



"We believe, we achieve, we succeed in God's family"



THANKFULNESS ● COMMUNITY ● COMPASSION ● TRUTHFULNESS ● COURAGE ● FORGIVENESS

Computing & Online Safety Knowledge and Skills Progression Overview

"Computers are incredibly fast, accurate, and stupid. Human beings are incredibly slow, inaccurate, and brilliant. Together they are powerful beyond imagination." Albert Einstein.

<p>Intent</p>	<p>Our aim is to give pupils a thorough and ambitious education in computing, equipping them to use technology, computational thinking and creativity to understand and change the world. It is now more important than ever that pupils understand how to use technology positively, responsibly and safely, and that they see good models of this. By the time they leave St Mary's C of E Primary School, pupils will have gained key knowledge and skills in the three main strands of the National Curriculum for Computing (2014). These strands are: computer science (programming and understanding how digital systems work), information technology (using computer systems to create, store, retrieve and send information) and digital literacy (evaluating digital content and using technology safely and respectfully). Our knowledge-engaged curriculum enables children to understand how computers and computer systems (such as the internet) work, and how they are designed and programmed. It ensures they know what to do if they have concerns about anything they encounter online, and how to be safe, responsible and respectful when using the internet. Equally, our offer provides many opportunities for learners to apply their evolving knowledge imaginatively, becoming fluent and creative in their mastery of computing. The depth and breadth of our coverage aims to provide all our children with a solid grounding for future learning and the ability to become active digital citizens in the modern world.</p>
<p>Implementation</p>	<p>Our scheme of work for Computing is adapted from the 'Teach Computing' Curriculum and covers all aspects of the National Curriculum. The implementation of our new progression framework in computing ensures a balanced coverage of the three computing strands (computer science, information technology and digital literacy). The children work on all three strands each year. As they progress through the school, children build on their prior learning within each strand, covering new or deeper knowledge and developing their technical skills. The relevant, context-embedded computing experiences through which this knowledge-engaged curriculum is taught will benefit learners in secondary school, further education and future workplaces. From research methods, use of presentation and creative tools and computational and critical thinking, computing at St Mary's gives children the building blocks that enable them to pursue a wide range of interests and vocations in the next stage of their lives. A range of inclusive teaching and learning strategies will be used in every lesson to capture pupils' interest and to promote effective learning and progress for all children including those with Special Educational Needs (SEND) and disadvantaged pupils.</p>
<p>Impact</p>	<p>Our approach to the curriculum provides fun, engaging and meaningful learning for all pupils, in which the children understand not only the content that is taught but the opportunities offered to them by their computing education, enabling them to become creators and change-makers in our digital world. The impact of our curriculum and the quality of children's learning is evident in their work and pupil voice outcomes. This information feeds into teachers' future planning and enables assessment of pupil's knowledge and skills. Through cross-curricular uses of computing in other subjects, teachers are able to revisit misconceptions and knowledge gaps in computing in tandem with other curriculum areas. This supports varied paces of learning and ensures all pupils make good progress.</p>

National Curriculum Requirements

EYFS

Within the revised EYFS statutory framework, the **Technology** strand within **Understanding the World** has been removed. However, there are opportunities within each area of the framework to effectively prepare children for studying the computing curriculum.

Technology in the Early Years can mean:

- taking a photograph with a camera or tablet
- searching for information on the internet
- playing games on the interactive whiteboard
- exploring an old typewriter or other mechanical toys
- using a Beebot
- watching a video clip
- listening to music

KS1

Pupils should be taught to:

- 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.

KS2

Pupils should be taught to:

- 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 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.

Links with British Values and Personal Development

- In computing we are learning to understand and be considerate to the views of other internet users. We understand that we are each part of the democracy of the internet and that we can each, in our own small way, affect the way the internet exists.
- In computing we understand the use of rules on computers and the internet, such as when we are allowed to use social media and what we are allowed to post and share. We understand that rules are to keep others and ourselves safe and to help the internet to be an enjoyable and engaging place.
- In computing we understand how to use our right to freedom of speech in a respectable and thoughtful way, being considerate of how this speech will affect others. We understand the freedom the internet and computers offer us in discovering information and connecting us with the world.
- In computing we appreciate and understand the views of others, our right to challenge, question and discuss opinions and views, and to do this in a respectable and thoughtful way. We understand that as we are connected with the world while accessing the internet, we are exposed to the widest range of views, and we are learning to respect them.
- In computing we understand that we are connected to people across the whole world. We understand that these are people from different communities, cultures, faiths and beliefs. We use the opportunities offered in computing to question, challenge and understand people with these different characteristics to support and develop our tolerance of them.

