

Computing and Online Safety Subject Skeleton Overview

“It is not the strongest of the species that survives, nor the most intelligent that survives. It is the one that is the most adaptable to change.” Charles Darwin



Essential Knowledge

Computing Overview						
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Christian Values	FORGIVENESS		PERSEVERANCE		RESPECT	
	FRIENDSHIP	TRUTHFULNESS	WISDOM	COMPASSION	JUSTICE	RESPONSIBILITY
EYFS	ELG (Technology): There are no early learning goals that directly relate to computing objectives, though it is still expected that children will be introduced to appropriate technology and use it within provision. - Learning how to log onto Purple Mash and use age-appropriate software E.g 2 Paint and set 2dos related to our topic work - We will become more independent using ICT equipment in the classroom E.g taking photos for Tapestry, timers - We will use the internet to help find out facts to support our classroom work - Use some simple programs on the iPads that are cross curricular and support our learning, 'Bugs and Buttons' 'Pre-Motor Dexteria' Internet Safety - In our PSHE lessons we will use the SCARF program to look at 'Keeping Safe on-line' and talking about ways to stay safe when using technology.					

EYFS Online Safety	Self-Image and Identity Children will know:		Online Reputation Children will know:		Managing Information Online Children will know:		Privacy and Security Children will know:	
	That online or offline, anyone can say 'no', 'please stop', 'I'll tell', or 'I'll ask' to somebody who makes them feel sad, uncomfortable, embarrassed, or upset. Online Relationships Children will know:		That they can put information on the internet in different ways. Online Bullying Children will know:		- That the internet can be used as a way of finding information online. - Devices they could use to access information on the internet. Health, Well-being and Lifestyle Children will know:		- That some simple examples of personal information include name, address, birthday, age, and location. - Who would be trustworthy to share this information with and can explain why those people are trusted. Copyright and Ownership Children will know:	
Y1	Information Technology + Digital Literacy Introduction to Purple Mash Pupils will know how:	Information Technology Purple Mash Unit: Creative Computing 2Paint Pupils will know how:	Information Technology Purple Mash Unit: Data Explorers 2Count Pupils will know how:	Digital Literacy Purple Mash Unit: Technology Around Us Pupils will know how:	Computer Science Purple Mash Unit: Creating and Following Instructions Pupils will know how:	Information Technology Purple Mash Unit: Making Beats 2Explore 2Beat Pupils will know how:		
	To be able to log on and navigate Purple Mash	- To create digital art - Save their work	To represent and sort data digitally	To identify technology they use and how to use it safely	To follow code by steps. Computer Science Purple Mash Unit: Coding 2Code Pupils will know how:	To create and debug simple programs		

Y1 Online Safety	Self-Image and Identity Children will know:		Online Reputation Children will know:		Managing Information Online Children will know:		Privacy and Security Children will know:	
	- That there may be people online who could make someone feel sad, embarrassed, or upset. - That if something happens that makes them feel sad, worried, uncomfortable, or frightened, they can give examples of when and how to speak to a trusted adult and how that adult can help Online Relationships Children will know:		- That information can stay online and could be copied. - That they should not put information online without asking a trusted adult first. Online Bullying Children will know:		- Simple examples of how to find information using digital technologies, such as search engines or voice-activated searching. - That they can encounter a range of things online including things they like and don't like, as well as things that are real, make-believe, or a joke. - How to get help from a trusted adult if they see content that makes them feel sad, uncomfortable, worried, or frightened. Health, Well-being and Lifestyle Children will know:		- That passwords are used to protect information, accounts, and devices. - More detailed examples of personal information, such as where someone lives or goes to school, and family names. - That it is important to always ask a trusted adult before sharing personal information online, whether it belongs to themselves or others. Copyright and Ownership Children will know:	
Y2	Information Technology & Digital Literacy Purple Mash Unit: The Internet Pupils will know how:	Information Technology Purple Mash Unit: Creating Pictures 2Paint A Picture Pupils will know how:	Computer Science Purple Mash Unit: Coding 2Code Pupils will know how:	Information Technology Purple Mash Unit: Questioning 2Graph 2Count Pupils will be know how:	Computer Science Purple Mash Unit: Spreadsheets 2Calculate Pupils will know how:	Computer Science Purple Mash Unit: Route Explorers 2Go Pupils will know how:	Information Technology Purple Mash Unit: Making Music 2Sequence	
	To gain a better understanding of the Internet.	To learn the functions of the 2Paint a Picture tool.	- To create a computer program using an algorithm. - To understand that algorithms follow a sequence.	To explore ways to collect data digitally	To use 2Calculate to collect data in a spreadsheet	To program a route using code		

