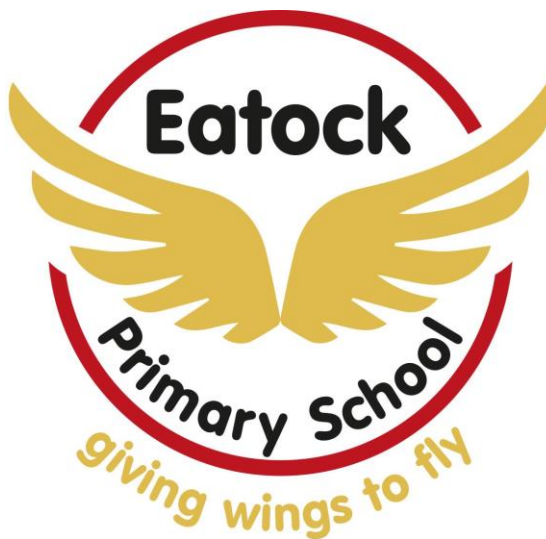




**Computing
Progression of
Knowledge and Skills
Document**

KEY

Red: Eatock Curriculum

Green: LOTC

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Computing at Eatock

Intent for Computing:

Here at Eatock Primary School, we intend to prepare our children to be confident and competent within a world that is heavily shaped by technology. We recognise that our children, like many others, are using technology on a daily basis at home and at school, therefore within our curriculum, we aim to develop knowledge, understanding and confidence to apply their skills and knowledge to everyday situations. We want our children to have opportunities to work through the essential elements and concepts of computer science, programming and data handling. As well as this, we intend for our children to develop their oracy skills, within the computing curriculum, by using a range of different software where children of all ages can find, analyse and present information and further evaluate their presentations. We intend to develop independent learners, who are fluent in their understanding of computer science, by teaching them how to use a range of programs where they are able to design, create and evaluate their work using specific vocabulary.

We ensure our children are taught the importance of safe internet use during computing lessons but also in our bespoke S.M.S.C curriculum. In every year group, online safety is a key focus and we are proud that a vast majority of our children have the knowledge and understanding of how to stay safe online.

Our ambition, for our children, is through the use of first hand, experiential learning, for them to leave us developing their digital literacy and being able to safely use technology and develop their ideas through information and communication technology, which they will be able to apply to their further education and further career to become computer literate and 'tech savvy' in the rapidly changing digital world.

Implementation

At our school we believe that a clear and effective scheme of work that provides coverage in line with the National Curriculum is essential to meet the requirements of our children in order for them to thrive. Teaching and learning facilitates progression across all key stages within the strands of digital literacy, information technology and computer science. In KS1, one of the ways we are teaching the pupils about the language and concepts associated with computer programming is by using Bee Bots, which are simple programmable robots. Children in KS2 have access to the hardware (computers, tablets, and programmable equipment) and software that they need to develop knowledge and skills of digital systems and their applications. Computing is implemented across all aspects of our school curriculum, with one example being the use of Times Tables Rockstars during Maths lessons.

Impact

Eatock Primary School strive to ensure that every child can become a confident user of technology, while being able to use it to accomplish a wide variety of goals, both at home and in school. Children will have a secure and comprehensive knowledge of the implications of technology and digital systems by the time they leave our school. This is important in a society where technologies and trends are rapidly evolving. They will be able to apply the British values of democracy, tolerance, mutual respect, rule of law and liberty when using digital systems, which will hold them in great stead in their future endeavours.

Computing Coverage Overview

	Autumn	Spring	Summer
Year 1	Digital Citizenship Digital Literacy (Basic skills)	Computer Science Focus: Algorithm- a set of instructions in everyday language	Information technology Focus: Using the Internet Computing Pioneers: Tim Berners Lee Consolidation project for digital literacy
Year 2	Digital Citizenship Digital Literacy (Basic skills)	Computer Science Focus: Program- a set of precise instructions in for a computer	Information technology Focus: Effective Searching Computing Pioneer: <i>Revisit: Tim Berners Lee</i> Consolidation project for digital literacy
Year 3	Digital Citizenship Digital Literacy	Computer Science Focus: Sequence- the order that a set of instructions are carried out	Information technology Focus: Online Communication Computing Pioneers: Ada Lovelace Consolidation project for digital literacy

Year 4	Digital Citizenship Digital Literacy	Computer Science Focus: Repeat/Loop- Parts of a program that are to be repeated	Information technology Focus: Computer Networks Computing Pioneers: Hedy Lamarr or Radia Perlman Consolidation project for digital literacy
Year 5	Digital Citizenship Digital Literacy	Computer Science Focus: Selection/Conditional- using an 'if' statement in a computer program	Information technology Focus: Computing Pioneers Computing Pioneers): Revisit: Alan Turing and Bill Gates. Consolidation project for digital literacy
Year 6	Digital Citizenship Digital Literacy	Computer Science Focus: Variable- part of a program that can change	Information technology Focus: History and the Future of Computing Computing Pioneers: Revisit: Bill Gates and Elon Musk Consolidation project for digital literacy

EYFS Knowledge and Skills Progression grid: Understanding The World
COMPUTING Nursery

Understanding the world involves guiding children to make sense of their physical world and their community. The frequency and range of children's personal experiences increases their knowledge and sense of the world around them – from visiting parks, libraries and museums to meeting important members of society such as police officers, nurses and firefighters. In addition, listening to a broad selection of stories, non-fiction, rhymes and poems will foster their understanding of our culturally, socially, technologically and ecologically diverse world. As well as building important knowledge, this extends their familiarity with words that support understanding across domains. Enriching and widening children's vocabulary will support later reading comprehension.

I Can Statements	Knowledge and skills What will pupils know, understand and be able to do?	Vocabulary
CS1 I can name items we control in the everyday environment CS2 I can use everyday technology CS3 I can explore on-screen activities by clicking	<u>Autumn Term</u> Explore and use everyday technology in continuous provision Turn on and off and store the torches Use the interactive tilt screen to interactive with handwriting patterns software Touch the screen to interact with the software; Education City, Mini Mash, Supersonic Phonic Friends and Twinkle phonic games on the whiteboard, I Pad and the large tilt screen Talk about the technology I use at home	Torch, computer, iPod, iPad, washing machine, BeeBots, microphone, batteries, TV, radio, boom box, remote control, large tilt screen
IT 1 I can talk about the internet as a way of finding information online IT2 I can identify devices that I could use to access information on the internet IT3 I can identify some simple examples of my personal information DL4 I can give examples of how I might use technology to communicate with people I know	<u>Spring Term</u> Talk about what makes them special as part of circle times and Jigsaw Know that we can use a search engine such as Google to help us find out new information Know that we can a laptop/ computer or phone to find information on the internet ie- a song You Tube Know some things that are special about me such as my name, age, birthday, where I live, things I like to do... Identify some ways that they can communicate with their friends and family; phone conversation, Face time, Zoom, Tapestry... I can use an app to access software <u>Summer Term</u> I know that I shouldn't speak to strangers on technology I know that I can tell an adult if something has happened that I am unsure of	Internet, Google, Youtube, phone, screen, computer, iPad, name, birthday, age, address, safe

DL8 I can identify a few rules that keep me safe and healthy when using technology IT4 I can say who would be trustworthy to share information with	I know that a stranger is someone that I don't know. They are not my family or a friend. I can name some people in my family that I can trust	Telephone, Zoom, email, Facetime, safe, private, family, stranger, Tapestry
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EYFS Knowledge and Skills Progression grid: Understanding The World
COMPUTING: Reception

Understanding the world involves guiding children to make sense of their physical world and their community. The frequency and range of children's personal experiences increases their knowledge and sense of the world around them – from visiting parks, libraries and museums to meeting important members of society such as police officers, nurses and firefighters. In addition, listening to a broad selection of stories, non-fiction, rhymes and poems will foster their understanding of our culturally, socially, technologically and ecologically diverse world. As well as building important knowledge, this extends their familiarity with words that support understanding across domains. Enriching and widening children's vocabulary will support later reading comprehension.

