WILLIAM LILLEY INFANT AND NURSERY SCHOOL

NATIONAL CURRICULUM

INTENT, IMPLEMENTATION, PROGRESSION AND ASSESSMENT

COMPUTING

INTENT

Our children learn to appreciate how computers can help them learn about, explore and change the world. They learn how technology supports in all aspects of life. Children begin to develop the skills which help them to make safe and respectful choices, communicate, create programs which bring about change, create and manipulate information in order to become active participants in a digital world.

IMPLEMENTATION

In EYFS, children are taught how technology supports everyday life and are encouraged to use their developing ICT skills to support their learning	Curriculum skills are progressive, using Purple-mash planning, resources and assessment to support this development	Cross curricular application of skills give children the opportunity to consolidate their understanding and become independent in their choices	Digital safety is taught within computing and PSHE curriculum, as children develop their understanding of how to be safe	Children use an online reading scheme which develops their technology skills whilst enhancing their reading
Clear progression of skills development for each computing element; such as progression of algorithms from EYFS remote controlled devices to computer based software in KS1	Technology is used as an integral part of lessons, both for staff and children; supporting with learning journeys and assessment	Suite of laptop computers used for discrete computer skill sessions across F2 and KS1	F2 children have independent access to computers to develop their own lines of enquiry	Computing after school club gives children the opportunity to develop their skills further
Children have access to internet resources, where appropriate within lessons in order to explore and research	School website has links for the children to access and information for whole school events and activities to follow	Parents are invited to e-safety training in order to support their child's safe use of the internet	Staff CPD is a priority during periods of change of hardware/software	Homework tasks and activities are available on purple-mash platform, enhancing opportunities at home

COMPUTING KNOWLEDGE, SKILLS AND VOCABULARY PROGRESSION

Please note that this progression for the teaching of computing knowledge and skills only. It does not relate to cross-curricular application of computing knowledge, understanding and skills. See also Nottinghamshire Computing Framework progression. The majority of coverage within EYFS links to cross curricular work. The following are covered as discrete sessions:

EYFS - NURSERY:						
	Autumn 1	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
Topic Title	**All about me: myself**	**All about me: my house**	**The wide, wide world: Traditional stories**	**The wide, wide world: celebrate**	**Wonderful world: circle of life**	**Wonderful world: The summertime**
Understanding and Knowledge	**Introduction to technology** Wind-up toys, Pulleys, Sets of cogs with pegs and boards. Remote controlled toys, Bee bots, Making and playing games Sock puppets, Everyday technology To know that devices have controls which make them work. To know a digital device can simulate things which happen in real life. Know not to give out any information about themselves. Know that care need is needed when using technology.		**Communicating electronically** Focus on Tablets, V tech resources To know that ICT may be used to communicate information electronically. To koow Digital devices can present information in a variety of forms.		**Using the internet, gathering information from technology** Tablets, V tech resources, Interactive white boards To know that the internet may be used to find things out. To know that information may be stored and sorted using a computer. To know that information may be stored on digital devices.	
Skills	To be able to explore how devices and things work Tell an adult if they see something on a digital device they don't like		To be able to use a tablet to find something out		To be able to explore different internet sites To get information from a digital device	
Vocabulary	Bee-bot, technology, computer, tablet, white board, click search		Tablet, click, open, save, store		Internet, safe, search, store, digital	

