Computing Long Term Planning

'Achieve Excellence'

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Nursery Cycle 1 (experiences)	Knobs and Buttons Cookers/microwaves/mobile phones **Understanding the world: Technology** ₪ Seeks to acquire basic skills in turning on and operating some digital equipment ₪ Operates mechanical toys, e.g. turns the knob on a wind-up toy or pulls back on a friction car ₪ Knows how to operate simple equipment, e.g. turns on CD player, uses a remote control, can navigate touch-capable	Torches Buttons On/Off **Understanding the world: Technology** ₪ Operates mechanical toys, e.g. turns the knob on a wind-up toy or pulls back on a friction car ₪ Shows skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images	Early programming Home TV remotes/phones **Understanding the world: Technology** ₪ Seeks to acquire basic skills in turning on and operating some digital equipment ₪ Knows how to operate simple equipment, e.g. turns on CD player, uses a remote control, can navigate touch-capable technology with	Paint program **Understanding the world: Technology** ₪ Shows an interest in technological toys with knobs or pulleys, real objects such as cameras, and touchscreen devices such as mobile phones and tablets ₪ Shows skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images	Paint program **Understanding the world: Technology** ₪ Shows an interest in technological toys with knobs or pulleys, real objects such as cameras, and touchscreen devices such as mobile phones and tablets ₪ Shows skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images	Pirate Number Drag Game **Understanding the world: Technology** ₪ Shows an interest in technological toys with knobs or pulleys, real objects such as cameras, and touchscreen devices such as mobile phones and tablets

	technology with support ▨ Shows an interest in technological toys with knobs or pulleys, real objects such as cameras, and touchscreen devices such as mobile phones and tablets ▨ Shows skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images ▨ Knows that information can be retrieved from digital devices and the internet		support			
Nursery Cycle 2 (experiences)	Knobs and Buttons Cookers/microwaves/mobile phones **Understanding the world: Technology** ▨ Seeks to acquire basic skills in turning on and operating some digital equipment ▨ Operates mechanical toys, e.g. turns the knob on a wind-up toy or pulls back on a friction car	Torches Buttons On/Off **Understanding the world: Technology** ▨ Operates mechanical toys, e.g. turns the knob on a wind-up toy or pulls back on a friction car ▨ Shows skill in making toys work by pressing parts or lifting flaps to achieve effects such	Remote control toys- Early programming Simple city (Purple Mash programme) **Understanding the world: Technology** ▨ Seeks to acquire basic skills in turning on and operating some digital equipment	Little Red Riding Hood Paint program (Purple Mash) **Understanding the world: Technology** ▨ Shows an interest in technological toys with knobs or pulleys, real objects such as cameras, and touchscreen devices such as mobile phones and tablets	Paint program Superheros (Purple Mash) **Understanding the world: Technology** ▨ Shows an interest in technological toys with knobs or pulleys, real objects such as cameras, and touchscreen devices such as mobile phones and tablets ▨ Shows skill in	Explore Keyboards Role Play **Understanding the world: Technology** ▨ Shows an interest in technological toys with knobs or pulleys, real objects such as cameras, and touchscreen devices such as mobile phones and tablets

	▧ Knows how to operate simple equipment, e.g. turns on CD player, uses a remote control, can navigate touch-capable technology with support ▧ Shows an interest in technological toys with knobs or pulleys, real objects such as cameras, and touchscreen devices such as mobile phones and tablets ▧ Shows skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images ▧ Knows that information can be retrieved from digital devices and the internet	as sound, movements or new images	▧ Knows how to operate simple equipment, e.g. turns on CD player, uses a remote control, can navigate touch-capable technology with support	▧ Shows skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images	making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images	
Reception (experiences)	Cameras **Understanding the world: Technology** ▧ Completes a simple program on electronic devices ▧ Uses ICT hardware to	Celebrations Paint Programs **Understanding the world: Technology** ▧ Uses ICT hardware to interact with age	Beebots Programming (Journeys) **Understanding the world: Technology** ▧ Completes a simple program on electronic devices	Fairy Tales Labeling Drag and Dr **Understanding the world: Technology** ▧ Uses ICT hardware to interact with age		Keyboards/Typing Simple word processing **Understanding the world: Technology** ▧ Completes a simple program on electronic devices