I Can Statements	Knowledge and skills What will pupils know, understand and be able to do?	Vocabulary
DL3 I can recognise some ways in which the internet can be used to communicate with people I know DL4 I can give examples of how I might use technology with people I know DL8 I can identify rules that keep us safe and healthy in and beyond the home when using technology CS1 I can name items we control in the everyday environment	<u>Autumn Term Digital Citizenship and Digital Literacy</u> Explore and use everyday technology in continuous provision Turn on and off, select and store equipment safely Use the interactive tilt screen to interactive with handwriting patterns software Touch the screen to interact with the software; Education City, Mini Mash, Reading Eggs, Supersonic Phonic Friends and Twinkle phonic games on the whiteboard, I Pad and the large tilt screen Identify technology in my home and environment and can talk about how I use technology at home Identify and talk about how I use technology at home to communicate with my friends and family (face time, Tapestry, phone, teams...) I know that the following rules that help me to stay safe: • I can use technology when an adult says I can • I can only buy things when an adult says it is okay • I am only allowed to watch what an adult says is ok • I need to come off my device if an adult asks • I can access my devices for short periods of time, taking breaks • I go online with a family member	Internet, Google, YouTube, phone, screen, computer, iPad, name, birthday, age, address, safe, telephone, zoom, email, Facetime, safe, private, family, stranger, world wide web, online bullying, digital citizen, internet, communication,

DL6 I can describe ways that some people can be unkind online CS3 I can explore on screen activities by clicking, tapping and swiping CS4 I know that an algorithm is a set of instructions that can solve a problem CS5 I can create a simple algorithm IT5 I know that work created belongs to me IT6 I can name my work so that others know it belongs to me	I can identify a trusted adult to help keep me safe I can name some things that might make me feel unhappy/ sad/ happy when using technology and the internet I can identify some personal information about myself; age, name, address, birthday, where I live and know that I can only share this information with adults I trust (family, friends, teachers...) Understand and give some examples of personal and not personal information <u>Spring Term Computer Science and Digital Literacy</u> Recognise the difference between kind and unkind behaviours Identify a few ways in which we can be unkind online (mean on games/social media/through a device) Being unkind 'face to face' is saying something hurtful to someone/ unkind actions Touch the screen to interact with the software; Education City, Mini Mash, Reading Eggs, Supersonic Phonic Friends and Twinkle phonic games on the whiteboard, I Pad and the large tilt screen Use an IPod to take a photograph I can talk about how I use the internet to find things out I can name devices that I can use to access the internet Know that the internet can be used as a tool to find out information I can create a simple set of instructions for a Beebot (other programmable toy) <u>Summer Term information Technology</u> I can name some parts of a computer I know how to hold a mouse correctly I have used software and apps for my online learning I can shut down a computer I can log in I can identify some personal information about myself; age, name, address, birthday, where I live I understand what 'belong' means I can recognise that digital work/ objects belong to me (Tapestry photos... would be a tool that supports this understanding show examples of files with your name on)	Algorithm, directional language, BeeBot, technology, debugging, Communication, world wide web, personal information, online information, internet, mouse, keyboard, printer, monitor, BeeBot, programmable toy, instruction, personal and not personal
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KS1 Computing Knowledge and Skills Grid

Year 1

National Curriculum understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions create and debug simple programs use logical reasoning to predict the behaviour of simple programs use technology purposefully to create, organise, store, manipulate and retrieve digital content recognise common uses of information technology beyond school use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.	Key knowledge and skills that will be revisited in Y1 - To know that information can be retrieved from computers - To know they can take a photo of a model they have made - To use a computer to interact with age appropriate software - To use the story 'Chicken Clicking' to reintroduce the idea of Online Safety – see End Point Document for other suggested cross curricular reading opportunities.		
	Autumn Term: Digital citizenship and Digital Literacy		
	Key Learning	Vocabulary	Assessment
	<u>Digital citizenship</u> - WALT: talk about my digital footprint. - WALT: name people who can help us and where to go for help if I am uncomfortable. (Butterfly feeling) - WALT: give examples of when I need to ask an adult before I do something online. - WALT: describe how to behave online to not upset others - WALT: explain rules to stay safe when using technology. (See project evolve for lesson plans and resources)	<u>Digital Citizenship</u> Internet Safe Unsafe Uncomfortable Personal information Password Private Digital footprint Butterfly feeling	<u>Digital citizenship</u> - I can talk about my digital footprint - I can recognise that there may be people online who could make me feel sad, embarrassed or upset - If something happens that makes me feel sad, worried, uncomfortable or frightened I can give examples of when and how to speak to an adult I can trust. (Butterfly feeling) - I can give examples of when I should ask permission to do something online and explain why this is important. - I can describe how to behave online in ways that do not upset others and can give examples - I can explain rules to keep us safe when we are using technology both in and beyond the home - I can describe what information I should not put online without asking a trusted adult first

	<u>Digital Literacy- Basic Skills</u> - WALT: start to type simple sentences (making use of a word bank) (Using 2type- useful teaching videos on this programme) - WALT: start to log on and off a computer and Purple Mash independently. (ongoing) - WALT: how to move to different places in the text using the arrow keys or mouse. - WALT: use 2create to write sentences and draw a matching picture. (Input text and images using a simple publishing programme)	<u>Digital Literacy</u> Text Keyboard Mouse Log on Log off Control (Ctrl) Alt Delete Type	<u>Digital Literacy</u> - I can input text and images using a simple publishing programs - I can type a simple sentences on the screen, making use of a word bank - I can use the main keys for typing e.g. shift, space bar, full stop - I can type simple sentences using the correct format (Capital letters, space and full stop) - I can move to different places in the text using the arrow keys or mouse
National Curriculum understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions create and debug simple programs use logical reasoning to predict the behaviour of simple programs use technology purposefully to create, organise, store, manipulate and retrieve digital content	<u>Spring Term: Computer Science and Digital Citizenship (Online Safety Day)</u>		
	Key Learning	Vocabulary	Assessment
	<u>Revisit and consolidate this prior learning:</u> - How to give and follow clear instructions - Who to ask for help if they feel uncomfortable online <u>Computer Science</u> <u>Focus Vocab: Algorithm- a set of instructions in everyday language</u> - WALT: tell you what an algorithm is - WALT: plan a simple algorithm (Beebot, scratch, 2go) - WALT: give and follow commands, which include straight / turning commands – one at a time Include an LOTC lesson based on following and giving instructions - WALT: understand what 'debug' means	<u>Online Safety</u> Internet Safe Unsafe Uncomfortable Personal information Password Private <u>Computer Science</u> Algorithm Instruction Command Beebot Debug	<u>Digital Citizenship</u> - I can use technology safely and respectfully - I know what is my personal information is and give an example - I can name people who can help me - I can identify where to go for help if I feel uncomfortable (butterfly feeling). <u>Computer Science</u> - I can tell you what an algorithm is - I can plan a simple algorithm - I can give and follow commands, which include straight / turning commands – one at a time - I can debug a simple algorithm that is causing an unexpected outcome.

