Knowledge Progression Document – Computing

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Computer Science – algorithms **Real life contexts / Why this is taught** Electronic, digital technologies are embedded throughout 21st century life e.g. smart phones, computers, cloud based applications, robotic manufacturing, washing machines, TVs, even mixing paint at a DIY store. Children need to know that these devices are controlled by algorithms compiled into code. Developing logical reasoning and knowledge of algorithms and coding will ensure children are knowledgeable and skilled users of these technologies and are prepared to use future technologies through their understanding of the underlying principles.	• Know that an algorithm is a set of instructions used to solve a problem or achieve an objective. • Know that an algorithm written for a computer is called a program. • Can write algorithms. • Can explain what coding is and what a 'block of code' is. • Can program the robot/ character to move forwards, backwards, turn, when and make sounds. • Can program a response when objects interact. Units 1.4 1.5 1.7 1R	• Know that an algorithm is a set of instructions to complete a task. • Know algorithms must be precise to compile into code. • Can write simple program that achieves a specific purpose. • Can use timer and repeat commands. • Program designs display a growing knowledge of the need for logical, programmable steps. • Can create precise algorithms and programs to make 'Roamer' to follow routes with right angles. Units 2.1 2R	• Create sequential algorithms. • Know and understand: "Object, Action, Output, Control, Event" • Knows programs can simulate physical systems. • Know how to use X and Y properties of object. • Know how to create "if" statements. • Understand variables and know how to create them. • Can use repeat. • Can use repeat to make the roamer draw (pen in roamer on paper) mathematical shapes using precise code, e.g. including squares, rectangles, and triangles. • Can explore the effects of changing these variables. • Include outputs. Units 3.1 3R	• Can create code that conforms to their design • Knows how to create an 'If/else' statement. • Can set/change the variable values appropriately. • Knows how to interpret a flowchart that depicts an if/else flowchart. • Knows how to create a timer that prints a new number to the screen every second. • Knows how to use keyboard inputs to create a response • Knows how to use an algorithm when making a simulation of an event on the computer. Unit 4.1 • Know how to use PU PD SETPC SETPST in Logo • Know how to write procedures and embed them in other code. E.g. REPEAT 9 [SQUARE RT 160 Unit 4.5 • Knows how to write procedures. • Knows how to include procedures and repeat within other code. Unit 4R	• Know how to create simulations. • Understand 'decomposition' and know how to decompose. • Understand 'abstraction' and know how to abstract. • Know variables can be strings (words, phrases, sentences) as well as numbers. • Know how to code buttons and objects that execute a command e.g. launch an app / page Unit 5F • Know how to program multiple repeats and procedures. Unit 5R	• Know the importance of planning and designing before writing code. • Know how to use functions • Know how and why code is grouped into sections e.g. tabs • Know how to program for user input Unit 6.1 • Knows what interactive (non-linear) stories are. • Can design an interactive story. • Knows how to write code in blocks, tabs using functions and outputs. • Knows how to include user inputs. Unit 6.5 • Know that web pages are written in Hyper Text Markup Language. • Know how to use a plain text editor (e.g. Notepad++) to write a simple webpage. • Know how to create simple styling. • Know how to inset images on a web page. • Know how to insert hyperlinks to other web pages Unit 6W • Know digital systems are ultimately patterns of 1s 0s represented by on/off electrical states • Know how to use a variable set to 0 or 1 to control Unit 6.8

