Computing Long-term Overview 25/26	AUTUMN	SPRING	SUMMER
Nursery	Children will learn: 1. to play simple games on the interactive whiteboard by pressing buttons. 2. to mark make on paint software on the interactive whiteboard. 3. to recognise a selection of digital devices. tTo handle equipment responsibly with a level of care. 4. to know how to switch something on or off. 5. how to work equipment: turn on, swipe iPad, move a mouse, press a button on a keyboard.	Children will learn: 1. to make a bee-bot move. 2. to use bee-bots to explore moving objects for a purpose. 3. to be able to use the play, rewind, stop and pause button on a CD player, karaoke machine, iPad or speaker when playing music. 4. to use CD players, iPad or speakers to play music.	Children will learn: 1. to be able to name different types of technology that they have experienced or seen people around them use before (e.g., Computer, phone, tablet, laptop etc). 2. to recognise and name different types of technology in the environment and at home. 3. to explore using cameras on iPad to film and take photographs. 4. to be able to take a photograph on a camera or iPad.
Reception	**Technology All Around Us** Children will learn: 1. to talk about the different purposes of some technology and how it helps them in their daily lives. 2. to say that a device is a piece of equipment 3. the purposes of some technological features (e.g., Keyboard, monitor, camera, power button, apps etc). 4. to type simple words or other familiar phrases using a keyboard.	**All About Instructions (Unplugged Activities) Bee-Bot Programming** Children will learn: 1. to use a simple computer programme with increasing control. 2. to take part in simple programming activities with age-appropriate equipment eg. bee-bots. 3. to follow simple instructions/create simple instructions using bee-bots. 4. to use technology to complete simple programmes.	**Let's Paint, Let's Write, Online Safety** Children will learn: 1. to recognise that we can retrieve information from different technology sources. 2. to use search engines to find out information during class discussions. 3. to access content in a range of formats e.g., image, video, audio. 4. to begin to understand how to stay safe when online.

	5. to use various tools on Paint such as brushes, pens, erasers, fill, stamps and shapes. 6. to explore paint, SMART, PowerPoint and begin to use its 'pen' features. 7. to direct a mouse, recognising the relationship between it and its position on the screen. 8. to independently change games or increase levels of difficulty.		5. to choose the best device/equipment for a task (e.g., camera, iPad or phone to take a picture) 6. to record a video on an iPad or camera. 7. to use the simple functions e.g., taking a photograph, stopping and starting a video and working out how to play a game. 8. to use a camera/other technology for purpose e.g., taking a photo of their own work.		5. Discussions around e-safety through circle time/PSHE curriculum. To know what personal information is and that it shouldn't be shared on line. 6. about acceptable use, to ask permission before using www. 7. that information can be public or private.	
Year 1	**Just Paint and Write – Part 1 - All about Me** Children will learn: 1. to create a number of drawings and text files. 2. to save their drawings. 3. to use their drawings in a JiT5 'Write' and 'Paint' software. 4. to produce pieces of work entitled 'All about Me'.		**Collect Photographs and Paint Pictures Part 2** Children will learn: 1. to create a digital album using photographs, JIT5 'Write, 'Paint' and 'Mix' tools	**Gathering Data and Creating Charts** Children will learn: 1. to create charts using JIT 'Chart' and 'Pictogram' tools. 2. to develop an understanding of interpreting data from a chart using JIT 'Mix' to present work.	**Simple Algorithms and Programs - Part 1** Children will learn: 1. to demonstrate logical thinking to support algorithmic thinking, prediction and debugging. 2. to encode algorithms to a program to control a floor turtle using a mixture of unplugged and physical computing activity types.	**Create Simple Programs - Part 2** Children will learn: 1. to use logical thinking to evaluate algorithms and route-based programs to improve outcomes.
Year 2	**Ways to Present Information** Children will learn: 1. to design assets using JiT5 'Paint', 'Write'	**Art of Animation** Children will learn: 1. to design animations that present information about oceans.	**Create a Topic-Based eBook** Children will learn: 1. to use JiT tools to create an	**Sequencing Simple Algorithms and Programs** Children will learn: 1. to predict and investigate route-based programs to answer numerous challenges.	**Collecting, Organising, and Presenting Data** Children will learn: 1. to develop a better understanding of interpreting data from a chart – using JIT 'Chart' and 'Pictogram' tools. 2. to gather opinions using the J2vote software.	