The Path to Success

Step 5: Connect it...

Pupils use computing skills to explore knowledge in other subjects e.g. research, presentations in other curriculum subjects, filmmaking in drama

Discuss the role of computing in other curriculum areas e.g. Maths, DT and science

Discuss the role of computing in careers such as engineering, filmmaker, scientist

Step 4: Develop it...

Collaborate!

Children discussing how computing skills and understanding can inform problem solving and creativity

Discuss global issues and people's online responses to them

Use collaborative activities to enhance vocabulary application and use of computing language

Challenge—set tasks that require pupils to 'teach' about a particular aspect of computing such as coding

Step 3: Use it...

Computing as stimulus for work in other areas (collective worship, RE, discussions in other subjects such as history)

Regularity of opportunity—follow the curriculum structure

Range of practice throughout the curriculum to consolidate transferrable skills

Evidence learning: pupil voice

Step 1: Experience it...

Ensure children experience a rich context for computing around the school

Regular opportunities for computing teaching of explicit skills

STEM opportunities across the Trust schools

Computing skills utilised across the curriculum

Children having opportunities to create their own collective worship resources and present to school

Newsround as a source for media information

Step 2: Play with it...

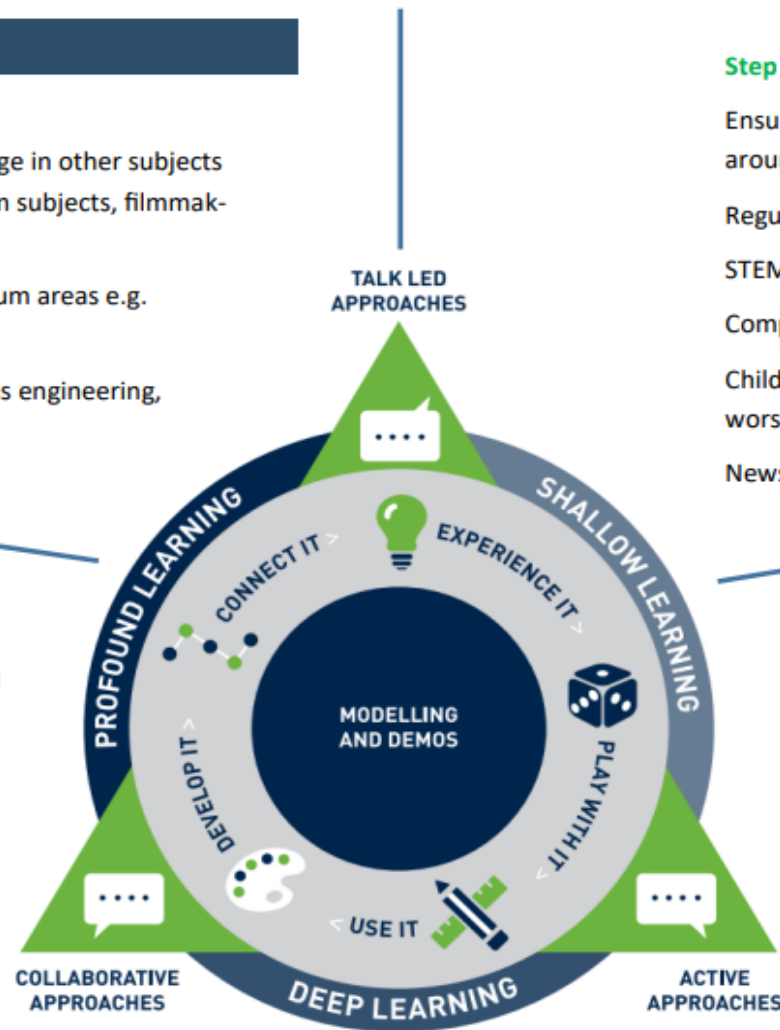
Chance to experiment with computing

Celebrating children's creativity

Word association games and follow-on play with vocabulary

Apply 'how could I respond to this situation?' (critical thinking; how could I solve this)

Computing 'flash' share something interesting in the media



INFORMATION TECHNOLOGY – most of these objectives will be covered by using tech creatively across the rest of the curriculum, although it may be necessary to teach some discrete skills. Learners should know that technology is everywhere, be able to identify the technology they encounter and have a growing understanding of how it works.