use technology purposefully to create, organise, store, manipulate and retrieve digital content recognise common uses of information technology beyond school use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.	<u>Information Technology:</u> • WALT: give simple examples of how to find information (e.g. search engine, browsers, voice activated searching) • WALT: explain how passwords can be used to protect information and devices • WALT: explain why it is important to always ask a trusted adult before sharing any personal information online, belonging to myself or others • WALT: explain why work I create using technology belongs to me • WALT: save my work (Purplemash) so that others know it belongs to me (e.g. filename, name on content) See Project Evolve for lesson plans and ideas <u>Computer Pioneer focus:</u> Teach a lesson on Sir Tim Berners-Lee how they used computing in their jobs/ why they are a computer pioneer. <u>Digital Literacy:</u> <u>Using 2create a story/2publish</u> • WALT: type simple sentences using the correct format (Capital letters, space and full stop) • WALT: format my typing in a number of ways (size, colour, font) • WALT: make text bold/ italics / text alignment etc. • WALT: use the 'undo' icon to fix a mistake	<u>Information Technology</u> Search engine Information Password Trusted adult Technology Save	• I can explain how passwords can be used to protect information and devices • I can recognise more detailed examples of information that is personal to someone (e.g. where I live, my family's names, where I go to school) • I can explain why it is important to always ask a trusted adult before sharing any personal information online, belonging to myself or others • I can explain why work I create using technology belongs to me • I can save my work (Purplemash) so that others know it belongs to me (e.g. filename, name on content) • I can say why it belongs to me (e.g. 'it is my idea' or 'I designed it') • I understand that work created by others does not belong to me even if I save a copy • I can identify the icons for applications on the desktop and launch accordingly • I know what a browser is and how to open one • I can log on and off the school network using my individual username and password <u>Digital Literacy</u> • I can input text and images using a simple publishing programs • I can format my typing in a number of ways (size, colour, font) • I can use the main keys for typing e.g. shift, space bar, full stop
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	<u>Cross curricular link: Maths</u> <u>Data Handling- block graphs and tally charts.</u> - WALT: add data into a block graph. - WALT: use a block graph to answer simple questions.		- I can type simple sentences using the correct format (Capital letters, space and full stop) - I can make text bold/ italics / text alignment - I can move to different places in the text using the arrow keys or mouse - I can use the 'undo' icon to fix a mistake - I can create a pictogram by entering data into a simple graphing package (2Graph) - I can use a pictogram to answer simple questions (2Graph)
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Year 2

National Curriculum	Key knowledge and skills that will be revisited in Y2		
understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions create and debug simple programs use logical reasoning to predict the behaviour of simple programs use technology purposefully to create, organise, store, manipulate and retrieve digital content	- How to stay safe online, safe use of online apps - How to use 2 hands when typing - How to log on and off a computer and school resources (PurpleMash, Reading Eggs, Times table Rockstars) - Basic safety skills when using a computer/iPad (no drinks, do not touch the plugs, do not touch any wires etc.) - See End Point Document for suggested cross curricular reading opportunities.		
	<u>Autumn Term: Digital citizenship and Digital Literacy</u>		
	Key Learning	Vocabulary	Assessment
	<u>Digital Citizenship:</u> - WALT: give examples of issues online that might make me feel sad, worried, uncomfortable or frightened; I can give examples of how I might get help. (Butterfly feeling) - WALT: explain why I have a right to say 'no' or 'I will have to ask someone'. - WALT: explain why I should always ask a trusted adult before clicking 'yes', 'agree' or 'accept' online	<u>Online Safety</u> Internet Safe Unsafe Uncomfortable Personal information Password Private Inappropriate Appropriate Digital Footprint	<u>Digital Citizenship</u> - I can give examples of issues online that might make me feel sad, worried, uncomfortable or frightened; I can give examples of how I might get help. (Butterfly feeling) - I can explain why I have a right to say 'no' or 'I will have to ask someone'. - I can explain why I should always ask a trusted adult before clicking 'yes', 'agree' or 'accept' online - I can explain how information put online about me can last for a long time

recognise common uses of information technology beyond school use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.	• WALT: explain what bullying is, how people may bully others and how bullying can make someone feel • WALT: give examples of bullying behaviour and how it could look online (See project evolve for lesson plans and resources) <u>Digital Literacy</u> • WALT: log onto the computer and school's online resources independently. • WALT: type with two hands using capital letters, spaces and full stops. • WALT: load and save my work in a folder with support. • WALT: how to use spell checker to check my work. • WALT: how to use the return/enter key to insert relevant line breaks • WALT: how to save an image from the internet rather than using copy & paste • WALT: format my typing in a number of ways (size, colour, font)	<u>Digital literacy</u> Keyboard Mouse Control (Ctrl) Alt Delete Enter Return Undo Load Save Copy Paste Spell checker	• I can explain what bullying is, how people may bully others and how bullying can make someone feel • I can give examples of bullying behaviour and how it could look online • I can explain who I should ask before sharing things about myself or others online • I can explain who can help me if I feel under pressure to agree to something I am unsure about or don't want to do • I can identify who can help me if something happens online without my consent • I can explain why anyone who experiences bullying is not to blame • I can talk about how anyone experiencing bullying can get help <u>Digital Literacy</u> • I can start to use two hands when typing. • I can type simple sentences using the correct format (Capital letters, space and full stop) • I can move to different places in the text using the arrow keys or mouse • I can save and load work to/from my own folder on the network using save as (with support) • I can use spell checker to check my work. • I can use the return/enter key to insert relevant line breaks • I can save an image from the internet rather than using copy & paste
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National Curriculum	Spring Term: Computer Science and Digital Citizenship (Online Safety Day)		
	Key Learning	Vocabulary	Assessment
understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions create and debug simple programs use logical reasoning to predict the behaviour of simple programs use technology purposefully to create, organise, store, manipulate and retrieve digital content recognise common uses of information technology beyond school use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.	<u>Revisit and consolidate this prior learning:</u> • How to log on and off the computer and school's online resources independently. • How to type with two hands using capital letters, spaces and full stops. • How to save and open work with support • How to stay safe online <u>Computer Science:</u> <u>Focus Vocab: Program/Events: A set of precise instructions in for a computer</u> • WALT: explain what a program is • WALT: explain what an event is • WALT: understand programs need an event to begin • WALT: give and follow instructions, which include direction and turning command – several in order • WALT: understand that computers need precise instructions • WALT: use logical reasoning to predict outcomes • WALT: create a program that contains several commands for a device or software programme • WALT: debug a program independently that has caused an unexpected outcome • WALT: use different events to start my programs – timing / on click / on button press	<u>Computer Science</u> Algorithm Instruction Command Beebot Debug Program Event Precise	<u>Computer Science:</u> • I can tell you what a program is • I can tell you what an event is • I know programs need an event to begin • I can give and follow instructions, which include direction and turning command – several in order • I know that computers need precise instructions • I can plan use logical reasoning to predict outcomes • I can create a program that contains several commands for a device or software programme • I can debug a program independently that has caused an unexpected outcome • I can use different events to start my programs – timing / on click / on button press

	<u>Digital citizenship: Online Safety Day</u> • WALT: 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) • WALT: talk about my digital footprint and explain how other people may look and act differently online and offline • See End Point Document for suggested cross curricular reading opportunities		<u>Digital Citizenship:</u> • I can talk about my digital footprint and explain how other people may look and act differently online and offline • I can 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)
National Curriculum understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions create and debug simple programs use logical reasoning to predict the behaviour of simple programs use technology purposefully to create, organise, store, manipulate and retrieve digital content recognise common uses of information technology beyond school	<u>Summer Term: Information Technology and Digital Literacy</u> See End Point Document for suggested cross curricular reading opportunities		
	Key Learning	Vocabulary	Assessment
	<u>Revisit and consolidate this prior learning:</u> • How to stay safe online • Typing with two hands using the correct format (capital letter, spaces, full stops) • Using enter/return and undo buttons. • How to open and save work. <u>Information Technology</u> • WALT: use simple keywords in search engines • WALT: demonstrate how to navigate a simple webpage to get to information I need (e.g. home, forward, back buttons; links, tabs and sections) • WALT: explain the difference between things that are imaginary, 'made up' or	<u>Digital Creativity</u> 2publish 2create a story Copy Paste Select Resize	<u>Information Technology:</u> • I can use simple keywords in search engines • I can demonstrate how to navigate a simple webpage to get to information I need (e.g. home, forward, back buttons; links, tabs and sections) • I can explain the difference between things that are imaginary, 'made up' or 'make believe' and things that are 'true' or 'real' • I can explain how passwords can be used to protect information, accounts and devices • I can explain and give examples of what is meant by 'private' and 'keeping things private' • I can explain how some people may have devices in their homes connected to the internet and give examples (e.g. lights, fridges, toys, televisions) • I can recognise that content on the internet may belong to other people