	and 'Animate' tools.	2. to draw assets using JIT5 'Paint'. 3. to add backgrounds and shared images to combine and create an effective animation.	eBook in JiT 'Mix' tool. 2. to include a mixture of text, painting and photos within a variety of page layouts.	2. to complete tasks that will require them to modify route-based programs 3. to make their own route-based programs.	3. to present the findings.	
Year 3	**Organising, Creating and Presenting** Children will learn: 1. to use three types of multi-media: text, image and animation 2. to create, organise and present content effectively. 1. to consider layout choices and appropriate presentation styles depending on purpose.	**QR Codes** Children will learn: 1. to explore what QR codes are and how they are created to present information to a user. 2. to record sound files and create QR codes to allow others to access and listen to the sound file.	**Creating a Branching Database and Interrogating Simple Databases** Children will learn: 1. to understand what a database is and how frequently we use them in life. 2. to use JiT 'Branch' to create and use a branching database,. 3. to focus on questions to ask to uniquely identify objects/people. 4. to use j2 'Data' to interrogate a simple database. 5. to create a j2e5 file to evidence screen captures of the searches. 6. to reflect on their learning.		**Write a program - Part 1** Children will learn: 1. to use block-based sequences. 2. to debug sequences of code. 3. to use J2Code tool 'Visual' to create a scene with two characters having a conversation/telling a joke.	**Write a Program - Part 2 drawing shapes** Children will learn: 1. to complete some 2. 'unplugged activities' to improve concepts of debugging and logical reasoning. 3. to use j2Code tool 'Visual'. 4. to create the code in Visual to draw simple shapes and patterns. 5. to repeat code.
Year 4	**Multimedia Fact File** Children will learn: 1. to create a researched based fact file based upon a topic being studied.	**What is Computer Technology**? Children will learn: 1. what a computer is made up of. 2. how the components all work together to provide access to	**Creating and Interrogating Simple Databases** Children will learn: 1. to discuss how information is collected and organised for	**Scratch Programming - From Algorithm to Code** Children will learn: 1. to use Scratch to use various inputs and outputs to make a sprite move, change size or play sounds.	**On the Move with Programming** Children will learn: 1. to use Scratch 3 to introduce movement blocks to animate sprites and change backgrounds. 2. to use conditional statements – 'If …,Then …', reinforcing sequence, repetition, and selection in programming.	

	2. to plan and create fact files pages that are hyperlinked from the home page. 3. to include a range of multimedia – images, sounds and video.	the technology we use today.	use in a database. 2. to design a database, considering audience and purpose. 3. to interrogate data contained within a database using the sort 4. and search functions.	2. to use 'broadcast' as a conditional input.	
Year 5	**Infographics** Children will learn: 1. to develop an understanding of what makes infographics a popular choice to present and share information. 2. to develop an understanding of colour, styling, enhanced editing tools and the use of charts/graphs/tables to effectively present information.	**Computers for Communication and Collaboration** Children will learn: 1. how computers offer opportunities for communication and collaboration. 2. to consider how technology has improved communication. 3. to consider how forms of communication have changed as a result. 4. to know who has been influential in the changes of technology over time.	**Creating and Using spreadsheets as Models to Solve Problems** Children will learn: 1. to use and create spreadsheets to support solving mathematical problems. 2. to use simple formulae to carry out calculations. 3. to answer 'What if …?' type questions. 4. to present information in the form of graphs where required.		**Programming Making Games** Children will learn: 1. to develop logical thinking and coding using Scratch 3 to make a range of computer games.

	3. to research and select key information to present as an infographic in J2e5.				
Year 6	**Analyse and Interpret Data using Spreadsheets** Children will learn: 1. to create spreadsheets that are fit for purpose. 2. to use the spreadsheets to find the answers to problems.	**The Internet and World Wide Web** Children will learn: 1. to understand what the internet is. 2. to discuss the services it provides. 3. to focus in on the world wide web as a service and how data and information travels around the network. 4. to consider how search engines help to find Information. 5. to improve search techniques when looking for information online.	**Understanding Big Data** Children will learn: 1. what big data is. 2. the impact on privacy and security of data. 3. how data is used by others in both authorised and unauthorised ways. 4. to investigate ways that big data is used for global projects that benefit our lives	**Artificial Intelligence and Machine Learning** Children will learn: 1. what misinformation and disinformation means 2. what Machine Learning and Artificial Intelligence is and how it uses big data. 3. how AI and ML uses big data to benefit others. 4. to create a Smart Classroom using IBM Watson and Machine Learning.	**Game Design** Children will learn: 1. to use pseudo-code, cloning and conditional operators (Boolean) in Scratch3 to make and design complex games.