St Michael's Primary School

Computing: long term planning

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Nursery *Curriculum*	-Knows how to operate simple equipment, e.g. using a remote control. -Shows an interest in technological toys with knobs or pulleys, or real objects such as cameras or mobile phones. -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 computers.					
Reception *E-safety*	Online relationships -Recognise some ways in which the internet can be used to communicate. -Give examples of how they (might) use technology to communicate with people I know.	Online bullying -Describe ways people can be unkind online. -Offer examples of how this can make others feel.	Privacy & Security -Identify some simple examples of my personal information (e.g. name, address, birthday, age, location). -Describe who would be trustworthy to share this information with and example why they are trusted.	Self-image & Identity -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.	Online Reputation -Identify ways that I can put information on the internet.	Health, Wellbeing & Lifestyle -Identify rules that help keep us safe and healthy in and beyond the home when using technology. -Give some simple examples of these rules.
Reception *Curriculum*	-Completes a simple program on a computer. -Uses ICT hardware to interact with age-appropriate computer software -Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes.					
Year 1 *E-safety*	Online bullying -Describe how to behave online in ways that do not upset others and can give examples.	Online relationships -Explain why it is important to be considerate and kind to people online and to respect their choices.	Privacy & Security -Explain how passwords are used to protect information, accounts and devices. Managing online information -Know 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.	Self-image & Identity -Recognise that there may be people online who could make someone feel sad, embarrassed or upset.	Online Reputation -Recognise that information can stay online and could be copied.	Health, Wellbeing & Lifestyle -Explain rules to keep themselves safe when using technology both in and beyond the home.
Year 1 *Curriculum*	How do I access and use online platforms? Purple mash unit 1.1 -Log in to and out of Purple Mash using my own login and understand why it's important. -Create, save, and find my work in Purple Mash, and I know that my work belongs to me. -Use tools and icons in Purple Mash to add text and pictures to my work. -Explore and use different sections in Purple Mash like	What are the basic parts of a spreadsheet? -Navigate a spreadsheet. -Explain what rows and columns are. -Save and open spreadsheets. -Enter data into cells. -Open the image toolbox and insert clipart. -Use 'move cell' tool so that images can be dragged around the page. -Use the 'lock' tool to prevent changes.	How can I tell a story through an e-book? -Add an algorithm to an e-book -Add information to a story -Add sound to a story -Include additional features to enhance a story.	How do I create simple code? -Understand the functionality of basic direction needs. -Create and debug a set of instruction -Edit and change an algorithm.	How can I use coding to design a simple programme? -Explain what coding means. -Understand that for a computer to make something happen, it needs to follow clear instructions. -Explain what a block of code is. -Design a simple programme. -Programme a character to move when clicked, given a variety of input events. -Programme a sound to play when objects collide.	How can I use pictograms to show information? -Understand that data can be represented in picture format. - Contribute to a class pictogram. -Use a pictogram to record experiment results.

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	Topics, Tools, and Games. -Read messages from their teacher and search for resources in Purple Mash.					
Year 2 *E-safety*	Online bullying -Explain what bullying is, how people may bully others and how bullying can make someone feel. -Explain why anyone who experiences bullying is not to blame. -Talk about how anyone experiencing bullying can get help.	Online relationships -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)	Privacy & Security -Explain and give examples of what is meant by 'private' and 'keeping things private'. Managing Online Information -Use simple keywords in search engines.	Self-image & Identity -Explain how other people may look and act differently online and offline.	Online Reputation -Describe how anyone's online information could be seen by others.	Health, Wellbeing & Lifestyle -Explain simple guidance for using technology in different environments and settings e.g. accessing online technologies in public places and the home environment.
Year 2 *Curriculum*	How do I use the internet to search? Purple mash unit 2.5 -Recall the meaning of key Internet and searching items -Identify the basic parts of a web search engine page. -Search the internet for answers.	How can I create music, using technology? -Explore how to speed up and slow down tunes. -Understand what happens to a tune when sounds are moved. -Change the volume of background sounds. -Create tunes to depict feelings. -Create, upload and use their own recorded sounds.	How can I code a programme, using a variety of events? -Explain that an algorithm is a set of instructions. -Make decisions about which object type to use. -Explain what 'debugging' means. -Debug simple programmes. -Create a computer programme using different objects. -Code a programme using a variety of objects, actions, events and outputs successfully.	How can I present ideas using technology? -Know that digital content can be represented in many forms. -Talk about their work and make improvements to solutions based on feedback received. -Extract information from a file. -Add appropriate clip art/photos to a document. -Use a variety of software to manipulate and present digital content and information. -Collect, organise and present data and information in digital content.	How can I use databases to ask and answer questions? -Understand that the information on pictograms cannot be used to answer more complicated questions. -Use a range of yes/no questions to separate items. -Understand what is meant by a database. -Use a database to answer simple, and more complex questions.	How do I create pictures by using software? -Use painting software to create a picture -Explain what pointillism is. -Use painting software to create art, inspired by an artist. -Create art that uses repeating patterns in a variety of ways. -Combine effects to enhance patterns in a picture.
Year 3 *E-safety*	Online Bullying -Describe appropriate ways to behave towards other people online and why that is important. -Give examples of how bullying behaviour could appear online and how someone can get support.	Online relationships -Explain how someone's feelings can be hurt by what is said or written online.	Privacy & Security -Describe simple strategies for creating and keeping passwords private. Managing Online Information -Explain the difference between a 'belief', and 'opinion' and a 'fact' and give examples of how and where they might be shared online e.g in videos, memes, posts,	Self-image & Identity -Explain what is meant by the term 'identity'.	Online Reputation -Give examples of what anyone may or may not be willing to share about themselves online and explain the need to be careful before sharing anything personal.	Health, Wellbeing & Lifestyle -Explain why spending too much time using technology can sometimes have a negative impact on anyone; give some examples of both positive and negative activities where it is easy to spend a lot of time engaged.