EYFS	KS1	KS2
Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes.	Use technology purposefully to create, organise, store, manipulate and retrieve 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.

COMPUTER SCIENCE

EYFS	KS1	KS2
Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes.	<p>Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.</p> <p>Create and debug simple programs</p> <p>Use logical reasoning to predict the behaviour of simple programs</p>	<p>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</p> <p>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output</p> <p>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p> <p>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.</p> <p>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</p>

DIGITAL LITERACY

EYFS	KS1	KS2
Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes.	<p>Recognise common uses of information technology beyond school</p> <p>Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about material on the internet or other online technologies</p>	<p>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</p> <p>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</p> <p>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact</p>

DIGITAL LITERACY /ESafety - Education For a Connected World Objectives EYFS, KS1 & KS2

EYFS	KS1	KS2
Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes.	<p>Recognise common uses of information technology beyond school</p> <p>Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about material on the internet or other online technologies</p>	<p>Understand computer networks including the internet; how they can provide multiple services, such as the worldwide web; and the opportunities they offer for communication and collaboration</p> <p>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</p> <p>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact</p>

WORD PROCESSING / TYPING

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<ul style="list-style-type: none"> • I can play on a touch screen game and use computers/keyboards/mouse in role play • I can type letters with increasing confidence using a keyboard and tablet. • I can dictate short, clear sentences into a digital device. 	<ul style="list-style-type: none"> • I can confidently type words quickly and correctly on a digital device. • I can use the space bar to make space and delete to delete letters/ words • I can make a new line using enter/return • I can dictate into a digital device more accurately and with punctuation 	<ul style="list-style-type: none"> • I can use the space bar only once between words and use touch to navigate to words letter to edit • I can copy and paste images and text • Use caps locks for capital letters. • I can add images alongside text in a word processed document. • I can dictate longer passages into a digital device with accurate punctuation. 	<ul style="list-style-type: none"> • I can use index fingers on keyboard home keys (f/j), use left fingers for a/s/ • I can use right fingers for h/j/k/l • I can edit the style and effect of my text and images to make my document more engaging and eye-catching. For example, borders and shadows. • I can use cut, copy and paste to quickly duplicate and organise text. 	<ul style="list-style-type: none"> • I can combine digital images from different sources, objects, and text to make a final piece of a variety of tasks: posters, documents, eBooks, scripts, leaflets. • Confidently and regularly use text shortcuts such as cut, copy and paste and delete to organise text • Use font sizes appropriately for audience and purpose.\Use spell check and thesaurus including through Siri and other AI technology 	<ul style="list-style-type: none"> • I can start to apply other useful effects to my documents such as hyperlinks. • I can import sounds to accompany and enhance the text in my document. • I can organise and reorganise text on screen to suit a purpose 	<ul style="list-style-type: none"> • I can confidently choose the best application to demonstrate my learning. • I can format text to suit a purpose. • I can publish my documents online regularly and discuss the audience and purpose of my content.

DATA HANDLING

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<ul style="list-style-type: none"> • I can identify a chart. • I can sort physical objects, take a picture and discuss what I have done. • I can present simple data on a digital device. 	<ul style="list-style-type: none"> • I can sort images or text into two or more categories on a digital device. • I can collect data on a topic. • I can create a tally chart and pictogram. • I can record myself explaining what I have done and what it shows me. 	<ul style="list-style-type: none"> • I can sort digital objects into a range of charts such as Venn diagrams, carroll diagrams and bar charts using different apps and software. • I can orally record myself explaining what the data shows me. • I can create a branching database using questions 	<ul style="list-style-type: none"> • I can create my own sorting diagram and complete a data handling activity with it using images and text. • I can start to input simple data into a spreadsheet. • I can create a feelings chart exploring a story or character's feelings. 	<ul style="list-style-type: none"> • I can create my own online multiple choice questionnaire. • I can input data into a spreadsheet and export the data in a variety of ways: charts, bar charts, pie charts. • I understand how data is collected. 	<ul style="list-style-type: none"> • I can create and publish my own online questionnaire and analyse the results. • I can use simple formulae to solve calculations including =sum and other statistical functions • I can edit and format difference cells in a spreadsheet. 	<ul style="list-style-type: none"> • I can write spreadsheet formula to solve more challenging maths problems. • I can create and publish my own online quiz with a range of media (images and video)

