	DIGITAL LITERACY	COMPUTER SCIENCE	INFORMATION TECHNOLOGY
EYFS (Early Learning Goals)	▪ Explain the reasons for rules, know right from wrong and try to behave accordingly ▪ Show sensitivity to their own and to others' needs. *Personal, Social and Emotional Development - Managing Self - Building Relationships	▪ Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity ▪ Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally. *Mathematics – Numerical Patterns	▪ Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function ▪ Share their creations, explaining the process they have used *Expressive Arts and Design - Creating with Materials ▪ Talk about the lives of the people around them and their roles in society. ▪ Know some similarities and differences between things in the past and now ▪ Describe their immediate environment ▪ *Understanding the World – Past and Present – People, Culture and Communities
NATIONAL CURRICULUM KS1	▪ use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about material on the internet or other online technologies	▪ understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions ▪ create and debug simple programs ▪ use logical reasoning to predict the behaviour of simple programs	▪ recognise common uses of information technology beyond school ▪ use technology purposefully to create, organise, store, manipulate and retrieve digital content
NATIONAL CURRICULUM KS2	▪ use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact	▪ design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts ▪ use sequence, selection, and repetition in programs; work with variables and various forms of input and output ▪ use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and program	▪ understand computer networks including the internet; how they can provide multiple services, such as the world-wide web; and the opportunities they offer for communication and collaboration ▪ use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content ▪ select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.

Links to NC and areas	Online Safety	Coding and Programming	Technology in our lives	Multimedia: Sound / Motion Text / Images	Data Handling

Computing is split into 5 different skill categories: **Online Safety**, **Coding and Programming**, **Multimedia**, **Technology in Our Lives** and **Date Handling**. Below is the progression of skills that children should learn from Reception until they leave us in Year 6. Due to mixed classes year 1 and 2, 3 and 4, 5 and 6 are taught over a 2 year programme.

ONLINE SAFETY						
RECEPTION	**YEAR 1**	**YEAR 2**	**YEAR 3**	**YEAR 4**	**YEAR 5**	**YEAR 6**
See themselves as a valuable individual.	Understand they need to follow certain rules to remain safe when online	Follow school rules when staying safe online.	Understand relationships online and face to face and the risks associated with these	Create safe screen names Understand ways of communicating online	Look at joining online groups and how this can affect us	Know how to safeguard their future
Build constructive and respectful relationships	Know what personal information is	Know to log out of applications when using them.	Know we can go online to buy and sell things	Understand advertisement and how this can be age appropriate	Know how apps and services can read and share personal information	Identify scams and phishing
Express their feelings and consider the feelings of others.	Know to speak to a trusted adult if they have concerns about anything online		Understand what an online identity is and that this can show what someone wants to and may not reflect the true person	Understand why people pretend to be someone they are not	Consider fake profiles and question if these are ok or not	Understand self-identity and how the media portrays people e.g. gender
Think about the perspectives of others.	Know how to use technology safely – using avatars, emojis and passwords.	Realise that not all websites are equally good sources of information – learn to ask questions	Understand the difference between beliefs, opinions and facts	Question and differentiate between beliefs, facts and opinions	Understand misinformation and disinformation	Explore fake news and how to deal with influencers
Work and play cooperatively and take turns with others	Recognise when something is wrong online and understand acceptable behaviour.	Explore what cyber-bullying means & what to do when they encounter it	Understand what bullying is and reflect on their and others' online behaviour	Reflect on kindness and unkindness through a range of media	Use online communication for the power of good	Understand bullying and how you can gain help with this and gather evidence

Form positive attachments to adults and friendships with peers	Understand that if I create something then it belongs to me.		Identify who owns content online	Consider copyrighting	Understand when it is acceptable to copy others	Acknowledge sources
Show sensitivity to their own and to others' needs	Understand the concept of a digital footprint.	Know that if they put information online it leaves a digital footprint or "trail" & they need to manage it so it's not hurtful	Stop and think before sharing online	Aware or protecting my online profile and how information can be found about me online	Know steps to take to protect myself online and how I can help my friends	Think before speaking and risk assess problems that may arise from rash or impulsive thinking
	Understand why limiting screen time is important and find activities that can help with this.		Explain why screen time and face to face needs a balance	Understand the importance of sleep	Understand the science of sleep	Reflect on how useful their screen time is

CODING AND PROGRAMMING						
RECEPTION	**YEAR 1**	**YEAR 2**	**YEAR 3**	**YEAR 4**	**YEAR 5**	**YEAR 6**
Describe a familiar route and discuss locations, using words like 'in front of' and 'behind'	Physically follow & give each other instructions to move around	Plan, generate and follow a sequence of instructions (actual and on-screen) to make something happen; or complete a given task	design a program (e.g. game) with a purpose	Decompose a program (e.g. game) into its parts.	Write down the steps required (an algorithm) to achieve the outcome that is wanted and refer to this when programming.	use logical reasoning to explain how some simple algorithms work
To notice patterns and arrange things in patterns.	Explore outcomes when buttons are pressed in sequences on a robot	Explore and create sequences of commands/instructions in a variety of programs/devices.	write a program with a sequence of instructions.	write a program that uses a repeat command and explain what the repeats in my program do.	Write a control program and create a control system	Predict the outputs for the steps in an algorithm
Notice and correct an error in a repeating pattern.	Begin to create an algorithm to achieve a specific purpose	Understand, write, use and improve algorithms	Talk about algorithms planned by others and myself	Solve open-ended problems using software such as finding efficient procedures to create shapes	Understand what a simulation is	Design, write and debug a simulation.

