



ST MICHAEL'S PRIMARY SCHOOL

COMPUTING



Information Technology	Digital Literacy	Computer Science
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	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Nursery Curriculum	<ul style="list-style-type: none"> -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	<ul style="list-style-type: none"> -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? -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	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	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	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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	<p>Mash to add text and pictures to my work.</p> <ul style="list-style-type: none"> -Explore and use different sections in Purple Mash like Topics, Tools, and Games. -Read messages from their teacher and search for resources in Purple Mash. 	<p>the page.</p> <ul style="list-style-type: none"> -Use the 'lock' tool to prevent changes. 			<p>move when clicked, given a variety of input events.</p> <ul style="list-style-type: none"> -Programme a sound to play when objects collide. 	
Year 2 <i>E-safety</i>	<p>Online bullying</p> <ul style="list-style-type: none"> -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. 	<p>Online relationships</p> <ul style="list-style-type: none"> -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) 	<p>Privacy & Security</p> <ul style="list-style-type: none"> -Explain and give examples of what is meant by 'private' and 'keeping things private'. <p>Managing Online Information</p> <ul style="list-style-type: none"> -Use simple keywords in search engines. 	<p>Self-image & Identity</p> <ul style="list-style-type: none"> -Explain how other people may look and act differently online and offline. 	<p>Online Reputation</p> <ul style="list-style-type: none"> -Describe how anyone's online information could be seen by others. 	<p>Health, Wellbeing & Lifestyle</p> <ul style="list-style-type: none"> -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 <i>Curriculum</i>	<p>How do I use the internet to search?</p> <ul style="list-style-type: none"> -Recall the meaning of key Internet and searching items -Identify the basic parts of a web search engine page. -Search the internet for answers. 	<p>How can I create music, using technology?</p> <ul style="list-style-type: none"> -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. 	<p>How can I code a programme, using a variety of events?</p> <ul style="list-style-type: none"> -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. 	<p>How can I present ideas using technology?</p> <ul style="list-style-type: none"> -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. 	<p>How can I use databases to ask and answer questions?</p> <ul style="list-style-type: none"> -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. 	<p>How do I create pictures by using software?</p> <ul style="list-style-type: none"> -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 <i>E-safety</i>	<p>Online Bullying</p> <ul style="list-style-type: none"> -Describe appropriate ways to behave towards other people 	<p>Online relationships</p> <ul style="list-style-type: none"> -Explain how someone's feelings can be hurt by what is said or written online. 	<p>Privacy & Security</p> <ul style="list-style-type: none"> -Describe simple strategies for creating and keeping passwords private. 	<p>Self-image & Identity</p> <ul style="list-style-type: none"> -Explain what is meant by the term 'identity'. 	<p>Online Reputation</p> <ul style="list-style-type: none"> -Give examples of what anyone may or may not be willing to share about 	<p>Health, Wellbeing & Lifestyle</p> <ul style="list-style-type: none"> -Explain why spending too much time using technology can sometimes have a



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	<p>online and why that is important.</p> <ul style="list-style-type: none"> -Give examples of how bullying behaviour could appear online and how someone can get support. 		<p>Managing Online Information</p> <ul style="list-style-type: none"> -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, news stories etc. 	<p>themselves online and explain the need to be careful before sharing anything personal.</p> <p>negative impact on anyone; give some examples of both positive and negative activities where it is easy to spend a lot of time engaged.</p>		
Year 3 Curriculum	<p>How can I be responsible online?</p> <ul style="list-style-type: none"> -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. 	<p>How can I use graphs to present data?</p> <ul style="list-style-type: none"> -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. 	<p>How do I communicate effectively using email?</p> <ul style="list-style-type: none"> -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. 	<p>How do I code, test and modify code to move a Microbit?</p> <ul style="list-style-type: none"> -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. 	<p>How can I communicate information using Powerpoint?</p> <ul style="list-style-type: none"> -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. 	<p>How do I create a branching database?</p> <ul style="list-style-type: none"> -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. -Debug branching databases.
Year 4 E-safety	<p>Online Bullying</p> <ul style="list-style-type: none"> -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. 	<p>Online relationships</p> <ul style="list-style-type: none"> -Describe strategies for safe and fun experiences in a range of online social environments (e.g. livestreaming and gaming platforms) 	<p>Privacy & Security</p> <ul style="list-style-type: none"> -Explain that internet use is never fully private and is monitored, e.g. adult supervision. <p>Managing Online Information</p> <ul style="list-style-type: none"> -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. 	<p>Self-image & Identity</p> <ul style="list-style-type: none"> -Explain that others online can pretend to be someone else, including my friends, and suggest reasons why they might do this. 	<p>Online Reputation</p> <ul style="list-style-type: none"> -Explain ways that some of the information about anyone online could have been created, copied or shared by others. 	<p>Health, Wellbeing & Lifestyle</p> <ul style="list-style-type: none"> -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.