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Computer Science – inputs and outputs, including simulations **Real life contexts / Why this is taught** Real life systems are controlled by inputs and outputs that interface with mechanical and other devices. E.g. a central heating system, an app to control that system from a phone, traffic lights, traffic flow controls, washing machine, robot vacuum cleaner. Models of systems are used to predict and test e.g. weather, a new road network. Children need to know how to use inputs and outputs to measure data and programme responses if this, then that. Developing this knowledge will ensure children understand the world around them and have the knowledge and skills to apply this to life and work.			• Knows how to use a datalogger to measure temperature and sound. • Knows how to connect a datalogger to a computer to record inputs over time in graph and table formats. Unit 3D • Know a computer simulation can represent real and imaginary situations. • Can give some examples of simulations used for fun and for work. • Evaluate simulations by comparing them with real situations and considering their usefulness. • Identify patterns, relationships and rules within simulations and make and test predictions. Unit 3.7	• Know what control systems are and why they are used. • Know the terms and examples of: 'output' 'input' 'sensor' • Know the main flowchart symbols. • Use a mimic to simulate real control technology (simulations) • Create a flowchart to control simple outputs • Understand recursive functions. • Know how to create parallel programs. • Know to programme outputs to respond to one input. • Know how to control more than one output: Unit 4F • Knows how to use a data logger to measure inputs from a wider range of sensors. • Can export the data in graph and table formats to use within other applications e.g. writing up findings from a science investigation in a text editing or publishing program. Unit 4D	• *Continue to use dataloggers within science and the wider curriculum.* • Know how to programme outputs to respond to inputs (multiple). Robot Mimic. • Knows how to add sound outputs, including simulated language. • Know how to programme subroutines • Know how to connect a control interface. • Control physical outputs using a computer and control interface: real-life model with motors and switches connected to a control interface. Unit 5F • Know how to change outputs e.g. speed, units of turn, pitch and tempo Unit 5R	• *Continue to use dataloggers within science and the wider curriculum.* • Know how to control multiple inputs (including sensors), outputs and sub-routines in order to control real-life models. E.g. 1 Big Wheel Mimic and Real-life model 2. • Know how to run graphs from real-life sensors connected via an interface to a control system. Unit 6F
Computer Science – debugging programs **Real life contexts / Why this is taught** Computers, even complex ones, are logical machines. Errors in inputs result in errors in output. Errors in algorithms and	• Can compare with / without precise instructions. • Knows the order of instructions affects the result. • Can work out what is wrong with a simple algorithm when the steps are out of order.	• Can identify and correct some errors. • Can record their roamer instructions and ensure these are efficient e.g. fd 8 rather than fd 3 fd 5 Units 2.1 2R	• Can explain the term "debugging". • Can debug simple programs. Units 3.1 3R 3.7	• Know the need to start coding at a basic level of abstraction to remove superfluous details from their program that do not contribute to the aim of the task. • Can make good attempts to break down their aims for a coding	• Understand 'abstraction' and know how to abstract. Units 5.1 5F 5R	• Continue to use abstraction and encapsulation when coding and debugging.

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coding produce unexpected results or errors. Children need to know that algorithms need to be precise to obtain required results. Coding should be broken into chunks and not be more complex than needed. Developing this knowledge will ensure children can identify errors, problem solve and work systematically.	• Can create unambiguous instructions. • Know that an unexpected outcome is due to the code they have created and can make logical attempts to fix the code Units 1.5 1.7			task into smaller achievable steps Units 4F 4.1		
Computer Science – predicting Real life contexts / Why this is taught Users of technology know if we do… then… will happen and can predict to apply that to new contexts. Young children need to be taught to know how to predict by drawing on what they know.	• Know how to read code one line at a time in a program and make good attempts to envision the bigger picture of the overall effect of the program. • Can explain where the turtle will end up at the end of the program. Units 1.5 1.7 1R	• Can identify the parts of a program that respond to specific events and initiate specific actions: they can write a cause and effect sentence of what will happen in a program. • Can read a robot program and explain what the robot will do. Units 2.1 2R	• Can predict what might reasonably happen when variables are changed. Unit 3R • Can use a simulation to try out different options and to test predictions. Unit 3.7			
Computer Science - networks Real life contexts / Why this is taught Internet, World Wide Web, mobile, local area, wide area, networks, Wi-Fi, collaborative cloud working, video and conference calls are a major part of 21st century communication.		• Knows some ways things are shared electronically. Unit 2.2	• Know ways in which the internet can be used for communication. Unit 3.2	*Consolidate prior learning through cross-curricular contexts.*	• Know what computer networks are including the internet, WAN and LAN and wireless. • Know the difference between the internet and World Wide Web. • Know about the opportunities offered by these services for communication and collaboration. Unit 6.6 • Know how to work collaboratively on one piece of work across devices.	• Collaborate using a learning platform