EYFS - RECEPTION:						
	Autumn 1	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
Topic Title	**Me and you**	**Down our street**	**Real life superheroes**	**Cultural explorers** **We are different we are the same**	**Squeak, cluck, roar**	**Before I was born** **We're off on a journey…**
Knowledge and understanding	**Introduction to Purple Mash** To know how to access purple mash programs To know how to use 2 paint a picture Know not to give out any information about themselves. Know that care need is needed when using technology.	**Purple Mash login** To know how to login To know how to find out information from 2 Simple city To know that digital devices can present information in a variety of forms.	**Gathering information from computer** People who help us topic pins To know that the internet may be used to find things out. To know that Information may be stored on digital devices.	**Saving work and music** Cultural celebrations paint projects To know how to use 2 beat To know that a digital device can simulate things which happen in real life. To know that Information may be stored and sorted using a computer.	**Creating a story** To know how to use a computer to create a simple story To know how to use Mashcams To know ICT may be used to communicate information electronically.	**Introduction to coding** Bee bops and remote control toys To know that devices have controls which make them work.
Skills	To use a mousepad To use click Tell an adult if they see something on a digital device they don't like	To be able to explore 2 simple city programs To use the keyboard to login	To be able to use the computer to answer questions To be able to gather information from the computer	To be able to stimulate music on a digital device To be able to save	To be able to use 2 create a story To be able to use computer camera	To be able to program simple programmable toy
Vocabulary	Screen, mouse, image, keyboard, paint, words, word banks. Paint a picture, Purple Mash	2 simple, login, click, tray	Choices, internet, website, safe, share,	2 beat, saving, store, tray	Webcam, photos, insert, image, text, program	Equipment, program, buttons, movement, instructions, robots, Bee-bop patterns.
Education for a connected world links	Self image and identity	Online relationships	Copyright and ownership Health wellbeing and lifestyle	Online reputation Privacy and security	Online bullying	Managing online information

YEAR 1 and 2 YEAR A:						
	Autumn 1	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
Topic Title	**Location, Location, Location**	**Surprise, Surprise!**	**Winter Wonderland!**	**Furry, feathery friends**	**Land Ahoy!**	**Our future**
Knowledge and understanding	**Unit 1.1 Online safety and exploring Purple Mash (4 weeks)** **Unit 2.5 Effective searching (2 weeks)**	**Unit 2.5 Effective searching (1 week)** **Unit 1.4 Lego builders (3 weeks)** **1.9 Technology outside school (2 weeks)**	**Unit 1.2 Grouping and sorting (2 weeks)** **Unit 2.6 Creating pictures (3 weeks)**	**Unit 2.6 Creating pictures (2 week)** **Unit 1.8 Spreadsheets (3 weeks)**	**Unit 1.7 Coding (6 weeks)**	**Unit 2.1 Coding (5 weeks)**
Skills	• Know the SMART rules. • Know what to do if they view content they think is inappropriate or upsetting (school policy) eg know how to minimise a screen if they see something inappropriate on a website and tell a trusted adult. • Begin to evaluate web sites by giving opinions about preferred sites. • Know that anyone can create a web site and it is sometimes difficult to know if information is true. • Know to keep personal information private when communicating online (This could be discussed when sending a class email). • Know that online communication is not always confidential and that it can be monitored. • Identify some risks presented by new technologies inside and outside school (eg online games, mobile phone texting, cyberbullying). • Learn to respect the work of others that is stored on a shared drive of a network or presented online. • The internet provides a wide and accessible range of images, sound and video. • Both traditional and digital methods can be used to find useful information. • Web pages can be viewed using a web browser that lets us look at web pages and navigate around them sites can be bookmarks as favourites.	• Everyday devices like automatic doors, car park barriers, street lights etc can be controlled by simple sensors. • Our senses allow us to find out what is happening in the world and some machines can do the same. • A computer can be used to view a visual representation of external conditions like sound levels and temperature. • An algorithm is a sequence of instructions which can control a device.	• Events can be recorded using text, sound, still and moving images. • Text, images and sound may be sourced from a variety of places including the internet.	• Software and apps can be used to create and edit images. • Digital simulation allows users to explore options and make choices. • Digital devices aid the drawing of more complex shapes and designs.	• Algorithms are implemented as programs on digital devices. • A digital device may be used to simulate a wide range of environments and situations.	• An algorithm is a sequence of instructions which can control a device. • Algorithms are implemented as programs on digital devices. • A digital device may be used to simulate a wide range of environments and situations.
Y1 Vocabulary *Y2 Vocabulary*	Login, username, password, my work, Log out, avatar, notification, topic, tools, save *Internet, search, search engine*	Instruction, algorithm, computer, program, debug, technology	Sort, criteria *Impressionism, palette, pointillism, share, surrealism, template,*	Arrow key, cells, backspace key, cursor, columns, clipart, count tool, delete key, move cell tool, lock tool, speak tool, spreadsheet, rows, image toolkit	Action, algorithm, background, code, command, debug, debugging, event, execute, input, instructions, object, properties, output, run, sound, scale, when clicked, scene	*Action, algorithm, background, button, collision detection, debug, debugging, design made, event, key pressed, nesting, object, predict, scale, run, properties, scene, sound, test, sequence, when clicked/swiped, text, timer*
Education for a connected world links	Self image and identity Online relationships	Online reputation Online bullying	Copyright and ownership	Privacy and security	Health wellbeing and lifestyle	Managing online information