PRESENTATIONS / WEB DESIGN / EBOOK CREATION

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
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<ul style="list-style-type: none"> • I can record my voice over a picture. • I can create a simple digital collage. • I can move and resize images with my fingers or mouse. 	<ul style="list-style-type: none"> • I can add labels to an image • I can order images to create a simple storyboard. • I can create a simple spider diagram. • I can sequence a series of pictures to explain my understanding of a topic. 	<ul style="list-style-type: none"> • I can add voice labels to an image. • I can add a voice recording to a storyboard. • I can add speech bubbles to an image to show what a character thinks. • I can import images to a project from the web and camera roll 	<ul style="list-style-type: none"> • I can create an interactive comic with sounds, formatted text and video. • I can annotate an image with videos • I can create a simple web page. • I can create a simple digital timeline/mindmap 	<ul style="list-style-type: none"> • I can create an interactive quiz eBook introducing hyperlinks. • I can create an eBook with text, images and sound. • I can create a presentation demonstrating my understanding with a range of media. • I can create a digital timeline/mindmap and include different media - sound and video. 	<ul style="list-style-type: none"> • I can collaborate with peers using online tools • I can create and export an interactive presentation including a variety of media, animations, transitions and other effects. • I can create an interactive guide to an image by embedding digital content and publishing it online. • I can create a webpage and embed video. 	<ul style="list-style-type: none"> • I can create a web site which includes a variety of media. • I can design an app prototype that links multimedia pages together with hyperlinks. • I can choose applications to communicate to a specific audience. • I can evaluate my own content and consider ways to improvements.
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ANIMATION

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<ul style="list-style-type: none"> • I can animate a simple image to speak in role • I can create a simple animation to tell a story including more than one character. 	<ul style="list-style-type: none"> • I can add filters and stickers to enhance an animation of a character. • I can create an animation to tell a story with more than one scene. • I can add my own pictures to my story animation. 	<ul style="list-style-type: none"> • I can create multiple animations of an image and edit these together. • I can create a simple stop motion animation. • I can explain how an animation/flip book works 	<ul style="list-style-type: none"> • I can create animations of faces to speak in role with more life-like realistic outcomes. • I can improve stop motion animation clips with techniques like onion skinning. • I can use animation tools in presenting software to create simple animations. 	<ul style="list-style-type: none"> • I can take multiple animations of a character I have created and edit them together for a longer video. • I can use software to create a 3D animated story. • I can use line draw tool to create animations. 	<ul style="list-style-type: none"> • I can record animations of different characters and edit them together to create an interview. • I can add green screen effects to a stop motion animation. • I can create flip book animation using digital drawings and export as a Gif or video 	<ul style="list-style-type: none"> • I can mix animations and videos recordings of myself to create video interviews. • I can plan, script and create a 3D animation to explain a concept or tell a story. • I can choose and create different types of animations to best explain my learning.

VIDEO CREATION

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<ul style="list-style-type: none"> • I know the difference between a photography and video. • I can record a short film using the camera • I can record and play a film • I can watch films back 	<ul style="list-style-type: none"> • I can record a film using the camera app. • I can select images and record a voiceover. • I can highlight and zoom into images as I record. 	<ul style="list-style-type: none"> • I can write and record a script using a Teleprompter tool. • I can use tools to add effects to a video • I can begin to use green screen techniques with support 	<ul style="list-style-type: none"> • I can sequence clips of mixed media in a timeline and record a voiceover • I can trim and cut film clips and add titles and transitions • I can independently create a green screen clip. 	<ul style="list-style-type: none"> • I can add music and sound effects to my films • I can add animated titles and transitions • I can add simple subtitles to a video clip. • I can use confidently use green screen adding animated backgrounds. 	<ul style="list-style-type: none"> • I can use cutaway and split screen tools in iMovie. • I can evaluate and improve the best video tools to best explain my understanding. • I can further improve green screen clips using crop and resize and 	<ul style="list-style-type: none"> • I can use the green screen masking tool with more than one character. • I can use picture in picture tools in iMovie. • I can add animated subtitles to my film to further enhance my creation.