	<u>Information Technology & Digital Literacy</u> Purple Mash Unit: Introduction to Purple Mash Pupils will know how: • To access Purple Mash and tools.		• To understand and debug simple programs.			Pupils will know how: • To create music digitally
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Y2 Online Safety	Self-Image and Identity Children will know: - That other people may look and act differently online and offline. - That there are issues online that might make someone feel sad, worried, uncomfortable, or frightened, and they can give examples of how to get help. Online Relationships Children will know: - That using technology to communicate with people they don't also know offline can be risky (e.g. Email, online gaming, or a pen-pal in another school/country). - Who they should ask before sharing things about themselves or others online. - Different ways to ask for, give, or deny permission online and who can help if they are unsure. - That they have a right to say 'no' or 'I will have to ask someone', and who can help if they feel pressured to agree to something. - Who can help if something happens online without their consent. - How it may make others feel if they do not ask permission or ignore answers before sharing something about them online. - That they should always ask a trusted adult before clicking 'yes', 'agree', or 'accept' online.	Online Reputation Children will know: - That information put online about someone can last for a long time. - That anyone's online information could be seen by others. - Who to talk to if something has been put online without consent or if it is incorrect. Online Bullying Children will know: - What bullying is, how people may bully others, and how bullying can make someone feel. - That anyone who experiences bullying is not to blame. - How someone experiencing bullying can get help.	Managing Information Online Children will know: - How to use simple keywords in search engines. - How to navigate a simple webpage to get to information I need (e.g. Home, forward, back buttons; links, tabs and sections). - 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). - The difference between things that are imaginary, 'made up' or 'make believe' and things that are 'true' or 'real'. - That not everything online is real or true. Health, Well-being and Lifestyle Children will know: - Simple guidance for using technology in different environments and settings, such as public places and at home and know how rules and guides can help anyone accessing online technologies.	Privacy and Security Children will know: - That passwords can be used to protect information, accounts, and devices. - What is meant by "private" and "keeping things private" and can give examples. - Rules for keeping personal information private, such as creating and protecting passwords. - That some people may have internet-connected devices in their homes, such as lights, fridges, toys, or televisions. Copyright and Ownership Children will know: - That content on the internet may belong to other people. - Why other people's work belongs to them.
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Y3	<u>Computer Science</u> Purple Mash Unit: micro:bits Free Code micro:bit Pupils will know how: - To enter code to manipulate a micro:bit. <u>Information Technology</u> Purple Mash Unit: Branching Databases 2Question Pupils will know how: - To use a branching database to filter data.	<u>Digital Literacy & Computer Science</u> Purple Mash Unit: Email 2Email Pupils will know how: To send, open and reply to emails in a safe platform.	<u>Computer Science</u> Purple Mash Unit: Coding 2Code Pupils will know how: To use input commands, use timers and debug code.	<u>Information Technology</u> Purple Mash Unit: Touch Typing 2Type Pupils will know how: To use their left hand and their right hand to type on a keyboard.	<u>Information Technology</u> Purple Mash Unit: Presentations Microsoft PowerPoint Pupils will know how: To create a presentation using PowerPoint.	<u>Information Technology</u> Purple Mash Unit: Spreadsheets 2Calculate Pupils will know how: To use a spreadsheet to organise and analyse data.
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Y3 Online Safety	Self-Image and Identity Children will know: - What is meant by the term 'identity' - That people can represent themselves in different ways online. - That someone might change their identity depending on what they are doing online (e.g. gaming, using an avatar, social media) and why. Online Relationships Children will know: - That people with similar likes and interests can connect online. - What it means to 'know someone' online and why this is different from knowing someone offline. - What it means to 'trust someone online', why this is different from 'liking someone online', and why they should be careful about who to trust and with what information. - That someone may change their mind about trusting another person if they feel nervous, uncomfortable, or worried. - That feelings can be hurt by what is said or written online. - The importance of giving and gaining permission before sharing things online, and that the same principles apply offline (e.g. Sharing images or videos).	Online Reputation Children will know: - How to search for information about others online. - That people may or may not want to share information about themselves online, and they should be careful before sharing personal details. - Who to ask if they are unsure about putting something online. Online Bullying Children will know: - Appropriate ways to behave towards others online and why this is important. - Examples of how bullying behaviour could appear online and how someone can get support.	