Continue, copy and create repeating patterns	Use the word debug to correct any mistakes when programming a floor robot	Understand what debugging is and begin to understand that you can develop strategies to help find errors.	Identify any problems and debug for desired effect	Begin to correct errors (debug) as they program devices & actions on screen, & identify bugs in programs written by others	Explain what a variable is	use variables in a program
Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity	Begin to predict what will happen for a short sequence of instructions in a program	Predict what will happen & test results	explain what an input device is and write a program that uses input from an input device	use logical reasoning to debug a program and explain this.	Identify difficulties & articulate a solution for errors in a program explain what selection is	write a program using selection

MULTIMEDIA						
RECEPTION	**YEAR 1**	**YEAR 2**	**YEAR 3**	**YEAR 4**	**YEAR 5**	**YEAR 6**
Explore paint, using fingers and other parts of their bodies as well as brushes and other tools.	Use a sound recorder to collect sounds	Create a soundscape by recording and layering up sounds	Use software to experiment with sounds and musical phrases	Create a piece of music using preselected tracks	Experiment with recording music and layering up the sound	Create a piece of music by layering up complementing musical phrases
Explore, use and refine a variety of artistic effects to express their ideas and feelings.	Take photos or videos using a device	Explore the effects of sound, music and graphics in animation and video	Create a short video Explore the use of subtitles in videos to help convey messages	Select photos, video footage and music effectively. Explore the use of added text to enhance a message on video	Develop skills using transitions and hyperlinks to enhance the stricture of presentations	Collect information and media from a range of sources (considering copyright issues) into a presentation for a specific audience
Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.	Add text and images to a template document using an image & word bank	Create own documents, adding text and images. Save work	Create & begin to edit presentation and word documents; experimenting with fonts, size and colour for emphasis & effect	Create & edit presentation and word documents; experimenting with formatting textboxes and pictures for emphasis & effect	Use sound, images, text, transitions and hyperlinks effectively in presentations	Discuss audience, atmosphere and structure of a presentation or video Use word and presentation documents confidently.

Share their creations, explaining the process they have used.	Use index fingers (left and right hand) on a keyboard to build words &sentences Know when & how to use the SPACE BAR to make spaces between words	Know when and how to use the RETURN/ ENTER key. Use CAPS LOCK to enter capital letters. Use DELETE & BACKSPACE buttons to correct text.	Become quicker at locating keys on the keyboard	Use the shift key to input punctuation and capital letters	Continue to develop keyboard skills	

TECHNOLOGY IN OUR LIVES						
RECEPTION	**YEAR 1**	**YEAR 2**	**YEAR 3**	**YEAR 4**	**YEAR 5**	**YEAR 6**
Explore how things work.	Recognise uses of technology in their homes and in their community	Begin to understand there are a variety of sources of information and begin to recognise the differences	Save work on the school network, on the Internet and on individual devices	Talk about the school network & the different resources they can access, including the Internet	Identify different parts of computing devices.	Describe different services provided by the Internet & how information moves around the Internet
Talk about the lives of the people around them and their roles in society *Jobs using computers*	Understand that there are online tools that can help them create and communicate	Begin to understand what the Internet is and the purposes that it is used for	Talk about the parts of a computer	Frame questions & identify key words to search for information on the Internet	Explain what the internet is.	Explain the difference between the internet and the WWW and how the internet provides access to the WWW.
Know some similarities and differences between things in the past and now *Use of technology now and in past*		Understand the different types of content on websites and that some things may not be true or accurate	Use appropriate tools to collaborate and communicate on-line	Consider reliability of information & ways it may influence you	Choose appropriate tools for communication and collaboration and use them responsibly; class blog and composing emails	Identify appropriate forms of online communication for different audiences; attaching items to emails and website building
			Use simple search tools and find appropriate websites	Explain how search engines select results.	Use effective strategies to search with appropriate search engines	Explain how search engines rank results

					Talk about the different elements on web pages	

DATA HANDLING						
RECEPTION	**YEAR 1**	**YEAR 2**	**YEAR 3**	**YEAR 4**	**YEAR 5**	**YEAR 6**
Collect information as photos	Take photographs, video and record sound to record learning experiences (Seesaw)	Contribute to and interpret a pictogram	Create and interpret a simple bar chart	Construct and interpret a branching database	Collect and record information using spreadsheets and databases	Use the whole data process – generate, process, interpret, store, and present information – realising the need for accuracy and checking plausibility
Take photographs, video and record sound to record learning experiences (Seesaw)	Look at how data is representing digitally	Ask questions and consider how they will collect information	Create a database and enter records	Change format of database cells to show currency, numbers and text	Carry out simple searches using a database	Carry out complex searches (e.g. using and/or; ≤ / ≥)
		Collect data, generate graphs and charts to find answers	Use a data logger to monitor changes and talk about the outcomes seen	Use a data logger to record and compare individual readings.	Solve problems and present answers using data tools	Identify and present results
		Save & retrieve the data to show to others			Analyse information and question data	Interrogate a database, refining searches to provide answers to questions