YEAR 1 and 2 YEAR B:						
Topic Title	**Medieval magic**	**Best of British**	**Active planet**	**Rumble in the Jungle**	**Pollution solution!**	**Inside Out**
Knowledge and understanding	**Unit 1.1 Online safety and exploring Purple Mash (4 weeks)** **Unit 1.5 Maze explorers (2 week)**	**Unit 1.5 Maze explorers (1 week)** **Unit 2.4 Questioning (5 weeks)**	**Unit 2.2 Online safety (3 week)** **Unit 1.6 Animated story books (3 weeks)**	**Unit 1.6 Animated story books (2 weeks)** **Unit 2.7 Making music (3 weeks)**	**Unit 2.3 Spreadsheets (4 weeks)** **Unit 1.3 Pictograms (2 weeks)**	**Unit 1.3 Pictograms (2 weeks)** **Unit 2.8 Presenting ideas (4 weeks)**
Skills	• Know the SMART rules. • Know what to do if they view content they think is inappropriate or upsetting (school policy) eg know how to minimise a screen if they see something inappropriate on a website and tell a trusted adult. • Begin to evaluate web sites by giving opinions about preferred sites. • Know that anyone can create a web site and it is sometimes difficult to know if information is true. • Know to keep personal information private when communicating online (This could be discussed when sending a class email). • Know that online communication is not always confidential and that it can be monitored. • Learn to respect the work of others that is stored on a shared drive of a network or presented online. • Identify some risks presented by new technologies inside and outside school (eg online games, mobile phone texting, cyberbullying). • Text, images and sound may be sourced from a variety of places including the internet. • The internet provides a wide and accessible range of images, sound and video. • The internet can be used to share information via email,online comments. • Both traditional and digital methods can be used to find useful information. • Web pages can be viewed using a web browser that lets us look at web pages and navigate around them sites can be bookmarks as favourites.	• ICT can be used to create a database.	• Images, text and sounds can be combined using digital devices. • Text can be entered and corrected. • Video is composed of a series of still images. • Still images can be combined to make a stop frame animation. The internet can be used to share information via email,online comments.	• Digital devices may be used to create musical. sounds, and these might sound like real instruments	• Data represented graphically can be easier to understand than tables or text. • ICT can be used to create graphs from data.	• Text, images and sound may be changed to suit a purpose. • Digital media accessed from a variety of sources on a range of devices can provide information on many different topics.
Y1 Vocabulary *Y2 Vocabulary*	Login, username, password, my work, Log out, avatar, notification, topic, tools, save	Direction, challenge, arrow, undo, rewind, forward, backwards, right turn, left turn, debug, instruction, algorithm *Pictogram, question, data, collate, binary tree, avatar, database*	*Search, display board, internet, sharing, email, attachment, digital footprint* Animation, e-book, font, file, sound effect, display board,	*Bpm, composition, digitally, instrument, music, sound effects (sfx), soundtrack, tempo, volume*	*Backspace key, copy and paste, columns, cells, count tool, delete key, equals tool, image toolbox, Lock tool, move cell tool, rows, speak tool, spreadsheet*	Pictogram, collate, data *Concept map (mind map)quiz, presentation, node, animated, non-fiction, narrative, audience*
Education for a connected world links	Self image and identity Online relationships	Copyright and ownership	Online reputation Online bullying	Privacy and security	Health wellbeing and lifestyle	Managing online information