	interact with age appropriate computer software ⊠ Can create content such as a video recording, stories, and/or draw a picture on screen ⊠ Develops digital literacy skills by being able to access, understand and interact with a range of technologies ⊠ Can use the internet with adult supervision to find and retrieve information of interest to them	appropriate computer software ⊠ Can create content such as a video recording, stories, and/or draw a picture on screen		appropriate computer software ⊠ Develops digital literacy skills by being able to access, understand and interact with a range of technologies		⊠ Uses ICT hardware to interact with age appropriate computer software ⊠ Develops digital literacy skills by being able to access, understand and interact with a range of technologies
Year 1	Magical Storytelling (Mr Andrews unit)		Wanted Dragon Internet Safety (Mr Andrews unit)	Puzzling Times (Mr Andrews unit)	Me and My Selfie (Mr Andrews unit)	
	Building on from using paint programmes and exploring technology in Reception Combine images, text and voice recordings to retell a story. Combine images and edit text to create posters and invitations. Use digital drawing tools to draw characters from a story or for a game. Type words correctly using a keyboard.		Building on from using paint programmes and exploring cameras in Reception Use digital drawing tools to draw characters from a story or for a game. Combine images with text to create posters and invitations. Use photo editing tools to crop images. Create digital books combining text,	Building on from English. Using paint programmes in Reception and exploring the keyboard in Reception **Information Technology** Use digital drawing tools to draw characters from a story or for a game. Combine images with text to create posters	Building on from taking photos and editing them previously in year 1 **Information Technology** Use a camera to capture images which are in focus. Select options to change the appearance of digital content. Apply edits to digital content to achieve a particular effect. Combine words and images to create Word Art. **Digital Literacy** Explain how other people's identity online can be	

	Create a simple animation with moving characters and voice recordings. **Digital Literacy** Describe why other people's work belongs to them and recognise that content on the internet may belong to other people.		images, and sounds. Collect images by capturing screenshots and editing them. Type words correctly using a keyboard. **Computer Science** Create simple programs.　　Design and create programs for others to play. Describe uses of technology beyond school. Predict the outcomes of a program. **Digital Literacy** Explain rules and give examples to keep us safe when we are using technology both in and be Explain simple guidance for using technology in different environments and settings and say how those rules/guides can help you.	and invitations. Use photo editing tools to crop images. Create digital books combining text, images, and sounds. Collect images by capturing screenshots and editing them. Type words correctly using a keyboard. **Computer Science** Create simple programs. Design and create programs for others to play. Describe uses of technology beyond school. Predict the outcomes of a program. **Digital Literacy** Explain rules and give examples to keep us safe when we are using technology both in and beyond the home.　　Explain simple guidance for using technology in different environments and settings and say how those rules/guides can help you	different to their identity in real life and how they might make themselves look different. Give examples of issues online that might make me feel sad, worried, uncomfortable or frightened; I can give examples of how I might get help (speak to adult I can trust). Recognise examples of information that is personal to me (name, address, birthday, age, where I go to school). Recognise that information about me can stay online for a long time and could be copied. Describe what information not to put online without asking a trusted adult first	
Year 2	Strange Creatures (Mr Andrews unit)	What is a computer? (Mr Andrews unit)	First footsteps in the world (Mr Andrews unit)	Computer programming getting started (Mr Andrews unit)	Presentations (Purple Mash unit)