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Children need to know how these systems allow communication and collaboration for learning and communication now and in their future world of work.					Unit 5.7	
Information Technology **Real life contexts / Why this is taught** Saving electronic work and basic IT skills are essential for learning, play and future work.	Knows how to • Name, save and open work • Follow simple instructions to access online resources. • Add backgrounds • Insert clipart • Copy & paste • Click and drag.	• Knows digital content can be represented in many forms. Unit 2.8				
Information Technology - text & combined publishing **Real life contexts / Why this is taught** Using apps to write a letter, make a poster, design a greeting card, make an effective slide show etc are core IT skills for learning and future work. Children need to know the correct way to process these documents, format them using current conventions, use a keyboard and style their work effectively for the audience.	• Enter text, spaces & capitals using shift • Change the colour, font and size of texts	• Can create a file that includes text, photo and clipart / saved image. • Combine information from more than one program / application to present information. • Knows how to start a new section using Enter. • Can type ?! "" £ @ using shift. Unit 2.8	• Knows the layout of a keyboard. • Can type on a keyboard with two hands. • Can use shift and space bar efficiently. • Can type all punctuation and symbols on they keyboard correctly, using the shift key when needed. Unit 3.4	• Format text for an audience. • Add graphics and images to engage an audience. • Use the tab key to indent text e.g. for a letter address and date, paragraphs. • Use Enter key for paragraphs Unit 4.4	• Know and understand the terms 'concept maps', 'stage', 'nodes' and 'connections'. • Know how to create concept maps. • Know how to style a concept map to provide clarity for an audience. Unit 5.7 • Know and understand the terms 'blog' and 'vlog'. • Know how to create a blog, make it appealing to an audience and evaluate its effectiveness. • Know how to post and comment, linking this to digital literacy. Unit 6.4	• Know how to design, create, style appropriately and present content to accomplish goals e.g. a slide presentation with images, sound, video, hyperlinks, and/or a desktop publishing leaflet, card, brochure newspaper etc. Unit 6P
Information Technology - paint, drawing, design, images **Real life contexts / Why this is taught** Manipulating images to	• Can draw / paint and save an image.	• Can use a paint program to create in a specific style • Knows how to create repeating patterns. • Can combine two or more paint effects.	*Consolidate prior learning through cross-curricular contexts.*	*Consolidate prior learning through cross-curricular contexts.*	• Know computers are used in 2D and 3D design modelling. • Know computers can simulate different viewpoints and design models. Unit 5.6	*Consolidate prior learning through cross-curricular contexts.*

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enhance or distract from elements is often in the news, computer aided design for architecture and manufacturing, 3D building. Children need to know how images can be produced and manipulated digital and how they can be used to design in 3D. This will give them an understanding of unrealistic 'role models' and facilitate their use of images and design for work and pleasure.		• Can create a digital montage by combining different elements. Unit 2.6				
Information Technology – sound and video **Real life contexts / Why this is taught** Voice memos, digital music, sound effects, audio tracks for film. Children need to know how digital sound and be created and manipulated. This will facilitate their use of it for work and pleasure.	• Add sound / voice recordings	• Can create digital music combining different sounds. • Can alter the tempo and volume of a digital composition. • Can record, upload and incorporate their own sound recordings into a digital composition. • Unit 2.7	*Can be applied within other apps and cross-curricular contexts*	• Know how to create animations. • Create 'stop motion' animation / film Unit 4.6	*Consolidate prior learning through cross-curricular contexts. e.g. to a blog*	*Consolidate prior learning through cross-curricular contexts. e.g. within slideshow presentations*
Information Technology – spreadsheets & graphs **Real life contexts / Why this is taught** Visual representations of data in graphs are often used alongside text for explanations, persuasion etc. Spreadsheets are used for accounting across the world of work.	• Understand rows, columns cells • Enter data, lock cells. • Count and share using a spreadsheet	• Can use copy and paste in a spreadsheet. • Can total rows / columns • Can use a spreadsheet to solve a maths puzzle. • Can use + and = to calculate totals. • Can create a table and a graph. Unit 2.3	• Knows how to calculate using: "> more than" "< less than" "= equals" • Can identify cells by column letter and row number. Unit 3.3 • Know how to enter data to create a graph. • Know how to sort data in the graph e.g. a-z small to large.	• Format numbers in a spreadsheet, including currency. • Write formulas to calculate in a cell • Use a series of data to create a line graph. Allocate values to images. Unit 4.3	• Know how to identify cells by letter number • Know a formula begins with = • Know how to write formulas for the 4 operations + - * / • Know how to format cells to make data easier to read • Know how to fill data automatically. • Know how to use auto sum.	• Present data as graphs (charts) considering the best format and intended audience. • Know how to use =average(:) =count(, , ,) =mode(, , ,) =median(, , ,) • Know how to sort data (one or more sets) in columns and in rows (options) • Know how to filter data