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			news stories etc.			
Year 3 *Curriculum*	How can I be responsible online? Purple mash unit 3.2 -Recognise ways in which digital devices can be distracting. -Recognise information that is private. -Understand that they should never give out private information online. -Understand that online information leaves a digital footprint. -Demonstrate an understanding of how people can connect on the internet. -Explain the importance of giving credit to people's work.	How can I use graphs to present data? -Set up a graph with a given number of fields. -Enter data to create a graph. -Produce and share graphs made on a computer. -Use graphing so solve math investigations. -Present results in a range of graphical formats.	How do I communicate effectively using email? -Highlight the strengths and weaknesses of different ways to communicate. -Open an email and respond to it. -Send emails to others in the class. -Know how to stay safe using email. -Attach appropriate files to an email. -Know what 'cc' means, and how to use it.	-Debug branching databases. How do I code, test and modify code to move a Microbit? -Create a LogoBot programme. -Export a programme as a .hex file. -Drag a file into a drive. -Modify a programme. -Programme multiple events with a repeated command. -Use a wait command to pause between instructions. -Use angle degrees to make the robot turn specific amounts. -Test and modify a programme.	How can I communicate information using Powerpoint? -Alter font, size and colour for emphasis and effect. -Insert graphics into a document. -Combine text and graphics for emphasis and effect. -Add hyperlink buttons to link pages in a presentation. -Add animation to a presentation. -Create a presentation.	How do I create a branching database? -Understand yes/no branches. -Contribute to a whole-class branching database. -Complete and use a branching database. -Create their own branching database with appropriate questions and images.
Year 4 *E-safety*	Online Bullying -Recognise when someone is upset, hurt or angry online. -Describe ways people can be bullied through a range of media. -Explain why people need to think carefully about how content they post might affect others, their feelings and how it may affect how others feel about them.	Online relationships -Describe strategies for safe and fun experiences in a range of online social environments (e.g. livestreaming and gaming platforms)	Privacy & Security -Explain that internet use is never fully private and is monitored, e.g. adult supervision. Managing Online Information -Describe 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.	Self-image & Identity -Explain that others online can pretend to be someone else, including my friends, and suggest reasons why they might do this.	Online Reputation -Explain ways that some of the information about anyone online could have been created, copied or shared by others.	Health, Wellbeing & Lifestyle -Identify times or situations when someone may need to limit the amount of time they use technology e.g.I can suggest strategies to help with limiting this time.
Year 4 *Curriculum*	How can I determine the credibility of online information? Purple mash unit 4.7 -Structure search queries to locate specific information. -Use search to answer a series of questions. -Recognise whether a source is true and reliable.	How can I create an animation using stop motion technology? -Understand what an animation frame is. -Create an animated image. -Use backgrounds and sounds to make more complex and imaginative animations. -Know what 'stop motion'	How do I troubleshoot using Word processing? -Identify poor word processing skills and correct mistakes. -Control where pictures are placed within text. -Use spell and grammar checks.	How do I create mathematical structure using Logo? -Know what common instructions are in Logo and how to type them. -Follow simple Logo instructions to create shapes on paper and in Logo. -Use Logo to draw patterns of increasing complexity.	How do I create a spreadsheet? -Use number-formatting tools appropriately. -Add a formula to a cell to complete a calculation. -Combine tools to explore number. -Use a series of spreadsheet data to create a line graph.	How do I create and code my own character? -Use sketching to design a programme. -Create code that conforms to their own design. -Create if/else statements. -Set/change variable values appropriately. -Make a character respond to

