tables, graphs or written reports Interpret data to feedback information wherever relevant and explain your findings clearly To present data as a group or as an individual Use information purposefully to create digital contents