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Children need to know how digital graphs are made and how to select the most appropriate one. They need to understand the principles of spreadsheets and basic functions. This will enable them to apply their knowledge at home and in future work.			• Know how to enter a title and label the axes. • Know how to select different graph formats, select and explain the one most suitable for purpose Unit 3.8		• Know how to format cells as text, currency and to show decimal places / round Unit 5S	Know how to make cells reference other cells Unit 6S
Information Technology – data, databases sorting, searching **Real life contexts / Why this is taught** Medical records, bank accounts, stock of on-line stores, insurance, car registry, criminals, utility companies al use databases to store and process data. Children need to know how data is stored, how it can be searched, ordered and processed. They will know how their personal data is held and used. They will have the knowledge and skills to understand this in the context of their own lives and in the future work.	•Knows how to use IT to sort •Create pictograms	•Know how to organise data and use it to answer questions. •Knows and understands the term 'binary tree'. •Can use a binary tree to answer questions. •Knows and understands the term 'database' •Can search a database. Can search for two criteria using 'and' Unit 2.4	• Know how Yes/No questions are structured and answered. • Know how to create branching database. • Know how to add images to their database. • Know how to use, test and debug their database. Unit 3.6	*Consolidate prior learning through cross-curricular contexts.*	• Know what a database is and how it is structured. • Know and apply the different ways to search a database. • Know and understand the terms 'record' 'field' • Know the need to ensure data entry is correct e.g. 'yelo' and 'yelow' would not be returned in a search for 'yellow' • Know how to create a database, add fields and records. • Understand the need to formulate field names / questions so they can be answered accurately. Unit 5.4	*Consolidate prior learning through cross-curricular contexts.*
Information Technology – Internet & Searches **Real life contexts / Why this is taught** The World Wide Web is the most used research repository, its use exceeds or has replaced other systems e.g. dictionaries, thesauruses,	•Can use the internet with simple key words to find things out. Unit 1.9	•Knows key internet terms. •Can identify the basic parts of an internet search engine. •Can use key words to search. •Can read a web search results page. Unit 2.5	• Knows information on websites may not be accurate / true. • Can think critically about search results and websites. Unit 3.2	• Know quotation marks are used for exact phrases. • Know not to include common words e.g. a the (except in a quoted phrase) • Know search engines ignore capitals • Know it is best to enter singular & root words *e.g walk (walking) not walked* • Identify copyright on pages	*Consolidate prior learning through cross-curricular contexts.*	• Know how to use Advanced Search e.g. https://www.google.com/advanced_search • Use search operators [note these are updated,, removed and vary across search engines] e.g "" OR AND - * define: filetype: site: e.g. site:microsoft.com inurl: Unit 6ES

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phone directories. Use of the WWW is rapidly gaining in other areas such as shopping.

Children need to know how to search effectively for the information they need and critically evaluate results. This is an essential life skill. | | | | Know how to analyse a web page for credibility.
Unit 4.7 | | |
| **Information Technology – email**

Real life contexts / Why this is taught
Email has almost replaced letters, communicating with sellers and suppliers, friendship groups, at school and at work. Email is also being replaced by online collaboration tools such as 'Teams' 'Meet', IM *(Instant Messaging)*, website based chat.

Children need to know how to email IM etc. and the correct form to use. An email IM etc. to a friend would be different to a business. This is an essential life skill. | • Can communicate online, with adult support, in a kind and considerate way.
Unit 1.9 | • Know how to use simple closed email safely
Unit 2.2 | • Knows how to open and respond to emails.
• Knows how to send a new email.
• Knows the correct format for writing an email is like an informal letter.
Unit 3.3 | *Consolidate prior learning through cross-curricular contexts.* | *Consolidate prior learning through cross-curricular contexts.* | *Consolidate prior learning through cross-curricular contexts.* |
| **Digital Literacy – technology**

Real life contexts / Why this is taught
Computers, laptops, tablets, iPads, interactive whiteboards, TVs, phones, washing machines, heating systems, shop tills, microwaves, timetables digital display boards, | • Knows what technology is and can give examples from in and out of school.
• Knows the difference between objects that use modern technology and those that don't
Unit I.9 | • Knows how many devices in the home could be connected to the internet and can list some of those devices. | | | | |