	Building on from using a key board and editing photos in year 1	Building on from creating a video previous term	Build on from the digital literacy in year 2 Autumn 1.	Building on form skills learnt this year to then debug simple algorithms	Building on from combining text and images to developing a presentation.
	Information Technology Collect images by capturing screenshots and editing them. Present information on a topic using images, text boxes and voice recordings. Create a simple animation with moving characters and voice recordings. Combine text and images to create video presentation. Edit video content to improve. **Digital Literacy** Use simple keywords in a search engine to find things out. Navigate a simple webpage to get the information I need (e.g. home, forward, back buttons; links, tabs and sections). Describe and demonstrate how to get help from a trusted adult or helpline if I find content that makes me feel sad, uncomfortable worried or frightened. Explain	**Information Technology** Create digital books combining text, images, and sounds. Type words correctly using a keyboard. Combine text and images to create video presentations. Edit video content to improve it. **Computer Science** Identify, name and explain the functions of the main components of a computer. Name and compare common input and output devices of computer systems. Identify and describe uses of technology beyond school. Explain how robots can be controlled. **Digital Literacy** Explain how devices can be connected to the internet and can list some of those devices.	**Information Technology** Create digital books combining text, images, and sounds. Type words correctly using a keyboard. **Digital Literacy** Explain why it is important to be considerate and kind to people online in ways that do not upset others and can give examples. Recognise that there may be people online who could make me feel sad, embarrassed or upset and give examples of when and how to speak to an adult you can trust. Give examples of bullying behaviour and how it could look online and how it can make someone feel. Talk about how someone can/would get help about being bullied online or offline.	**Computer Science** Create simple programs. Debug an error in a simple algorithm. Understand that instructions in an algorithm need to be precise and unambiguous. Use logical reasoning to predict the behaviour of simple programs. Use basic selections in programs and explain using the language if … then.	use technology purposefully to create, organise, store, manipulate and retrieve digital content recognise common uses of information technology beyond school

	the difference between things that are imaginary, 'made up' or 'make believe' and things that are 'true' or 'real'.				
Year 3/4 Cycle 1	Born to be an artist (Mr Andrew's unit)	Spreadsheets (Purple Mash)	Presenting (Purple Mash unit)	Email (Purple Mash unit)	How do computers work? (Mr Andrew's unit)
	Building on from digital art in year 2 and from editing photographs in year 2 **Information Technology** Use a camera accurately to capture interesting perspectives on objects. Select options to change the appearance of digital content and explore tools to edit it. Apply edits to digital content to achieve a particular effect and save them as both images and videos. Create galleries that include images and videos effects. Plan a movie which has a beginning, middle and end.	First introduction into spreadsheets. Building on prior knowledge of inputting information into a computer. Create a table of data on a spreadsheet. • Use a spreadsheet program to automatically create charts and graphs from data. Use the 'more than', 'less than' and 'equals' tools to compare different numbers and help to work out solutions to calculations. Use the 'spin' tool to count through times tables. Describe a cell location in a spreadsheet using the notation of a letter for the column followed by a number for the row. Find specified locations in a spreadsheet	Building on from adding information to make a leaflet y2 to making a presentation with animations Know what Google Slides is. • Pupils will know how to open Google Slides. Know how to add text and format it. Change the design of a presentation. Insert a new slide. Insert a picture. Edit pictures. Add shapes to a presentation. Add lines into a presentation. Use animations in a presentation. Use transitions in a presentation. Add text to a presentation. Add objects including text and pictures to their presentation. Add animation and transitions to their presentation. Present their work on Slides.	Building on from becoming more familiar with a keyboard and the use of using a computer for sharing information Open and respond to an email. Write an email to someone using an address book. Learn how to use email safely. Add an attachment to an email. Explore a simulated email scenario.	Build on from presenting skills in spring 2. Build on from what is a computer? Year 2 **Information Technology** Create a presentation with slides with animations and transition effects. **Computer Science** Identify the uses of technology beyond school and discuss the reasons why they are helpful (e.g. robots and simulations). Understand how a computer stores data. Understand the main hardware components of a computer system. Understand how the internet works, including how it is structured and data

| | | | | | travels along.

Digital Literacy
Use search engines effectively and narrow search results down.
Analyse information and have ways to check its credibility.
Be sceptical of things I find online such as fauxtography. |

Year 3/4 Cycle 2	Reading Power (Mr Andrews Unit)	Animations (Purple Mash Unit)	Entering a digital world (Mr Andrews Unit)	My very own game (Mr Andrews Unit)	Effective searching (Purple Mash Unit)
	Building on from presenting via Google slides - children now present information on a website

Information Technology
Build a website or web app that includes pages, text, images and videos.
Present information on a website page in a clear and organised way.
Plan videos content by using scripts.
Edit digital content to improve it, according to feedback
Create an interactive | Building on from animating Google slides In y3/4 cycle 1

Discuss what makes a good animated film or cartoon and what their favourites are.
Learn how animations are created by hand.
Find out how 2Animate can be created in a similar way using the computer.
Learn about onion skinning in animation.
Add backgrounds and sounds to animations.
Be introduced to 'stop motion' animation.
Share animation on the class display board and by blogging. | Master creating a presentation building on from y3/4 cycle 1 and build on online safety knowledge

Information Technology Create a presentation with slides with animations and transition effects.
Edit digital content to improve it, according to feedback.
Create graphics with texts and images.