use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.	'make believe' and things that are 'true' or 'real' • WALT: explain how passwords can be used to protect information, accounts and devices • WALT: explain and give examples of what is meant by 'private' and 'keeping things private' • WALT: recognise that content on the internet may belong to other people (See project evolve for planning and resources) <u>Computer Pioneer focus:</u> Teach a lesson (revisit) on Sir Tim Berners-Lee and how he used computing in his job/ why he is a computer pioneer. See End Point Document for suggested cross curricular reading opportunities <u>Digital Literacy</u> Sequencing with sounds: • WALT: explore sounds in a music programme or sound app. • WALT: record sounds using different devices. <u>Cross-Curricular Maths link:</u> <u>Data Handling (Bar Charts and Pictograms)</u> • WALT: collect data using a questionnaire. (2graph – linked to class learning) • WALT: organise and present data into a bar chart on 2graph. • WALT: use our database to answer simple questions and find information.		• I can log on and off the school network using my individual username and password and save my work to PurpleMash or the school network <u>Digital Literacy:</u> • I can explore sounds in a music programme or sound app • I can use a database to answer simple questions • I can search a database to find information • I can use ICT to support handling data – creating simple graphs, bar charts and pie charts
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KS2 Computing Knowledge and Skills Grid

Year 3

National Curriculum	Key knowledge and skills that will be revisited in Y3: • How to stay safe online, safe use of online apps • Logging on and using keyboard short cuts to log on • Use the keyboard to type sentences • Uses of information technology outside of school • See End Point Document for suggested cross curricular reading opportunities		
design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts use sequence, selection, and repetition in programs; work with variables and various forms of input and output use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration use search technologies effectively, appreciate how results are selected and	<u>Autumn Term: Digital citizenship and Digital Literacy</u>		
	Key Learning	Vocabulary	Assessment
	<u>Digital Citizenship:</u> • WALT: explain how people can represent themselves in different ways online • WALT: explain what is meant by 'trusting someone online', why this is different from 'liking someone online', and why it is important to be careful about who to trust online including what information and content they are trusted with • WALT: give examples of what anyone may or may not be willing to share about themselves online • WALT: explain why spending too much time using technology can sometimes have a negative impact on anyone, e.g. mood, sleep, body, relationships (See project evolve for lesson plans and resources)	<u>Online Safety:</u> Internet Cyberbullying Acceptable Unacceptable Inappropriate Concern Personal information Password Private Negative Identity	<u>Digital Citizenship:</u> • I can explain what is meant by the term 'identity' • I can explain how people can represent themselves in different ways online • I can explain what is meant by 'trusting someone online', why this is different from 'liking someone online', and why it is important to be careful about who to trust online including what information and content they are trusted with • I can explain how someone's feelings can be hurt by what is said or written online • I can give examples of what anyone may or may not be willing to share about themselves online • I can explain the need to be careful before sharing anything personal • I can explain why spending too much time using technology can sometimes have a negative impact on anyone, e.g. mood, sleep, body, relationships

ranked, and be discerning in evaluating digital content select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	<u>Digital Literacy (Microsoft Word)</u> - WALT: type sentences using the keyboard, change font size, and colour. - WALT: use word art to enhance my work - WALT: how to create a folder to save my work in. - WALT: how to give a file a name to identify it - WALT: load work from our own folder, learn to copy, and paste (an image from a safe internet site – link to RD topic). <u>Cross-Curricular project:</u> <u>Digital Literacy using 2animate</u> - WALT: create a storyboard for an animation showing what will happen and when. - WALT: plan an animation based on the Twits. - WALT: combine still images to create an animation using 2animate.	<u>Digital Literacy</u> Text Font File Shortcut Control (Ctrl) Save Format Tab WordArt Copy and Paste	<u>Digital Literacy</u> - I can type a number of sentences using the keyboard - I can give a file a name to identify it - I can independently save work to my own folder. - I can independently load work from my own folder - I can format wrapping/layout of text boxes and images in word - I can use the format tab to alter word art to enhance my work. - I can create a folder to save my work in. - I can give a file a name to identify it - I can storyboard a short film clip / animation - what would happen and when - I can effectively plan for an animation or film and use it purposefully - I can use a paint package to draw a picture using a range of devices e.g. Paint, 2Paint a picture, iPad apps
National Curriculum design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts use sequence, selection, and repetition in programs; work with variables and	<u>Spring Term: Computer Science and Digital Citizenship</u>		
	Key Learning	Vocabulary	Assessment
	<u>Revisit and consolidate this prior learning:</u> - How to stay safe online - Definition of ‘algorithm’ - How to follow and give instructions clearly - Include an LOTC lesson based on following instructions.	<u>Computer Science</u> Algorithm Debug Detect ‘If...then’ 2code Beebot Code Sequence	<u>Computer Science</u> - I can understand that a sequence is a list of instructions in a particular order - I can understand that if I change the sequence I may change the outcome of the program - I can sequence a simple program on Logo to produce a line drawing of a 2D shape

various forms of input and output use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information	<u>Computer Science</u> <u>Focus Vocab: Sequence- instructions that carries out a program in a particular order</u> • WALT: know that a sequence is a list of instructions in a particular order • WALT: know that if I change the sequence I may change the outcome of the program • WALT: sequence a simple program on Logo to produce a line drawing of a 2D shape • WALT: solve problems by decomposing them into smaller parts • WALT: detect and debug errors in my sequence • WALT: use and edit a pre-written program to achieve a specific outcome • WALT: use logical reasoning to explain what will happen next • WALT: predict how a change in a sequence may impact on the outcome of a program <u>Digital citizenship: Online Safety Day</u> • WALT: use technology safely, respectfully, responsibly and be able to talk about my digital footprint • WALT: explain the need to be careful before sharing anything personal • WALT: explain how someone's feelings can be hurt by what is said or written online • WALT: explain the difference between save and save as. • See End Point Document for suggested cross curricular reading opportunities	Command	• I can solve problems by decomposing them into smaller parts • I can detect and debug errors in my sequence • I can use and edit a pre-written program to achieve a specific outcome • I can use logical reasoning to explain what will happen next • I can predict how a change in a sequence may impact on the outcome of a program <u>Digital citizenship:</u> • I can explain the need to be careful before sharing anything personal • I can explain how someone's feelings can be hurt by what is said or written online
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use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	<u>Summer Term: Information Technology and Digital Literacy</u>		
	See End Point Document for suggested cross curricular reading opportunities		
	<u>Key Learning</u>	<u>Vocabulary</u>	<u>Assessment</u>
<u>Revisit and consolidate this prior learning:</u> • How to stay safe online • How to type using two hands • How to use capital letters and spaces. • How to save our work into a folder • How to save a picture into their own file. <u>Information Technology</u> • WALT: demonstrate how to use key phrases in search engines to gather accurate information online • WALT: explain the difference between a ‘belief’, an ‘opinion’ and a ‘fact’. and can give examples of how and where they might be shared online, e.g. in videos, memes, posts, news stories etc. • WALT: describe simple strategies for creating and keeping passwords private • WALT: give reasons why someone should only share information with people they choose to and can trust • WALT: explain that if they are not sure or feel pressured then they should tell a trusted adult. • WALT: explain why copying someone else’s work from the internet without permission isn’t fair and can explain what problems this might cause (See project evolve for lesson plans and resources)	<u>Digital Literacy(Sound and animation in PowerPoint)</u> Multimedia Insert Transition Import PowerPoint	<u>Information Technology</u> • I can demonstrate how to use key phrases in search engines to gather accurate information online • I can explain the difference between a ‘belief’, an ‘opinion’ and a ‘fact. and can give examples of how and where they might be shared online, e.g. in videos, memes, posts, news stories etc. • I can describe simple strategies for creating and keeping passwords private • I can give reasons why someone should only share information with people they choose to and can trust • I can explain that if they are not sure or feel pressured then they should tell a trusted adult. • I can explain why copying someone else’s work from the internet without permission isn’t fair and can explain what problems this might cause	