Units by Year Group – Mixed Age Classes

Theme Key:							
Coding and Computational thinking	Spreadsheets	Internet and Email	Art and Design	Music	Databases and graphing	Writing and Presenting	Communication and networks

In Year 1 and 2 coding, the lessons need to be taught in sequence as each lesson introduces skills that are consolidated and developed in the next lesson. Therefore, it is proposed to teach coding for 11 weeks in Cycle A and none in Cycle B. It is also beneficial for all children to recap unit 1.1 in both cycles as this introduces children new to the class with key skills needed to make the most of Purple Mash.

Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
YEAR 1 & 2 – CYCLE A	Unit 1.1 Online Safety & Exploring Purple Mash Weeks – 4 Programs – Various				Unit 2.5 Effective Searching Weeks – 3 Programs – Browser			Unit 1.4 Lego Builders Weeks – 3 Programs – 2DIY			Unit 1.9 Technology outside school Weeks – 2 Programs – Various		Unit 1.2 Grouping & Sorting Weeks – 2 Programs – 2DIY		Unit 2.6 Creating Pictures Weeks – 5 Programs – 2PaintAPicture					Unit 1.8 Spreadsheets Weeks – 3 Programs – 2Calculate			Unit 1.7 Coding Weeks – 6 Programs – 2Code						Unit 2.1 Coding Weeks – 5 Programs – 2Code				

Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
YEAR 1 & 2 – CYCLE B	Unit 1.1 Online Safety & Exploring Purple Mash Weeks – 4 Programs – Various				Unit 1.5 Maze Explorers Weeks – 3 Programs – 2Go			Unit 2.4 Questioning Weeks – 5 Programs – 2Question, 2Investigate						Unit 2.2 Online Safety Weeks – 3 Programs – Various			Unit 1.6 Animated Story Books Weeks – 5 Programs – 2Create A Story					Unit 2.7 Making Music Weeks – 3 Programs – 2Sequence			Unit 2.3 Spreadsheets Weeks – 4 Programs – 2Calculate				Unit 1.3 Pictograms Weeks – 3 Programs – 2Count				Unit 2.8 Presenting Ideas Weeks – 4 Programs – Various			

Education for a connected world: (www.gov.uk/government/publications/education-for-a-connected-world)

Each of the eight sections shows the progression continuum for 4 to 7 year olds. The first statement starting with Reception and moving to Year 2 along the continuum. Our RHE and PSHE work compliments these elements. Each element is embedded into lessons but there is also an additional session each term to focus on these. Sessions these have been mapped out to ensure coverage over the year. All elements are as follows:

Self-image and identity

I can recognise, online or offline, that anyone can say 'no' / 'please stop' / 'I'll tell' / 'I'll ask' to somebody who makes them feel sad, uncomfortable, embarrassed or upset.	I can recognise that there may be people online who could make someone feel sad, embarrassed or upset.	I can explain how other people may look and act differently online and offline.
	If something happens that makes me feel sad, worried, uncomfortable or frightened I can give examples of when and how to speak to an adult I can trust and how they can help.	I can give examples of issues online that might make someone feel sad, worried, uncomfortable or frightened; I can give examples of how they might get help.

Online relationships

I can recognise some ways in which the internet can be used to communicate.	I can give examples of when I should ask permission to do something online and explain why this is important.	I can give examples of how someone might use technology to communicate with others they don't also know offline and explain why this might be risky. (e.g. email, online gaming, a pen-pal in another school / country).
I can give examples of how I (might) use technology to communicate with people I know.	I can use the internet with adult support to communicate with people I know (e.g. video call apps or services).	I can explain who I should ask before sharing things about myself or others online.
	I can explain why it is important to be considerate and kind to people online and to respect their choices.	I can describe different ways to ask for, give, or deny my permission online and can identify who can help me if I am not sure.
	I can explain why things one person finds funny or sad online may not always be seen in the same way by others.	I can explain why I have a right to say 'no' or 'I will have to ask someone'. I can explain who can help me if I feel under pressure to agree to something I am unsure about or don't want to do.
		I can identify who can help me if something happens online without my consent.
		I can explain how it may make others feel if I do not ask their permission or ignore their answers before sharing something about them online.
		I can explain why I should always ask a trusted adult before clicking 'yes', 'agree' or 'accept' online.