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traffic lights, puffin crossings, Children need to recognise the wide range of devices that use technology.						
Digital Literacy – Privacy & security **Real life contexts / Why this is taught** Bank accounts, email, phone, computer etc. Personal information is stored digitally. It can also be tracked, shared, hacked (stolen) and sold. Malware, spyware, tracking cookies and viruses can be embedded in websites email, documents etc. Children need to know how to keep their information and devices safe.	• Knows more detailed examples of information that is personal to them. • Can explain why they should always ask a trusted adult before they share any information about themselves online. • Know how to use passwords to protect information and devices. Unit 1.1	• Knows online information about them could be seen by others • Can describe and explain some rules for keeping information private. • Uses passwords for accounts and devices and knows why.	• Knows what makes an effective password. • Understands the consequences of not keeping passwords safe. Unit 3.2 • Know why they should only share information with people they choose to and can trust. • Know if unsure or feeling pressured, they should ask a trusted adult. • Knows how connected devices can collect and share personal information with others	• Know security symbols such as a padlock protect their identity online. • Knows strategies for keeping my personal information private, depending on context. • Can explain a digital footprint is and how it relates to identity theft. • Can identify possible risks of installing free and paid for software. • Knows what a strong password is. • Knows others online can pretend to be them or other people, including their friends; and why. • Knows how internet use can be monitored.	• Can create and use strong and secure passwords. • Knows how many free apps or services may read and share their private information with others. • I can explain how and why some apps may request or take payment for additional content (e.g. in-app purchases) and explain why I should seek permission from a trusted adult before purchasing.	• Know to different passwords for a range of online services. • Know effective strategies for managing those passwords • Know what to do if their password is lost or stolen • Know what app permissions are and can give some examples from the technology or services they use. • Know simple ways to increase privacy on apps and services that provide privacy settings. • Know ways in which some online content targets people to gain money or information illegally; know strategies to help them identify such content (e.g. scams, phishing).
Digital Literacy – health well-being and lifestyle **Real life contexts / Why this is taught** Digital devices are used across the worlds of work, school and home. It easy to spend work time using digital devices and 'down time' also using them. Digital content, like films has	• Know rules to keep them safe when we are using technology both in and beyond the home. Units 1.1 I.9	• Can explain good & bad sides of digital technology. • Knows guidance for using technology in different environments and settings. • Knows how those rules/guides can help them.	• Knows why spending too much time using technology can sometimes have a negative impact. • Can give some examples of activities where it is easy to spend a lot of time engaged.	• Knows how technology can distract them from other things they might do or should be doing. • Knows times or situations when they might need to limit the amount of time the use technology. • Knows some strategies to help them limit this time.	• Knows ways technology can affect healthy sleep and can describe some of the issues. • Knows some strategies, tips or advice to promote healthy sleep with regards to technology.	• Knows about common systems that regulate age-related content (e.g. PEGI, BBFC, parental warnings) and describe their purpose. • Can assess and action different strategies to limit the impact of technology on my health. • Knows the importance of self-regulating my

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age guidance or restrictions. Children need to know the importance of balancing the amount of time and when they use digital devices. Know about age restrictions for digital content.						use of technology; can discuss the strategies they use to do this.
Digital Literacy – copyright and ownership **Real life contexts / Why this is taught** Digital content belongs to the creator 'intellectual property'. This is usually shown by © or 'All rights reserved.' Using others work without the right to do so can be plagiarism or 'copyright infringement' penalties can included fines or imprisonment. Children need to know they should not pass others work as their own. The should always cite their sources, which also allows for fact checking.	• Knows work created using technology belongs to them. • Can save work so it is identified as belonging to them e.g. file name, own folder. • Can open work. Unit 1.1 etc	• Can explain why people's work belongs to them. • Knows content on the internet may belong to other people.	• Know copying someone else's work from the internet without permission can cause problems. • Can give examples of what those problems might be.	• Know if their online activities infringe another's copyright. • They know the difference between researching and using information and copying it. • Know the need to cite sources. •	• Knows how to assess and justify when it is acceptable to use the work of others. • Knows examples of content that is permitted to be reused.	• Knows how to use search tools to find and access online content which can be reused by others. • Knows how to make references to and acknowledge sources I have used from the internet.
Digital Literacy – self-image and identity **Real life contexts / Why this is taught** On-line profiles can be idealised versions of people or even complete false identities. Photographs, recounts, descriptions etc. can be modified, copied, altered, biased or fictional.	• Knows there are people online who can make them feel sad and who is a trusted adult they can talk to. • Create an avavatar and know why it is used. Unit 1.1	• can explain how other people's identity online can be different to their identity in real life • Knows some ways in which people might make themselves look different online. • Knows examples of issues online that might make them feel sad, worried, frightened etc. • Knows some ways to get help.	• Knows what is meant by the term 'identity'. • Knows how they can represent themselves in different ways online. • Can explain ways in which and why they might change my identity depending on the online activity. (e.g. gaming; using an avatar; social media).	• Knows how online identity can be different to the identity presented in 'real life' • Knows the right decisions about how they interact with others and how others perceive them.	• Knows how identity online can be copied, modified or altered. • Can make responsible choices about their online identity, depending on context.	• Knows about ways in which media can shape ideas about gender. • Can identify messages about gender roles and make judgements based on them. • Cn challenge and explain why it is important to reject inappropriate messages about gender online. • Knows issues online that might make them or