	<u>Computer Pioneer focus:</u> Teach a lesson on either Ada Lovelace or Charles Babbage and how they used computing in their jobs/ why they are a computer pioneer. See End Point Document for suggested cross curricular reading opportunities <u>Digital Literacy</u> <u>(Sound and animation in PowerPoint)</u> • WALT import images, use the transition tool and insert sounds into a ready made PowerPoint. • WALT: format images - move, rotate and re-size shapes • WALT: use bullet points, speech bubbles, auto shapes and text boxes • WALT: format wrapping/layout of text boxes and images in PowerPoint • WALT: use cut, copy and paste to re-order text		<u>Digital Literacy</u> <u>(Sound and animation in PowerPoint)</u> • I can format images - move, rotate and re-size shapes • I can use bullet points, speech bubbles, auto shapes and text boxes • I can format wrapping/layout of text boxes and images in PowerPoint • I can create a multimedia presentation/eBook, with a title page, incorporating images, sounds and text • I can use cut, copy and paste to re-order text • I can explain the difference between save and save as.
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Year 4

<u>National Curriculum</u> design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts	Key knowledge and skills that will be revisited in Y4: • How to stay safe online, safe use of online apps. • Saving and opening work in the children's own folder and using keyboard shortcuts. • The use of algorithms to program on 2 code and Beebots.
	<u>Autumn Term: Digital Citizenship and Digital Literacy</u> See End Point Document for suggested cross curricular reading opportunities

use sequence, selection, and repetition in programs; work with variables and various forms of input and output use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing,	Key Learning <u>Digital Citizenship:</u> • WALT: explain how my online identity can be different to my offline identity and be able to talk about my digital footprint • WALT: explain that others online can pretend to be someone else, including my friends, and can suggest reasons why they might do this • WALT: give examples of how to be respectful to others online and describe how to recognise healthy and unhealthy online behaviours • WALT: explain how content shared online may feel unimportant to one person but may be important to other people's thoughts feelings and beliefs <u>Cross-Curricular Maths link</u> <u>Digital Literacy (Spreadsheets):</u> • WALT: enter a basic mathematical formula into Excel • WALT: add basic mathematical formulas • WALT: use SUM to calculate the total of a set of numbers in a range of cells • WALT: change the look of a spreadsheet by using different formats e.g. text styles, colour, number format inc, currency and date, row and column heights	Vocabulary <u>Digital Citizenship</u> Internet Online Identity Apps Digital Footprint Virus Reliability Social networking Inappropriate Content Research <u>Digital Literacy</u> Spreadsheet Excel Mark sheet Column Row Cell Formula SUM Brackets Multiply (*) subtract (-) Format	Assessment <u>Digital Citizenship</u> • I can explain how my online identity can be different to my offline identity and be able to talk about my digital footprint • I can explain that others online can pretend to be someone else, including my friends, and can suggest reasons why they might do this • I can give examples of how to be respectful to others online and describe how to recognise healthy and unhealthy online behaviours • I can explain how content shared online may feel unimportant to one person but may be important to other people's thoughts feelings and beliefs • I can recognise when someone is upset, hurt or angry online • I can describe positive ways for someone to interact with others online and understand how this will positively impact on how others perceive them <u>Digital Literacy:</u> • I can enter a basic mathematical formula into Excel • I can add basic mathematical formulas • I can use SUM to calculate the total of a set of numbers in a range of cells • I can change the look of a spreadsheet by using different formats e.g. text styles, colour, number format inc, currency and date, row and column heights
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evaluating and presenting data and information use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	- WALT: insert and delete columns and rows in a spreadsheet - WALT: use spreadsheets to create a graph	Data collection	- I can insert and delete columns and rows in a spreadsheet - I can use spreadsheets to create a graph - I can select appropriate tools to add emphasis and effect to my work - I can explain why I have chosen my layout and formatting
National Curriculum design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts use sequence, selection, and repetition in programs; work with variables and various forms of input and output use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs understand computer networks including the internet; how they can provide multiple services, such as the world wide	<u>Spring Term: Computer Science and Digital Citizenship</u> See End Point Document for suggested cross curricular reading opportunities		
	Key Learning	Vocabulary	Assessment
	<u>Revisit and consolidate this prior learning:</u> - How to stay safe online - What an algorithm, program and sequence is - Explain ways in which the internet is useful. <u>Computer Science:</u> <u>Focus Vocab: Repeat/Loops- part of the program that are to be repeated</u> - WALT: know what a repeat is - WALT: know that a repeat is used to repeat a set of instructions - WALT: use repeats in programs confidently - WALT: independently select repeat and sequence code to make my own program - WALT: detect and debug errors in algorithms and programs. - WALT: transfer my coding skills between software	<u>Computer Science:</u> Algorithm Debug Detect 'If...then' 2code Beebot Code Sequence Command Selection Repeat Loop	<u>Computer Science:</u> - I know what a repeat is - I know that a repeat is used to repeat a set of instructions - I can use repeats in programs confidently - I can independently select repeat and sequence code to make my own program - I can detect and debug errors in algorithms and programs. - I can transfer my coding skills between software - I can explain why it is important to use the repeat function in a particular place in my sequence

web; and the opportunities they offer for communication and collaboration use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	- WALT: explain why it is important to use the repeat function in a particular place in my sequence <u>Digital Citizenship (Online safety day)</u> - WALT: describe ways people can be bullied through a range of media (e.g. image, video, text, chat) - WALT: 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 (their reputation) - WALT: explain how using technology can be a distraction from other things, in both a positive and negative way - See End Point Document for suggested cross curricular reading opportunities	<u>Digital Citizenship</u> Internet Online Identity Apps Digital Footprint Cyberbullying Virus Reliability Social networking Inappropriate Content Research Reputation	<u>Digital Citizenship</u> - I can describe ways people can be bullied through a range of media (e.g. image, video, text, chat) - I can 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 (their reputation) - I can explain how using technology can be a distraction from other things, in both a positive and negative way - I can 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
National Curriculum design, write and debug programs that accomplish specific goals, including	<u>Summer Term: Information Technology and Digital Literacy</u> See End Point Document for suggested cross curricular reading opportunities		