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	-Analyse the content of a web page for clues about the credibility of the information.	animation is and how it is created. -Make a simple animation.		-Understand the pu and pd commands. -Follow a Logo to predict an outcome.	-Create a practical spreadsheet to plan actions.	user keyboard input. -Create an algorithm modelling the sequence of a simple event. -Manipulate graphics in design view to achieve the desired look for the programme.
Year 5 *E-safety*	Online Bullying -Recognise online bullying can be different to bullying in the physical world and can describe some of those differences. -Describe how what one person perceives as playful joking and teasing (including banter) might be experience by others as bullying. -Explain how anyone can get help if they are being bullied online and identify when to tell a trusted adult. -Identify a range of ways to report concerns and access support both in school and at home about online bullying. -Explain how to block abusive users.	Online relationships -Give examples of technology-specific forms of communication (e.g. emojis, memes and GIFs)	Privacy & Security -Explain how many free apps or services may read and share private information with others. Managing Online Information - Describe how fake news may affect someone's emotions and behaviour, and explain why this may be harmful.	Self-image & Identity -Explain how identity online can be copied, modified or altered.	Online Reputation -Describe ways that information about anyone online can be used to make judgments about an individual and why these may be incorrect.	Health, Wellbeing & Lifestyle -Explain how and why some apps and games may request or take payment for additional content (e.g. in-app purchases, loot boxes) and explain the important of seeking permission from a trusted adult before purchasing.
Year 5 *Curriculum*	How can I display knowledge using a concept map? Purple mash Unit 5.7 -Make connections between thoughts and ideas. -Understand and use the correct vocabulary when creating a concept map. -Create their own concept map for a purpose. -Present a concept map to their class, using presentation mode.	How do I create a blog to entice an intended audience? -Understand the features of a blog and how they can be used as an informative text. -Work collaboratively to plan a blog. -Create a blog with a specific purpose. -Understand their audience and how to present information. -Understand that blogs need to be updated regularly to maintain interest and engagement. -Post comments on existing blogs.	How can I create a simulation using complex code? -Import, edit and create backgrounds and sprites in Scratch. -Import music and programme sprites to behave in a specific manner. -Draw a sprite and create alternative 'costumes' for the sprite. -Import a 'ready-made' sprite with costumes and programme it to behave in a specific manner.	How can I use spreadsheets to process information? - Recognise that mathematical models can be explored using a spreadsheet. -Use formula to calculate a sum. -Change data within a spreadsheet and ask 'what if?' questions. -Graph results from a spreadsheet in a range of ways. -Use a spreadsheet and formula to calculate profit and loss.	How do I code my own maze game? -Write an algorithm so a sprite moves with the arrow keys of a keyboard. -Create a maze background with Scratch software. -Write algorithms using the senses blocks. -Write algorithms using the motion blocks. -Duplicate and amend algorithms. -Complete and test algorithms. -Add variables to a game.	How can I create a 3D model? -Explore the different viewpoints in 3D modelling software. -Adapt 3D models by moving points to alter a shape, whilst still maintaining its form. -Edit polygon 3D models for a purpose. -Refine their design to prepare for printing.

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		-Understand the approval process that their posts go through and demonstrate an awareness of the issues surrounding inappropriate posts and cyberbullying.				
Year 6 *E-safety*	Online Bullying -Describe how to capture bullying content as evidence to share with others who can help me. -Explain how someone would report online bullying in different contexts.	Online relationships -Describe how things shared privately online can have unintended consequences for others (e.g. screen grabs)	Privacy & Security -Describe ways in which some online content targets people to gain money or information illegally and I can describe strategies to help me identify such content (e.g. scams, phishing). Managing Online Information -Describe the difference between online misinformation and dis-information.	Self-image & Identity -Identify and critically evaluate online content relating to gender, race, religion, disability, culture and other groups, and explain why it is important to challenge and reject inappropriate representations online.	Online Reputation -Explain the ways in which anyone can develop a positive online reputation.	Health, Wellbeing & Lifestyle -Recognise and discuss the pressures that technology can place on someone and how/when they could manage this.
Year 6 *Curriculum*	What can I learn about online networks? Purple mash unit 6.6 -Know the difference between the world wide web and the internet. -Know what LAN and WAN are. -Understand how we access the internet in school. -Know the history of the internet, including Tim Berners-Lee. -Consider some of the major changes in technology which have taken place during their lifetime and the life time of their teacher/another adult. -Think about what the future holds.	How can I create a quiz by using databases? -Create a picture-based quiz for young children, based on the audience's ability level and interests. -Share their quizzes and respond to feedback. -Know how to use different question types within a quiz. -Make a quiz that requires the player to search a database. -Make a test for adults.	How can I create my own film, using editing platforms? -Identify cinematography techniques and why various ones are used. -Plan, prepare and rehearse for a short film. -Use a camera to film a short presentation. -Import movie clips into a movie editing app. -Add text to a movie. -Add effects and music to a movie. -Create and edit their own movie including the taught features.	How do I code a game that includes variables like levels, resets and lives? -Write an algorithm so a sprite moves with the arrows on the keyboard. -Add end points and 'safe zones' to a game. -Add variables to a game such as 'lives'. -Write an algorithm whereby a good sprite, touching a bad sprite, will reset the game.	How do I use software to create a podcast? -Use audio editing software to record and edit audio recordings. -Add a jingle to add to the overall effect of the podcast. -Add sound effects to a podcast. -Change sound levels as appropriate, save and critically evaluate work. -Present a podcast to the class.	How can I use a spreadsheet for my own purpose? -Explore mathematical models using a spreadsheet. -Enter formulae to calculate totals and averages. -Graph data using chart icon and wizard. -Create a spreadsheet with its own purpose.

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