Digital Literacy
Explain how my online identity can be different to the identity presented in real life | Building on from animation and editing images from y2 and y3/4 cycle 1

Information Technology
Remove the background from images
Use photo editing tools to improve images.
Create digital books/posters by combining text, images, voice recordings, and videos.
Create a video by combining text, images and music.   Use a keyboard accurately with two hands to type and format documents.

Computer Science
Design and create a prototype game and make improvements following feedback.
Review a game and make improvements by debugging.
Create a program using a range of events/inputs to control what happens.
Work with various forms of input/output.

Digital Literacy | Building on from online safety Spring 1
Locate information on the search results page.
Search effectively to find out information.
Assess whether an information source is true and reliable. |

| | quiz and collect results. Organise a movie adding titles, images and effects. Create graphics with texts and images.

Computer Science
Create a quiz and program right and wrong answers. Embed an interactive quiz into a website.

Digital Literacy
Use search engines effectively and narrow search results down. Explain how the internet can be used to sell and buy things. When searching on the internet for content to use, consider who owns it and whether you have the right to use it and give some simple examples. | | and describe the right decisions about how to interact with others and how others perceive us. Recognise the need to be careful before sharing anything online.   Give reasons why you should only share information with people you choose to and can trust. Explain what is meant by 'trusting someone online' and explain why this is different from 'liking someone online'.   Understand and give reasons why strong passwords are important and describe simple strategies for creating and keeping passwords private. Explain what bullying is and can describe how people may bully others. Describe rules about how to behave online and how to follow them. Identify some online technologies where bullying might take place and describe ways people can be bullied through a range of media (e.g. image, video, text, chat).   Explain why you need to think | Explain why spending too much time using technology can sometimes have a negative impact and can give examples of activities where it is easy to spend a lot of time engaged online (e.g. games, films, videos). Describe and explain some of the methods used to encourage people to buy things online (e.g. advertising offers; in-app purchases, pop-ups) and can recognise some of these when they appear online. | |

			carefully about how content you post might affect others, their feelings and how it may affect how others feel about them (their reputation).		
Year 5/6 Cycle 1	Junior website developer (Mr Andrews unit)	Spreadsheets (Purple Mash unit)	How do computers impact our lives ? (Mr Andrews unit)	3D Modelling (Purple Mash unit)	Who wants to play? (Mr Andrews unit)
	Building on very beginning own website in y3/4

Information Technology
Evaluate my own content against success criteria and make improvements accordingly.

Computer Science
Work independently on a topic to build and create a website with pages, titles, images, videos and text.
Recognise my audience when designing and creating a website.

Digital Literacy
Assess and justify when it is acceptable to use the work of | Building on from inputting data into a spreadsheet y3/4 cycle 1
Create a formula in a spreadsheet to convert m to cm.
Apply this to creating a spreadsheet that converts miles to km and vice versa.
Use a spreadsheet to work out which letters appear most often.
Use the 'how many' tool.
Use a spreadsheet to work out the area and perimeter of rectangles.
Use these calculations to solve a real-life problem.
Create simple formulae that use different variables.
Create a formula that will work out how many days there are in x number of weeks or years
Use a spreadsheet to model a reallife | Building on from making a presentation in ¾

Information Technology
Work independently to create a presentation that includes graphics, and images.
Make a presentation to an audience using digital tools.

Computer Science
Describe the impact of technology on society.
Understand about e-commerce - what it is and its impact.
Investigate the services offered by the internet. Understand about different types of robotics and how they can impact our lives.
Understand about the advancements in | Building on from CAD technology in DT
Know what the 2Design and Make tool is for.
Explore the different viewpoints in 2Design and Make whilst designing a building.
Adapt one of the vehicle models by moving the points to alter the shape of the vehicle while still maintaining its form.
Explore how to edit the polygon 3D models to design a 3D model for a purpose.
Refine one of their designs to prepare it for printing. • Print their design as a 2D net and then created a 3D model.
Explore the possibilities of 3D printing | Building on from year ¾ cycle 2

Information Technology
Identify the pros and cons of different games.
Use creative tools to create a marketing campaign for a game.
Design and create 8-bit characters.
Combine text and images to create posters.
Plan and create a video by combining.images, text, music and different layouts.
Use word processing tools to format a document.