controlling or simulating physical systems; solve problems by decomposing them into smaller parts use sequence, selection, and repetition in programs; work with variables and various forms of input and output use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content select, use and combine a variety of software (including internet services) on a range of digital devices to design and	Key Learning <u>Revisit and consolidate this prior learning:</u> • How to stay safe online • How to save a picture into their own file • How to save and organise work into their own folders. <u>Information Technology</u> • WALT: describe how to search for information within a wide group of technologies and make a judgement about the probable accuracy (e.g. social media, image sites, video sites) • WALT: explain what is meant by fake news e.g. why some people will create stories or alter photographs and put them online to pretend something is true when it isn't • WALT: describe strategies for keeping personal information private, depending on context • WALT: know what the digital age of consent is and the impact this has on online services asking for consent • WALT: explain why work I create using technology belongs to me • WALT: save my work under a suitable title / name so that others know it belongs to me (e.g. filename, name on content) • WALT: understand that work created by others does not belong to me even if I save a copy	Vocabulary <u>Information Technology</u> Search Technologies Social Media Fake News Privacy Consent Copyright File Save Save as	Assessment <u>Information Technology</u> • I can describe how to search for information within a wide group of technologies and make a judgement about the probable accuracy (e.g. social media, image sites, video sites) • I can explain what is meant by fake news e.g. why some people will create stories or alter photographs and put them online to pretend something is true when it isn't • I can describe strategies for keeping personal information private, depending on context • I know what the digital age of consent is and the impact this has on online services asking for consent • I can explain why work I create using technology belongs to me • I can save my work under a suitable title / name so that others know it belongs to me (e.g. filename, name on content) • I understand that work created by others does not belong to me even if I save a copy • I can explain that internet use is never fully private and is monitored, e.g. adult supervision • I can describe how some online services may seek consent to store information about me; I know how to respond appropriately and who I can ask if I am not sure • I can say why it belongs to me (e.g. 'I designed it' or 'I filmed it')
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create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	<u>Computer Pioneer focus:</u> Teach a lesson on either Hedy Lamarr or Radia Periman and how they used computing in their jobs/ why they are a computer pioneer. See End Point Document for suggested cross curricular reading opportunities <u>Digital Literacy (Sound and animation in iMovie/Green Screen) (Greek iMovie)</u> • WALT: import images and the use of sounds recorded independently. • WALT: storyboard a short film clip - what would happen and when. • WALT: take a series of pictures or clips to form an a short film clip • WALT: use a mobile device to film a short clip • WALT: upload our video to doInk and create a background for our green screen • WALT: compare film for effect on audience • WALT: add simple titles and credits.	<u>Digital Literacy</u> Multimedia Hyperlink Insert Transition Animation Import DoInk Background Green Screen iMovie	<u>Digital Literacy (iMovie)</u> • I can storyboard a short movie - what would happen and when • I can save my movie at different stages and talk about the changes and improvements I have made • I can add titles, credits, transitions and special effects • I can edit video, movie or music footage by cropping clips • I can choose appropriate scene transitions
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Year 5

<u>National Curriculum</u> design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve	Key knowledge and skills that will be revisited in Y5: • How to stay safe online and the safe use of online apps • How to organise a folder effectively and to save and open work • Describe ways that the internet is useful and how we use internet in everyday life. • Explain what an algorithm is and how computers need specific instructions to operate. • The use of shortcuts on a keyboard (Copy and Paste, Saving, Printing work, Logging on)
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problems by decomposing them into smaller parts use sequence, selection, and repetition in programs; work with variables and various forms of input and output use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and	<u>Autumn 1: Digital Citizenship and Digital Literacy</u>		
	See End Point Document for suggested cross curricular reading opportunities		
	Key Learning	Vocabulary	Assessment
<u>Digital Citizenship</u> - WALT: talk about my digital footprint and demonstrate responsible choices about my online identity, depending on context - WALT: explain how identity online can be copied, modified or altered - WALT: explain how someone can get help if they are having problems and identify when to tell a trusted adult - WALT: describe ways technology can affect health and well-being both positively (e.g. mindfulness apps) and negatively - WALT: describe some strategies, tips or advice to promote health and well-being with regards to technology See End Point Document for suggested cross curricular reading opportunities	<u>Digital Citizenship</u> Acceptable behaviour Unacceptable behaviour Privacy settings Social networking Social media Appropriate Inappropriate Concerns Report Flag Safety Personal Information Privacy settings	<u>Digital Citizenship:</u> - I can talk about my digital footprint and demonstrate responsible choices about my online identity, depending on context - I can explain how identity online can be copied, modified or altered - I can explain how someone can get help if they are having problems and identify when to tell a trusted adult - I can describe ways technology can affect health and well-being both positively (e.g. mindfulness apps) and negatively - I can describe some strategies, tips or advice to promote health and well-being with regards to technology - I recognise the benefits and risks of accessing information about health and well-being online and how we should balance this with talking to trusted adults and professionals - I can give examples of technology-specific forms of communication (e.g.emojis, memes and GIFs). - I can explain that there are some people I communicate with online who may want to do me or my friends harm. I can recognise that this is not my / our fault	
<u>Digital Literacy- PowerPoint on Anglo Saxons</u> WALT: create a short PowerPoint. (Add titles, credits, transitions and special effects, different font, word art).	<u>Digital Literacy</u> PowerPoint Text Font	<u>Digital Literacy</u> - I can select appropriate tools to add emphasis and effect to my work - I can explain why I have chosen my layout and formatting	

content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	- WALT: combine the use of ICT tools to create a fact file (using PowerPoint) and use reliable websites for my research. Teach the following skills: copy and paste text and images from other places using keyboard shortcuts, save work with a useful name to open next week. - WALT: open and edit our fact file. Change font, use word art, use find and replace consider the layout, insert a photo and caption. Delete, inset and replace text to improve clarity. - WALT: think about whether our work is suitable for the audience and redraft our written work by inserting and replacing text. - WALT: import images, hyperlinks and insert sounds into our own PowerPoint.	Insert Copy and Paste File Shortcut Control Save Format Edit Transition	- I can review and edit my work and talk about the changes I made - I can identify whether my work is suitable for the audience - I can evaluate and improve my finished designs						
National Curriculum design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts use sequence, selection, and repetition in programs; work with variables and various forms of input and output use logical reasoning to explain how some simple algorithms work and to	<u>Spring Term: Computer Science and Digital Citizenship</u> See End Point Document for suggested cross curricular reading opportunities <table><tr><th>Key Learning</th><th>Vocabulary</th><th>Assessment</th></tr><tr><td> <u>Revisit and consolidate this prior learning:</u> - How to stay safe online, including the use of social media sites. - The definition of algorithm, program, repeat, loop, code, debug, error, command, goal. - How computers require specific instructions to function. <u>Computer Science:</u> <u>Focus Vocab: Conditional/Selection- Using an 'if' statement in a computer program</u> - WALT: tell you what a conditional / selection is </td><td> <u>Computer Science</u> Conditional Selection Algorithm Command Sequence Repetition Program Debug Detect 'If....then' 2code Beebot Code </td><td> <u>Computer Science:</u> - I can tell you what a conditional / selection is - I can plan algorithm and the write a program using the following: commands, sequence, repetition and selection / condition ('if...then') - I can detect and debug errors in more complex algorithms and programs - I can use selection to create games in which the user must make a choice - I can use my skills and understanding of conditional / selection in more than 2 programs </td></tr></table>			Key Learning	Vocabulary	Assessment	<u>Revisit and consolidate this prior learning:</u> - How to stay safe online, including the use of social media sites. - The definition of algorithm, program, repeat, loop, code, debug, error, command, goal. - How computers require specific instructions to function. <u>Computer Science:</u> <u>Focus Vocab: Conditional/Selection- Using an 'if' statement in a computer program</u> - WALT: tell you what a conditional / selection is	<u>Computer Science</u> Conditional Selection Algorithm Command Sequence Repetition Program Debug Detect 'If....then' 2code Beebot Code	<u>Computer Science:</u> - I can tell you what a conditional / selection is - I can plan algorithm and the write a program using the following: commands, sequence, repetition and selection / condition ('if...then') - I can detect and debug errors in more complex algorithms and programs - I can use selection to create games in which the user must make a choice - I can use my skills and understanding of conditional / selection in more than 2 programs
Key Learning	Vocabulary	Assessment							
<u>Revisit and consolidate this prior learning:</u> - How to stay safe online, including the use of social media sites. - The definition of algorithm, program, repeat, loop, code, debug, error, command, goal. - How computers require specific instructions to function. <u>Computer Science:</u> <u>Focus Vocab: Conditional/Selection- Using an 'if' statement in a computer program</u> - WALT: tell you what a conditional / selection is	<u>Computer Science</u> Conditional Selection Algorithm Command Sequence Repetition Program Debug Detect 'If....then' 2code Beebot Code	<u>Computer Science:</u> - I can tell you what a conditional / selection is - I can plan algorithm and the write a program using the following: commands, sequence, repetition and selection / condition ('if...then') - I can detect and debug errors in more complex algorithms and programs - I can use selection to create games in which the user must make a choice - I can use my skills and understanding of conditional / selection in more than 2 programs							