Managing Information Online Children will know: - How to use key phrases in search engines to gather accurate information online. - What autocomplete is and how to choose the best suggestion. - That the internet can be used to buy and sell things. - The difference between a belief, an opinion, and a fact, and can give examples of how these are shared online (e.g. Videos, memes, posts, news stories). - That not all opinions shared online will be accepted as true or fair by others. - How to describe and demonstrate how they can get help from a trusted adult if we they content that makes them feel sad, uncomfortable worried or frightened. Health, Well-being and Lifestyle Children will know: - Spending too much time using technology can negatively affect mood, sleep, body, or relationships, and they know examples of both positive and negative activities that can take up lots of time. - That some online activities have age restrictions, why it is important to follow them, and who to talk to if they feel pressured to access unsuitable content.	Privacy and Security Children will know: - Simple strategies for creating and keeping passwords private. - That information should only be shared with people they choose and can trust, and that if they are unsure or feel pressured, they should tell a trusted adult. - That connected devices can collect and share people's information with others. Copyright and Ownership Children will know: - That copying someone else's work from the internet without permission isn't fair and can cause problems.
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Y4	<u>Information Technology</u> Purple Mash Unit: Unpacking Hardware and Software 2Quiz 2Publish Pupils will know how: - To recognise hardware and software. <u>Computer Science & Information Technology & Digital Literacy</u> Purple Mash Unit: Effective Searching 2Publish Pupils will know how: - To use a search engine effectively.	<u>Computer Science</u> Purple Mash Unit: Logo Pupils will know how: To design, write and debug programs	<u>Computer Science</u> Purple Mash Unit: Coding 2Code Pupils will know how: To use design view to alter objects and use 'if' commands.	<u>Information Technology</u> Purple Mash Unit: Sound Stories 2Cast Pupils will know how: To create an audiobook	<u>Information Technology</u> Purple Mash Unit: Animation 2Animate Pupils will know how: To create an animation	<u>Information Technology</u> Purple Mash Unit: Composing Beats Busy Beats Pupils will know how: - To create digital music <u>Information Technology</u> Purple Mash Unit: Introduction to AI Pupils will know how: - To use AI responsibly
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Y4 Online Safety	Self-Image and Identity Children will know: - That their online identity can be different to their offline identity. - Positive ways to interact with others online and understand how this will positively affect how others perceive them. - That others online can pretend to be someone else, including their friends, and they can suggest reasons why this might happen. Online Relationships Children will know: - Strategies for safe and fun experiences in different online environments (e.g. Livestreaming, gaming platforms). - How to be respectful to others online and how to recognise healthy and unhealthy behaviours. - That content shared online may feel unimportant to one person but may matter greatly to another's thoughts, feelings, or beliefs.	Online Reputation Children will know: - How to find out information about others by searching online. - That some online information could have been created, copied, or shared by others. Online Bullying Children will know: - How to recognise when someone is upset, hurt, or angry online. - That bullying can take place through different media such as images, videos, text, or chat. - That people need to think carefully about how content they post might affect others' feelings and their reputation.	Managing Information Online Children will know: - How to analyse information to make a judgement about probable accuracy and why it is important to make their own decisions about content. - How to search for information within a wide range of technologies (e.g. Social media, image sites, video sites) and judge its probable accuracy. - Methods used to encourage people to buy things online (e.g. Advertising offers, in-app purchases, pop-ups) and can recognise these when they appear. - That many people sharing the same opinions or beliefs online does not make them true. - That technology can be designed to act like or impersonate living things (e.g. Bots) and can describe the benefits and risks. - What fake news is and that some people create stories or alter photographs to pretend something is true when it isn't. Health, Well-being and Lifestyle Children will know: - That technology can be a distraction from other things in both positive and negative ways. - Situations when it may be necessary to limit technology use and strategies that can help manage this.	Privacy and Security Children will know: - Strategies for keeping personal information private depending on the context. - That internet use is never fully private and is monitored, such as through adult supervision. - That some online services may seek consent to store information and how to respond appropriately, including asking for help if unsure. - What the digital age of consent is and the impact this has on online services requesting consent. Copyright and Ownership Children will know: - That when searching for content online, they must consider who owns it and whether they have the right to reuse it. - Examples of content that must not be used without permission, such as videos, music, and images.