APPENDIX 1

BREAKDOWN OF SOFTWARE

Year 1 – 6

*See Appendix 2 for EYFS

Strand	Software	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
MULTIMEDIA	**Pic Collage**	Select photographs to add in Rearrange using pre-made template	Add text / stickers Rearrange photographs manually				
	Chatterpix Kids	Take a photograph Record a comment Playback	Add in graphics				
	MS Word			Format text: font, colour, and size Add in an image Type in text using upper and lower case Save work Use textboxes Use WordArt Format textboxes: Change colours of border and background	Format textboxes: Change width of border line Format pictures: layout, border, artistic effects.	Insert a table Use Smart Art	Add in a header and footer
	MS Powerpoint			Create a blank presentation Type in text Add a new slide Insert a picture Save Work Format text: font, colour, size Choose a design idea	Change backgrounds Add in animations Add in audio Hyperlink a website	Think carefully about the design aspect of a presentation.	

	Pages	Use the space bar to separate words Add in an image Rename work	Type in text using upper and lower case Format text: font, colour, and size Add in shapes Use textboxes	Format textboxes Format pictures	Insert a gallery Insert a drawing		
	Clips	Create a new project Add in an image Record voice	Add in graphics	Add in live titles Add in titles	Use Clips proficiently in other curriculum areas		
	IMovie			Use the trailer option and complete the storyboard with appropriate captions and pictures	Select photos or video footage needed to cover Add in titles		
	Garageband		Create a soundscape by recording children and layering up sounds (guided) Audio recorder tool	Use live loops to experiment with sounds	Create a song using the live loops tracks	Use the tracks set up and experiment layering up sounds.	Use the tracks set up and experiment with sounds and create a piece of music for a background video.

Strand	Software	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
HANDLING DATA	**J2 data**		Create a simple pictogram Interpret pictograms	Create a simple bar chart Interpret a simple bar chart	Create a branching database Interpret a branching database		
	Excel					Create a basic spreadsheet E.g. details of class, names, ages, hair colour, year group	Use a formula. Change properties of cell to money.
	Numbers			Create a database using the “form” tool Enter records.	Change the “type” for the cell formant e.g. number / currency	From a database provided filter data based on “equal to”	From a database provided select a table and filter data based on more filtering items. E.g. greater than, between
	Library Catalogue					Use a database to search for records	Use filtering to refine searches

Strand	Software	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
CODING AND PROGRAMMING	**Beebots / Code + Go Mouse**	Explore outcomes when buttons are pressed in sequences on a robot Input a simple algorithm to achieve a goal Debug if it goes wrong	Input a sequence Predict what will happen				
	Scratch Junior	Begin to use software to create movement & patterns on a screen	Plan and enter a sequence of instructions to achieve an algorithm, specifying distance & turn and drawing a trail				
	Scratch			Use repeat to achieve solutions to tasks Debug Create a game	Debug programs Create shapes	Write a control program	Design write and debug a simulation Use variables
	Swift Playgrounds (Learn to Code)					Write down the steps required (an algorithm) to achieve the outcome that is wanted and refer to this when programming. Identify difficulties & articulate a solution for errors in a program explain what selection is	use logical reasoning to explain how some simple algorithms work Predict the outputs for the steps in an algorithm

Strand	Software	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
TECHNOLOGY IN OUR LIVES	**Search Engines**	Use a search engine to find an image	Use a search engine to find information	Compare search engines Kiddle Swiggle Kidrex Google bing	Fine tune searches to get more appropriate results Explain how search engines select results.	Use effective strategies to search with appropriate search engines Boolean operators e.g. AND, OR	Explain how search engines rank results
	Email					Compose an email Type in an email address Send	Attach an item
	Blogging (Seesaw Blog)			Add posts to a blog	Attach items to a blog	Use a blog to spread kindness and for good	To comment on others work with kindness

Strand	Software	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
ONLINE SAFETY	Natterhub	See yearly overview	See yearly overview	See yearly overview	See yearly overview	See yearly overview	See yearly overview

APPENDIX 2
SUGGESTED SOFTWARE GAMES TO SUPPORT AREAS OF EYFS

Arts	Phonics	Mathematics	Understanding of World
CBeebies (App)	CBeebies (App)	CBeebies (App)	Trucks (App)
Topmarks (website) LINK	Hairy Phonics (App)	Barefoot Computing EYFS (website) LINK	
Draw and Tell (App)	Teach your monster to read (App)	Code-a-pillar (resource)	
	DDM Reading (App)	Bee-bots (resource)	
		Moose math (App)	
		Park Math (App)	
		Pet Bingo (App)	