Online reputation

I can identify ways that I can put information on the internet.	I can recognise that information can stay online and could be copied.	I can explain how information put online about someone can last for a long time.
	I can describe what information I should not put online without asking a trusted adult first.	I can describe how anyone's online information could be seen by others.
		I know who to talk to if something has been put online without consent or if it is incorrect.

Online bullying

I can describe ways that some people can be unkind online.	I can describe how to behave online in ways that do not upset others and can give examples.	I can explain what bullying is, how people may bully others and how bullying can make someone feel.
I can offer examples of how this can make others feel.		I can explain why anyone who experiences bullying is not to blame.
		I can talk about how anyone experiencing bullying can get help.

Managing online information

I can talk about how to use the internet as a way of finding information online.	I can give simple examples of how to find information using digital technologies, e.g. **search engines**, **voice activated searching**).	I can use simple keywords in **search engines**.
I can identify devices I could use to access information on the internet.	I know / understand that we can encounter a range of things online including things we like and don't like as well as things which are real or make believe / a joke.	I can demonstrate how to navigate a simple webpage to get to information I need (e.g. home, forward, back buttons; links, tabs and sections).
	I know how to get help from a **trusted adult** if we see content that makes us feel sad, uncomfortable worried or frightened.	I can explain what **voice activated searching** is and how it might be used, and know it is not a real person (e.g. Alexa, Google Now, Siri).
		I can explain the difference between things that are imaginary, 'made up' or 'make believe' and things that are 'true' or 'real'.
		I can explain why some information I find online may not be real or true.

Health, well-being and lifestyle

I can identify rules that help keep us safe and healthy in and beyond the home when using technology.	I can explain rules to keep myself safe when using technology both in and beyond the home.	I can explain simple guidance for using technology in different environments and settings e.g. accessing online technologies in public places and the home environment.
I can give some simple examples of these rules.		I can say how those rules / guides can help anyone accessing online technologies.

Privacy and security

I can identify some simple examples of my personal information (e.g. name, address, birthday, age, location).	I can explain that passwords are used to protect information, accounts and devices.	I can explain how passwords can be used to protect information, accounts and devices.
I can describe who would be trustworthy to share this information with; I can explain why they are trusted.	I can recognise more detailed examples of information that is personal to someone (e.g where someone lives and goes to school, family names).	I can explain and give examples of what is meant by 'private' and 'keeping things private'.
	I can explain why it is important to always ask a trusted adult before sharing any personal information online, belonging to myself or others.	I can describe and explain some rules for keeping personal information private (e.g. creating and protecting passwords).
		I can explain how some people may have devices in their homes connected to the internet and give examples (e.g. lights, fridges, toys, televisions).

Copyright and ownership

I know that work I create belongs to me.	I can explain why work I create using technology belongs to me.	I can recognise that content on the internet may belong to other people.
I can name my work so that others know it belongs to me.	I can say why it belongs to me (e.g. 'I designed it' or 'I filmed it'').	I can describe why other people's work belongs to them.
	I can save my work under a suitable title / name so that others know it belongs to me (e.g. filename, name on content).	
	I understand that work created by others does not belong to me even if I save a copy.	

END OF KS1 ASSESSMENT STATEMENT

CHILDREN WILL EITHER HAVE ‘MET’ OR ‘NOT MET’ THE FOLLOWING STANDARD AT THE END OF KS1.

	Assessment statement
Year 1	Children have an understanding of technology and how to use this safety. They will be able to recognise, predict, create and debug algorithms and can create, organise, store and manipulate simple digital content.
Year 2 (End of KS1)	Children can safely search for digital content. They are beginning to apply their understanding through digital means. Children know how to create a simple program using an algorithm, they can respond to a program and are beginning to understand the need for logical steps.