detect and correct errors in algorithms and programs understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range	• WALT: plan an algorithm and then write a program using the following: commands, sequence, repetition and selection / condition ('if...then') • WALT: detect and debug errors in more complex algorithms and programs • WALT: use selection to create games in which the user must make a choice • WALT: use my skills and understanding of conditional / selection in more than 2 program <u>Digital Citizenship (Online Safety Day):</u> • WALT: describe ways that information about anyone online can be used by others to make judgments about an individual and why these may be incorrect • WALT: recognise online bullying can be different to bullying in the physical world and can describe some of those differences • WALT: describe the helpline services which can help people experiencing bullying, and how to access them (e.g. Childline / CEOP / The Mix) See End Point Document for suggested cross curricular reading opportunities	<u>Digital Citizenship</u> Cyberbullying Helpline services Digital Footprint Inappropriate Appropriate	<u>Digital Citizenship</u> • I can describe ways that information about anyone online can be used by others to make judgments about an individual and why these may be incorrect • I can recognise online bullying can be different to bullying in the physical world and can describe some of those differences • I can describe the helpline services which can help people experiencing bullying, and how to access them (e.g. Childline / CEOP / The Mix) • I can describe how what one person perceives as playful joking and teasing (including 'banter') might be experienced by others as bullying • I can explain how anyone can get help if they are being bullied online and identify when to tell a trusted adult • I can identify a range of ways to report concerns and access support both in school and at home about online bullying • I can explain how to block abusive users
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of ways to report concerns about content and contact.			
National Curriculum	<u>Summer Term: Information Technology and Digital Literacy</u> See End Point Document for suggested cross curricular reading opportunities		
design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts	Key Learning	Vocabulary	Assessment
use sequence, selection, and repetition in programs; work with variables and various forms of input and output	<u>Revisit and consolidate this prior learning:</u> • How to stay safe online • Identifying the difference between save and save as buttons. • Organising work into their own folders. • How to write formulas in Excel		
use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs	<u>Information technology</u> • WALT: read and respond to e-mails, send an e-mail using an address and send a group email. • WALT: add an attachment to an email and download an attachment from an email. (Using 2email) • WALT: know what an operating system is and why it important • WALT: identify the key internal parts of a computer – RAM, memory, processor and motherboard and describe what each part does • WALT: evaluate digital content and can explain how to make choices about what is trustworthy e.g. differentiating between adverts and search results • WALT: explain what a strong password is and demonstrate how to create one • WALT: give examples of content that is permitted to be reused and know how this content can be found online	<u>Information Technology</u> Email Operating System Attachment Internal Parts RAM Memory Processor Motherboard Digital Content Password	<u>Information Technology</u> • I know what an operating system is and why it important • I can identify the key internal parts of a computer – RAM, memory, processor and motherboard and describe what each part does • I can explain what is meant by 'being sceptical'; I can give examples of when and why it is important to be 'sceptical' • I can evaluate digital content and can explain how to make choices about what is trustworthy e.g. differentiating between adverts and search results • I can explain key concepts including: information, reviews, fact, opinion, belief, validity, reliability and evidence • I can explain what a strong password is and demonstrate how to create one • I can explain what app permissions are and can give some examples • I can assess and justify when it is acceptable to use the work of others • I can give examples of content that is permitted to be reused and know how this content can be found online
understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration			
use search technologies effectively, appreciate how results are selected and			

ranked, and be discerning in evaluating digital content select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	<u>Computer Pioneer focus:</u> Teach a lesson on Alan Turing and how they used computing in their jobs/ why they are a computer pioneer. See End Point Document for suggested cross curricular reading opportunities <u>Cross-Curricular Maths</u> <u>Digital Literacy- Spreadsheets (Information about planets)</u> Using 2investigage • WALT: how to create a database structure of my own and enter the data • WALT: how to prepare a data collection form and collect quality information • WALT: use databases to create a graph • WALT: choose the most appropriate form of graph for a data set giving reasons for my choice • WALT: how to interpret graphs of data collected from a variety of sources	<u>Digital Literacy</u> Spreadsheet Excel Mark sheet Column Row Cell Formula SUM Brackets Multiply (*) subtract (-) Format What if.... Data collection	<u>Digital Literacy</u> • I can create a database structure of my own and enter the data • I can prepare a data collection form and collect quality information • I can use databases to create a graph • I can choose the most appropriate form of graph for a data set giving reasons for my choice • I can interpret graphs of data collected from a variety of sources
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Year 6

National Curriculum	Key knowledge and skills that will be revisited in Y6:
design, write and debug programs that accomplish	• How to stay safe online and the safe use of online apps • How to organise a folder effectively and to save and open work

specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts use sequence, selection, and repetition in programs; work with variables and various forms of input and output use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content select, use and combine a variety of software (including internet services) on a range of digital	• Explain what an algorithm is, what debugging is and how computers need specific instructions to operate. • The use of shortcuts on a keyboard (Copy and Paste, Saving, Printing work, Logging on) • How to use a range of apps including PowerPoint, iMovie, Word • See End Point Document for suggested cross curricular reading opportunities		
	<u>Autumn Term: Digital Citizenship and Digital Literacy</u>		
	Key Learning	Vocabulary	Assessment
	<u>Digital Citizenship</u> • WALT: talk about my digital footprint and the importance of asking until I get the help needed • WALT: describe issues online that could make anyone feel sad, worried, uncomfortable or frightened. I know and can give examples of how to get help, both on and offline • WALT: explain how sharing something online may have an impact either positively or negatively. (Include appropriate / inappropriate images) • WALT: assess and action different strategies to limit the impact of technology on health (e.g. night-shift mode, regular breaks, correct posture, sleep, diet and exercise) • WALT discuss the power of persuasion and radicalisation <u>Digital Literacy (Using publisher to create a newspaper report)</u> • WALT: combine the use of ICT tools to create a Newspaper article (using Publisher or Word). Teach the following skills: copy and paste text and images from other places using	<u>Digital Citizenship</u> Acceptable behaviour Unacceptable behaviour Privacy settings Social networking Social media Appropriate Inappropriate Concerns Report Flag Safety Personal Information Privacy settings <u>Digital Literacy</u> Processing Text Font Insert Copy	<u>Digital Citizenship</u> • I can talk about my digital footprint and the importance of asking until I get the help needed • I can 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 • I can describe issues online that could make anyone feel sad, worried, uncomfortable or frightened. I know and can give examples of how to get help, both on and offline • I can explain how sharing something online may have an impact either positively or negatively • I can assess and action different strategies to limit the impact of technology on health (e.g. night-shift mode, regular breaks, correct posture, sleep, diet and exercise) • I recognise and can discuss the pressures that technology can place on someone and how / when they could manage this <u>Digital Literacy</u> • I can choose, select and use a combination of software to present my work • I can select appropriate tools to add emphasis and effect to my work

devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	keyboard shortcuts ,inserting columns on word save work with a useful name to open next week, creating a template, • WALT: how to choose, select and use a combination of software to present my work • WALT: select appropriate tools to add emphasis and effect to my work • WALT: explain why I have chosen my layout and formatting • WALT: review and edit my work and talk about the changes I made • WALT: consider whether my work is suitable for the audience • WALT: draft and redraft my work by deleting, inserting and replacing text • See End Point Document for suggested cross curricular reading opportunities	Paste File Shortcut Control Save Format Redraft Edit Columns	• I can explain why I have chosen my layout and formatting • I can review and edit my work and talk about the changes I made • I can consider whether my work is suitable for the audience • I can draft and redraft my work by deleting, inserting and replacing text						
National Curriculum design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts use sequence, selection, and repetition in programs; work with variables and various forms of input and output use logical reasoning to explain how some simple algorithms work and to	<u>Spring Term: Computer Science and Digital Citizenship</u> See End Point Document for suggested cross curricular reading opportunities <table><tr><th>Key Learning</th><th>Vocabulary</th><th>Assessment</th></tr><tr><td> <u>Revisit and consolidate this prior learning:</u> • How to keep safe online • Key Vocab: algorithm, program, repeat, loop, sequence, conditional, sequence • How computers need specific complex instructions. <u>Computer Science:</u> <u>Focus Vocab: Variable- part of a program that can change</u> • WALT: explain what a variable is </td><td> <u>Computer Science</u> Algorithm Debug Detect 'If...then' 2code Beebot Code Sequence Command Selection Repeat Kudo </td><td> <u>Computer Science</u> • I can explain what a variable is • I can confidently use events, repeats, selection and variables • I can use a variable in a variety of programming software • I can confidently decompose a problem and methodically create a program to solve it, testing and adapting as I go • I can evaluate the effectiveness of my programming and suggest improvements </td></tr></table>			Key Learning	Vocabulary	Assessment	<u>Revisit and consolidate this prior learning:</u> • How to keep safe online • Key Vocab: algorithm, program, repeat, loop, sequence, conditional, sequence • How computers need specific complex instructions. <u>Computer Science:</u> <u>Focus Vocab: Variable- part of a program that can change</u> • WALT: explain what a variable is	<u>Computer Science</u> Algorithm Debug Detect 'If...then' 2code Beebot Code Sequence Command Selection Repeat Kudo	<u>Computer Science</u> • I can explain what a variable is • I can confidently use events, repeats, selection and variables • I can use a variable in a variety of programming software • I can confidently decompose a problem and methodically create a program to solve it, testing and adapting as I go • I can evaluate the effectiveness of my programming and suggest improvements
Key Learning	Vocabulary	Assessment							
<u>Revisit and consolidate this prior learning:</u> • How to keep safe online • Key Vocab: algorithm, program, repeat, loop, sequence, conditional, sequence • How computers need specific complex instructions. <u>Computer Science:</u> <u>Focus Vocab: Variable- part of a program that can change</u> • WALT: explain what a variable is	<u>Computer Science</u> Algorithm Debug Detect 'If...then' 2code Beebot Code Sequence Command Selection Repeat Kudo	<u>Computer Science</u> • I can explain what a variable is • I can confidently use events, repeats, selection and variables • I can use a variable in a variety of programming software • I can confidently decompose a problem and methodically create a program to solve it, testing and adapting as I go • I can evaluate the effectiveness of my programming and suggest improvements							

detect and correct errors in algorithms and programs understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range	• WALT: confidently use events, repeats, selection and variables • WALT: use a variable in a variety of programming software • WALT: confidently decompose a problem and methodically create a program to solve it, testing and adapting as I go • WALT: evaluate the effectiveness of my programming and suggest improvements • WALT: confidently use the Blockly programming language <u>Digital Citizenship (Online Safety Day)</u> • WALT: describe how to be kind and show respect for others online including the importance of respecting boundaries regarding what is shared about them online and how to support them if others do not • WALT: explain strategies anyone can use to protect their 'digital personality' and online reputation, including degrees of anonymity • WALT: describe how to capture bullying content as evidence (e.g. screen-grab, URL, profile) to share with others who can help me • See End Point Document for suggested cross curricular reading opportunities	Sprite Background Navigate Scenery 3D Variables Conditional statements Loops Game features <u>Digital Citizenship</u> Cyberbullying Anonymity Evidence Screen-grab Boundaries URL Profile	• I confidently use the Blockly programming language <u>Digital Citizenship</u> • I can describe how to be kind and show respect for others online including the importance of respecting boundaries regarding what is shared about them online and how to support them if others do not • I can explain strategies anyone can use to protect their 'digital personality' and online reputation, including degrees of anonymity • I can describe how to capture bullying content as evidence (e.g. screen-grab, URL, profile) to share with others who can help me • I can describe how things shared privately online can have unintended consequences for others. e.g. screen-grabs • I can explain that taking or sharing inappropriate images of someone (e.g. embarrassing images), even if they say it is okay, may have an impact for
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of ways to report concerns about content and contact.			the sharer and others; and who can help if someone is worried about this I can explain how someone would report online bullying in different contexts
National Curriculum design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts use sequence, selection, and repetition in programs; work with variables and various forms of input and output use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration	<u>Summer Term: Information Technology and Digital Literacy</u> See End Point Document for suggested cross curricular reading opportunities		
	Key Learning	Vocabulary	Assessment
	<u>Revisit and consolidate this prior learning:</u> - How to stay safe online - What a search engine is - Using an iPad to record effectively <u>Information Technology:</u> - WALT: explain how search engines work and how results are selected and ranked and how to use them effectively - WALT: explain how and why some people may present 'opinions' as 'facts'; why the popularity of an opinion or the personalities of those promoting it does not necessarily make it true, fair or perhaps even legal - WALT: define the terms 'influence', 'manipulation' and 'persuasion' and explain how someone might encounter these online (e.g. advertising and 'ad targeting' and targeting for fake news) - WALT: describe simple ways to increase privacy on apps and services that provide privacy settings	<u>Information Technology</u> Radicalisation Manipulation Extremism Prevention Opinions and facts Influence Manipulation Persuasion Privacy Search engine	<u>Information Technology</u> - I can explain how search engines work and how results are selected and ranked - I can explain how to use search technologies effectively - I can explain how and why some people may present 'opinions' as 'facts'; why the popularity of an opinion or the personalities of those promoting it does not necessarily make it true, fair or perhaps even legal - I can describe how some online information can be opinion and can offer examples - I can define the terms 'influence', 'manipulation' and 'persuasion' and explain how someone might encounter these online (e.g. advertising and 'ad targeting' and targeting for fake news) - I can describe simple ways to increase privacy on apps and services that provide privacy settings

use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	<u>Computer Pioneer focus:</u> Teach a lesson on either Bill Gates or Elon Musk and how they used computing in their jobs/ why they are a computer pioneer. See End Point Document for suggested cross curricular reading opportunities <u>Digital Literacy:</u> <u>Creating Macbeth witches film using iMovie or Green Screen</u> • WALT: use a mobile device to film a short clip and consider the effect of camera angles, light and shadow when filming. • WALT: add titles, credits, transitions and special effects to my broadcast. • WALT: explain my choice of clips and effects and discuss and compare film for effect on audience. <u>Data handling- Spreadsheet (Working out the cost to go to the Globe and watch a play)</u> • WALT: design and create our own spreadsheet and enter the data. Teach: set text styles, colour, number format inc, currency and date, row and column heights, use SUM to calculate the total of a set of numbers in a range of cells, writing and using formulas. • WALT: create a graph in my spreadsheet and decide on the most appropriate form of graph given reasons for my choice. (Including pie charts, bar charts and line graphs) • WALT: interpret graphs of data collected.	<u>Digital Literacy</u> iMovie Camera angle Shadow Light Titles Credit Transition Special effect Import Effect Review Effectiveness Spreadsheet Excel Cell Formula Sum What if... Data Collection Max Min	<u>Digital Literacy</u> • I can interpret graphs of data collected from a variety of sources • I can use a mobile device to film a short clip • I can consider the effect of camera angles, light and shadow when filming • I can add titles, credits, transitions and special effects • I can review and add to, replace and edit clips to make messages clearer • I can explain my choice of clips, effects and structure in resources I have created • I can discuss and compare film for effect on audience. • I can export / embed a video in different formats for different purposes
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