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Children need to know how to present themselves safely on-line according to context. They need to behave respectfully, adhering to British Values. They need to know the identity of others may not be what it seems. These are essential life skills.						others feel sad, worried, uncomfortable or frightened. • Knows and can give examples of how they might get help, both on and offline. • Knows why they should keep asking until they get the help they need.
Digital Literacy – online bullying **Real life contexts / Why this is taught** Cyberbullying, outing (doxing), cyberstalking, trickery, fraping, masquerading, dissing, trolling, flaming, excluding, sexting are all types of digital bullying. Any type of digital bullying can be used. It can result in depression or even suicide. It is imperative for children's well-being that they recognise digital bullying, know how to take action and do not engage in it.	• Knows how to behave online in a way not to upset others.	• Knows about online bullying behaviour and how it could look online. • Knows and understands how bullying can make someone feel. • Knows how someone can/would get help about being bullied online or offline	• Knows about cyberbullying and can relate it to corporeal bulling. Knows how to report concerns with detail including screenshots Unit 3.2 • Knows rules about how to behave online and explains how they follow them.	• Knows some online technologies where bullying might take place. • Knows ways people can be bullied through a range of media (e.g. image, video, text, chat). • Knows the need to think carefully about how content posted might affect others, their feelings and how it may affect how others feel about them (their reputation).	• Knows how to recognise when someone is upset, hurt or angry online. • Knows how to get help for someone that is being bullied online and assess when they need to do or say something or tell someone. • Knows how to block abusive users • Knows how to report online bullying on the apps and platforms that they use. • Knows the helpline services who can support them and what to say and do if they needed their help	• Knows how to capture bullying content as evidence to share with others who can help. • Knows a range of ways to report concerns both in school and at home about online bullying.
Digital Literacy – online relationships **Real life contexts / Why this is taught** Digital communication and collaboration is used extensively in the	• [as above] Can communicate online, with adult support, in a kind and considerate way.]	• [as above Know how to use simple closed email safely] • Can give examples of how technology can be used to communicate, including with those not known well.	• Knows ways people who have similar likes and interests can get together online. • Knows examples of technology- specific forms of communication (e.g.	• Knows strategies for safe and fun experiences in a range of online social environments. • Knows examples of how to be respectful to others online.	• Knows that there are some people they may communicate with online who may want to do them or their friends harm. Knows that this is not their fault.	• Understands their responsibilities for the well-being of others in their online social group. • Knows how impulsive and rash