Computer Science
Work independently to design and program a game for a specific audience.
Program a game which tells a story over more than one level.
Experiment with different codes to test each element of a game until the desired outcome is reached.
Make predictions about what will happen in a program when inputs are changed.
Test, debug and improve programs.

Digital Literacy
Describe ways technology can affect healthy sleep and strategies, tips or advice to promote |

	others and give examples of content that is permitted to be reused. Demonstrate the use of search tools to find and access online content which can be reused by others. Demonstrate how to make references to and acknowledge sources that have been used from the internet.	situation and come up with solutions that can be practically applied	technology and the impact this has had on society. **Digital Literacy** Understand that there are many positives and negatives to using social media. Describe ways that information about people online can be used by others to make judgments about an individual. Describe some simple ways that help build a positive online reputation. Define the terms 'influence', 'manipulation' and 'persuasion' and explain how these might be encountered online (e.g. advertising and 'ad targeting').		healthy sleep with regards to technology. Explain the importance of self-regulating my use of technology and demonstrate the strategies I use to do this (e.g. monitoring my time online, avoiding accidents). Describe common systems that regulate age-related content (e.g. PEGI, BBFC, parental warnings) and describe their purpose.
Year 5/6 Cycle 2	How to... (Mr Andrews Unit)	Programming getting smarter (Mr Andrews Unit)	Growing up in a digital world (Mr Andrews Unit)		It's my business (Mr Andrews Unit)
	Building on knowledge of developing a website **Information Technology** Plan a digital resource to teach a specific audience	Build on programming from year 2 **Information Technology** Present understanding of	Building on knowledge from website design y5/6 **Information Technology** Evaluate content against success criteria and make improvements accordingly. **Computer Science**		Building on from spreadsheets Design using edited images and presentations **Information Technology** Design a suitable brand for a business and promote it. Create a spreadsheet with formulas for profit and loss of a business. Work independently to create a presentation that includes graphics, images and movies.

| | something new. Make choices on the best digital software available to present my ideas. Edit videos, graphics and documents independently to create a digital book or an app/website. Work independently to combine a range of tools (text, video, graphics, images) to present my ideas clearly for an audience to follow. | new programming concepts with digital tools.

Computer Science
Use selections and procedures in programs. Create programs including repeat commands. Create simple variables and understand their role in a program. Use logical reasoning to detect and correct errors in algorithms. | Work independently on a topic to build and create a website with pages, titles, images, videos and text. Recognise an audience when designing and creating a website.

Digital Literacy
Describe ways in which media can shape ideas about gender. Describe issues online that might make me or others feel sad, worried, uncomfortable or frightened. Explain how identity online can be copied, modified or altered. Demonstrate responsible choices about my online identity, depending on context. Understand the difference between online mis-information (inaccurate information distributed by accident) and dis-information (inaccurate information deliberately distributed and intended to mislead). Explain why information that is on a large number of sites may still be inaccurate or untrue. I can assess how this might happen (e.g. the sharing of misinformation either by accident or on purpose). Create and use strong and secure passwords and use different them for a range of online services. Describe ways in which some online content targets people to gain money or information illegally and describe strategies to identify such content (e.g. scams, phishing). Describe how to get help for someone that is being bullied online and assess when to do or say something or tell someone. Identify a range of ways to report concerns both in school and at home about online bullying. Make positive contributions and be part of online communities and describe how to collaborate with others positively. Explain how impulsive and rash communications | Design and build a webpage and share it online. Make a presentation to an audience using digital tools.

Computer Science
Create variables in spreadsheets and understand their role in a program.

Digital Literacy
Access and justify when it is acceptable to use the work of others. Explain how search engines work and how results are selected and ranked. |

			online may cause problems (e.g. flaming, content produced in live streaming). Understand that there are many positives and negatives to using social media.	