Y5	<u>Information Technology</u> Purple Mash Unit: Databases 2Investigate Pupils will know how: To use tools to interpret data in a database.	<u>Information Technology</u> Purple Mash Unit: Spreadsheets 2Calculate and Microsoft Excel Pupils will know how: To use functions in Excel spreadsheets.	<u>Information Technology</u> Purple Mash Unit: Quizzing 2Quiz Pupils will know how: To generate an interactive quiz.	<u>Computer Science</u> Purple Mash Unit: Coding 2Code Pupils will know how: To write and debug their own code.	<u>Information Technology</u> Purple Mash Unit: Word Processing Microsoft Word Pupils will know how: To use Word to generate documents.	<u>Computer Science</u> Purple Mash Unit: Game Creator 2DIY3D Pupils will know how: To create their own immersive game.
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Y5 Online Safety	Self-Image and Identity Children will know: - That identity online can be copied, modified, or altered. - How to make responsible choices about having an online identity, depending on the context. Online Relationships Children will know: - Examples of technology-specific communication such as emojis, memes, and gifs. - That some people they communicate with online may want to do them or their friends harm, and that this is not their fault. - How people can take part in online communities, collaborate constructively, and make positive contributions (e.g. Gaming groups, social media). - How to get help if they are having problems and when to tell a trusted adult. - How to support others online, including those having difficulties.	Online Reputation Children will know: - How to search for information about an individual online and summarise what they find. - That information about anyone online can be used by others to make judgments, and that these judgments may be incorrect. Online Bullying Children will know: - That online bullying can be different from bullying in the physical world and can describe some of those differences. - That what one person perceives as playful joking or banter might be experienced by others as bullying. - How anyone can get help if they are being bullied online and when to tell a trusted adult. - A range of ways to report concerns and access support both in school and at home about online bullying. - How to block abusive users. - About helpline services that support people experiencing bullying, such as Childline or The Mix, and how to access them.	Managing Information Online Children will know: - The benefits and limitations of different search technologies, such as voice-activated searching. - What it means to be sceptical and when and why this is important. - How to evaluate digital content and make choices about what is trustworthy, such as differentiating between adverts and search results. - Key concepts including information, reviews, fact, opinion, belief, validity, reliability, and evidence. - Ways the internet can draw people to information for different agendas, such as notifications, pop-ups, or targeted ads. - How to identify when online content has been commercially sponsored or boosted, for example by companies, vloggers, or influencers. - What stereotypes are, how they are amplified and reinforced online, and why accepting stereotypes may influence how people think about others. - That fake news can affect someone's emotions and behaviour and why this may be harmful. - What a hoax is and why people need to think carefully before sharing. Health, Well-being and Lifestyle Children will know: - Ways technology can affect health and well-being both positively, such as through mindfulness apps, and negatively. - Strategies, tips, and advice to promote health and wellbeing when using technology.	Privacy and Security Children will know: - What a strong password is and how to create one. - That many free apps or services may read and share private information such as contacts, likes, images, videos, messages, or location. - What app permissions are and can give examples. Copyright and Ownership Children will know: - How to assess and justify when it is acceptable to use the work of others. - Examples of content that can be reused and how to find this online.
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Y6	<u>Computer Science</u> Purple Mash Unit: Networks Pupils will know how: • To determine different networks and web browsers. <u>Information Technology</u> Purple Mash Unit: Graphing 2Graph 2Calculate Pupils will know how: • To create and interpret various graphs and charts.	<u>Information Technology</u> Purple Mash Unit: Blogging 2Blog Pupils will know how: • To write and contribute to a blog responsibly.	<u>Computer Science</u> Purple Mash Unit: Coding 2Code Pupils will know how: • To use a combination of coding structures and objects to design interactive and creative programs.	<u>Information Technology</u> Purple Mash Unit: Data Detectives Data Detectives Pupils will know how: • To use query tools to interrogate data.	<u>Computer Science</u> Purple Mash Unit: Introduction to Python Python in Pieces Pupils will know how: • To use Python as a text based code.	<u>Information Technology</u> Purple Mash Unit: 3D Modelling 2Design and Make Pupils will know how: • To use technology to design and make a 3D model. <u>Computer Science</u> Purple Mash Unit: micro:bits micro:bits Pupils will know how: • To use Free Code micro:bit in conjunction with the micro:bit's pins to create a range of outputs when a circuit is detected.