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workplace and socially. The 2020 pandemic dramatically increased the use of these technologies for both work and pleasure. Communication and collaboration on line may include: email, IM (Instant Messaging), website based chat, 'rooms' blogs, vlogs, bulletin boards, on-line forums, social networks (Facebook etc.), social review sites (e.g. Trip Adviser), image sharing sites (e.g. Instagram, Snapchat), Video hosting sites (e.g. YouTube, Vimeo), community blogs, discussion sites, sharing economy networks (AirBnB, Rover) open and closed social groups, work groups (e.g. 'Teams' 'Meet' LinkedIn, video calls, video conferencing. (e.g. Messenger, 'Meet' 'Zoom') Children need to know how to communicate and collaborate digitally, know some of the risks, how to keep themselves safe and how to behave responsibly in order to navigate this increasingly complex digital world.			emojis, acronyms, text speak). •Knows some risks of communicating online with others I don't know well. •Knows why they should be careful who I trust online and what information they can give out. •Know how my and other people's feelings can be hurt by what is said or written online. •Know they can take back my trust in someone or something feeling nervous, uncomfortable or worried. •Know what it means to 'know someone' online and why this might be different from knowing someone in real life. •Know what is 'trusting someone online' and how this is different from 'liking someone online'.		•Knows they can make positive contributions and be part of online communities. •Can describe some of the communities in which they are involved and describe how they collaborate with others positively.	communications online may cause problems •Knows how they would support others. •Knows ways of reporting problems online for both myself and my friends
Digital Literacy –online reputation **Real life contexts / Why this is taught**	•Knows information stays online and can be copied. Can talk about what should not be put online	•Knows information put online can last for a long time. •Can explain the term digital footprint.	•Can search for information about themselves online. •Knows the need to be careful before sharing anything about	• Knows how others can find out information about me by looking online. •Knows ways that some of the information about	• . I can search for information about an individual online and create a summary report of the information I find.	• Knows how they are developing an online reputation which will allow other people to form an opinion of them.

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Digital information is hard to erode, once it is in the public domain it can be copied, shared and distributed even if the original is removed. This information can remain for an indeterminate amount of time. Children need to know that it is essential they make considered choices about what they share online in order to protect their reputation both now and in the future.		• Knows the implications of inappropriate online searches. • Knows who to talk to if they think someone has made a mistake about putting something online.	themselves or others online. • Knows who to ask if I unsure if they should put something online.	me online could have been created, copied or shared by others.	• I can describe ways that information about people online can be used by others to make judgments about an individual.	• Know some simple ways that help build a positive online reputation
Digital Literacy – managing online information **Real life contexts / Why this is taught** Much information on the World Wide Web is useful and truthful, but not all. The WWW also includes bias, opinion, beliefs, false information, radicalisation, hoaxes, scams, phishing, and persuasion. Children need to know how to navigate the WWW effectively, how search results can be ranked, how to verify facts, identify opinion, bias, persuasion, hoaxes etc. This is essential knowledge for living in a digital world.	• Knows how to get help online or from a trusted adult.	• Knows some ways things are shared electronically • Can navigate webpages • Can explain voice activated searches. • Knows and can explain the difference between fact and made-up. • Knows some online information may not be true.	• Can use key phrases in search engines. • Knows what autocomplete is and how to choose the best suggestion • Knows how the internet can be used to sell and buy things. • Knows the difference between a 'belief', an 'opinion' and a 'fact'	• Know the meaning of the term 'phishing' • Knows of the existence of scam websites • Knows how to analyse information and differentiate between 'opinions', 'beliefs' and 'facts' • Knows what criteria have to be met before something is a 'fact'. • Knows searches for information can be within a wide group of technologies (e.g. social media, image sites, video sites). • Knows about some of the methods used to encourage people to buy things online (e.g. advertising offers; in-app, emails purchases, pop-ups) and can recognise some of these when they appear online.	• Can use different search technologies. • Knows how to evaluate digital content and can explain how they make choices from search results. • Knows key concepts including: data, information, fact, opinion belief, true, false, valid, reliable and evidence. • Knows the difference between online misinformation and dis-information • Knows what 'being sceptical' is and why it is important. • Knows what a 'hoax' is and why they need to be careful before forwarding anything. • Knows why some information online may not be honest, accurate or legal.	• Knows how to use search technologies effectively. (Advanced searches) • Knows how search engines work and how results are selected and ranked. • Knows strategies to be discerning in evaluating digital content. • Knows that some online information can be opinion and can offer examples. • Knows how and why some people may present 'opinions' as 'facts'. • Can define the terms 'influence', 'manipulation' and 'persuasion' and explain how they might encounter these online. • Knows strategies to enable them to analyse and evaluate the validity

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				• Knows some people they 'meet online' (e.g. through social media) may be computer programmes pretending to be real people. • Knows lots of people sharing the same opinions or beliefs online does not make those opinions or beliefs true. • Understand the moderator and approval process.	• Knows why information that is on a large number of sites may still be inaccurate or untrue and how this might happen.	of 'facts' can explain why using these strategies are important. • Knows how to identify, flag and report inappropriate content.