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Year 5 E-safety	<p><u>Online Bullying</u></p> <ul style="list-style-type: none"> -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. 	<p><u>Online relationships</u></p> <ul style="list-style-type: none"> -Give examples of technology-specific forms of communication (e.g. emojis, memes and GIFs) 	<p><u>Privacy & Security</u></p> <ul style="list-style-type: none"> -Explain how many free apps or services may read and share private information with others. <p><u>Managing Online Information</u></p> <ul style="list-style-type: none"> - Describe how fake news may affect someone's emotions and behaviour, and explain why this may be harmful. 	<p><u>Self-image & Identity</u></p> <ul style="list-style-type: none"> -Explain how identity online can be copied, modified or altered. 	<p><u>Online Reputation</u></p> <ul style="list-style-type: none"> -Describe ways that information about anyone online can be used to make judgments about an individual and why these may be incorrect. 	<p><u>Health, Wellbeing & Lifestyle</u></p> <ul style="list-style-type: none"> -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	<p><u>How can I display knowledge using a concept map?</u></p> <ul style="list-style-type: none"> -Make connections between 	<p><u>How do I create a blog to entice an intended audience?</u></p> <ul style="list-style-type: none"> -Understand the features of a 	<p><u>How can I create a simulation using complex code?</u></p> <ul style="list-style-type: none"> -Import, edit and create 	<p><u>How can I use spreadsheets to process information?</u></p> <ul style="list-style-type: none"> - Recognise that mathematical 	<p><u>How do I code my own maze game?</u></p> <ul style="list-style-type: none"> -Write an algorithm so a sprite 	<p><u>How can I create a 3D model?</u></p> <ul style="list-style-type: none"> -Explore the different viewpoints in 3D modelling



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	<p>thoughts and ideas.</p> <ul style="list-style-type: none"> -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. 	<p>blog and how they can be used as an informative text.</p> <ul style="list-style-type: none"> -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. -Understand the approval process that their posts go through and demonstrate an awareness of the issues surrounding inappropriate posts and cyberbullying. 	<p>backgrounds and sprites in Scratch.</p> <ul style="list-style-type: none"> -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. 	<p>models can be explored using a spreadsheet.</p> <ul style="list-style-type: none"> -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. 	<p>moves with the arrow keys of a keyboard.</p> <ul style="list-style-type: none"> -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. 	<p>software.</p> <ul style="list-style-type: none"> -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.
Year 6 E-safety	<p>Online Bullying</p> <ul style="list-style-type: none"> -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. 	<p>Online relationships</p> <ul style="list-style-type: none"> -Describe how things shared privately online can have unintended consequences for others (e.g. screen grabs) 	<p>Privacy & Security</p> <ul style="list-style-type: none"> -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). <p>Managing Online Information</p> <ul style="list-style-type: none"> -Describe the difference between online misinformation and dis-information. 	<p>Self-image & Identity</p> <ul style="list-style-type: none"> -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. 	<p>Online Reputation</p> <ul style="list-style-type: none"> -Explain the ways in which anyone can develop a positive online reputation. 	<p>Health, Wellbeing & Lifestyle</p> <ul style="list-style-type: none"> -Recognise and discuss the pressures that technology can place on someone and how/when they could manage this.
Year 6 Curriculum	<p>What can I learn about online networks?</p> <ul style="list-style-type: none"> -Know the difference between the world wide web and the internet. -Know what LAN and WAN 	<p>How can I create a quiz by using databases?</p> <ul style="list-style-type: none"> -Create a picture-based quiz for young children, based on the audience's ability level and interests. 	<p>How can I create my own film, using editing platforms?</p> <ul style="list-style-type: none"> -Identify cinematography techniques and why various ones are used. -Plan, prepare and rehearse 	<p>How do I code a game that includes variables like levels, resets and lives?</p> <ul style="list-style-type: none"> -Write an algorithm so a sprite moves with the arrows on the keyboard. 	<p>How do I use software to create a podcast?</p> <ul style="list-style-type: none"> -Use audio editing software to record and edit audio recordings. -Add a jingle to add to the 	<p>How can I use a spreadsheet for my own purpose?</p> <ul style="list-style-type: none"> -Explore mathematical models using a spreadsheet. -Enter formulae to calculate totals and averages.



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<p>are.</p> <ul style="list-style-type: none"> -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. 	<ul style="list-style-type: none"> -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. 	<p>for a short film.</p> <ul style="list-style-type: none"> -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.
	<ul style="list-style-type: none"> -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. 	<p>overall effect of the podcast.</p> <ul style="list-style-type: none"> -Add sound effects to a podcast. -Change sound levels as appropriate, save and critically evaluate work. -Present a podcast to the class.
		<ul style="list-style-type: none"> -Graph data using chart icon and wizard. -Create a spreadsheet with its own purpose.