Y6 Online Safety	Self-Image and Identity Children will know: - How to identify and critically evaluate online content relating to gender, race, religion, disability, culture, and other groups, and they know why it is important to challenge and reject inappropriate representations online. - That there are issues online that could make anyone feel sad, worried, uncomfortable, or frightened, and they can give examples of how to get help both on and offline. - The importance of asking for help until they get the support they need. Online Relationships Children will know: - That sharing something online may have either a positive or negative impact. - How to be kind and respectful to others online, including respecting boundaries about what is shared, and how to support others if those boundaries are not respected. - That things shared privately online can still have unintended consequences (e.g. Screen-grabs). - That taking or sharing inappropriate images, even with permission, may still have an impact for themselves and others, and who can help if they are worried.	Online Reputation Children will know: - Ways in which anyone can develop a positive online reputation. - Strategies to protect their digital personality and online reputation, including using different levels of anonymity. Online Bullying Children will know: - How to capture bullying content as evidence (e.g. Screenshot, URL, profile) to share with others who can help. - How to report online bullying in different contexts.	Managing Information Online Children will know: - How search engines work and how results are selected and ranked. - How to use search technologies effectively. - That some online information is opinion and can give examples. - That some people present opinions as facts, and that popularity or personality does not make an opinion true, fair, or legal. - The meaning of influence, manipulation, and persuasion, and how these can be encountered online (e.g. Advertising, fake news). - What persuasive design is and how it is used to influence choices. - How to analyse and evaluate the validity of facts and information and why this is important. - That companies and news providers target people with stories they are more likely to engage with and how to recognise this. - The difference between misinformation and disinformation. - That information appearing on many sites may still be inaccurate or untrue, and how this happens through the spread of misinformation or disinformation. - How to identify, flag, and report inappropriate content. Health, Well-being and Lifestyle Children will know: - Common systems that regulate age-related content (e.g. PEGI, BBFC, parental warnings) and their purpose.	Privacy and Security Children will know: - Effective ways to manage passwords, such as storing them securely or saving them in a browser. - What to do if a password is shared, lost, or stolen. - How and why people should keep their software and apps up to date, including auto-updates. - Simple ways to increase privacy on apps and services that offer privacy settings. - That some online content targets people to gain money or information illegally and can describe strategies to identify this, such as spotting scams or phishing. - That online services have terms and conditions that govern their use. Copyright and Ownership Children will know: - How to use search tools to find and access online content that can be reused by others. - How to make references to and acknowledge sources they have used from the internet.
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| | | | <ul style="list-style-type: none">• The pressures that technology can create and how and when to manage these.• Features of persuasive design and how these are used to keep users engaged.• Strategies to reduce the impact of technology on health, such as night - shift mode, regular breaks, correct posture, sleep, diet, and exercise. | |
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