			<ul style="list-style-type: none"> • I can create my own movie trailer 		<p>explore more creative ways to use the tool - wearing green clothes and the masking tool.</p>	<ul style="list-style-type: none"> • I can create videos using a range of media - green screen, animations, film and image.
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PHOTOGRAPHY AND DIGITAL ART

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<ul style="list-style-type: none"> • I can take a photograph • I can take a photograph and use it in an app • I can use a painting app and explore the paint and brush tools 	<ul style="list-style-type: none"> • I can edit a photo with simple tools • I can use a paint /drawing app to create a digital image • I can begin to cut out an image to layer on another image 	<ul style="list-style-type: none"> • I can edit a photo (crop, filters, mark up) • I can select and use tools to create digital imagery - controlling the pen and using the fill tool • I can cut images with accuracy to layer on other images. 	<ul style="list-style-type: none"> • I can confidently take and manipulate photos • I can create a digital image using a range of tools, pens, brushes and effects 	<ul style="list-style-type: none"> • I can enhance digital images and photographs using crop, brightness, contrast & resize • I can manipulate shapes to create digital art. • I can draw a series of images and export as an animated GIF 	<ul style="list-style-type: none"> • I can make a digital photo using camera settings • I can enhance digital photos and images using crop, brightness and resize tools • I can link and explain how to photoshop images and how this is used in the media 	<ul style="list-style-type: none"> • I can edit a picture to remove items, add backgrounds, merge 2 photos • I can evaluate and discuss images explaining effects and filters that have been used to enhance the media. • Use a 3D drawing app to create a realistic representation of world objects

AUGMENTED REALITY AND VIRTUAL REALITY

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<ul style="list-style-type: none"> • I can scan a QR code. • I can explore a 360 image. • I can talk about AR objects in my class 	<ul style="list-style-type: none"> • I can explore an interactive 360 image. • I can scan a trigger image to begin a AR experience. • I can pretend to interact with AR objects. 	<ul style="list-style-type: none"> • I can draw my own 360 image and explore it in VR. • I can bring objects into my surroundings using Augmented Reality. • I can create my own QR code. 	<ul style="list-style-type: none"> • I can create my own digital 360 image and explore it in VR • I can create my own images and bring it into my surroundings through AR. 	<ul style="list-style-type: none"> • I can create my own 360 video. • I can use the camera to create a 360 image. • I can add multiple objects into my surroundings through AR to explain a concept. 	<ul style="list-style-type: none"> • I can create an interactive VR experience. • I can create an animated object and bring it into my surroundings through AR • I can create an AR experience using objects I have created to explain a concept. 	<ul style="list-style-type: none"> • I can create and upload my own VR Google Expedition. • I can create an interactive poster using AR • I can explain how VR and AR works.

SOUND

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<ul style="list-style-type: none"> • I can record sounds with different resources • I can find ways to change your voice (tube, tin can, shouting to create an echo) • I can record sounds/ voices in storytelling and explanations 	<ul style="list-style-type: none"> • I can create a sequence of sounds (instruments, apps/software) • I can explore short and long sounds. • I can record my voice and add different effects. 	<ul style="list-style-type: none"> • Create a musical composition using software • I can record my own sound effects. • I can record my voice over a compositions to perform a song 	<ul style="list-style-type: none"> • I can create and edit purposeful compositions using music software to create mood or a certain style • I can experiment with live loops to create a song. 	<ul style="list-style-type: none"> • Edit sound effects for a purpose. • Create a simple four chord song following the correct rhythm. • I can record a radio broadcast or audiobook. 	<ul style="list-style-type: none"> • Add voice over and edit sound clips (volume, pitch, fade, effect) to create a podcast. • Create a remix of a popular song. 	<ul style="list-style-type: none"> • Add voice over and edit sound clips (volume, pitch, fade, effect) to use in a film or radio broadcast (podcast) • Compose a soundtrack that can be added to a film project.

COMPUTATIONAL THINKING

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<ul style="list-style-type: none"> • I can follow simple oral algorithms • I can spot simple patterns • I can sequence simple familiar tasks 	<ul style="list-style-type: none"> • I understand what algorithms are • I can write simple algorithms • I understand the sequence of algorithms is important • I can debug simple algorithms • I understand that algorithms are implemented as programs on digital devices 	<ul style="list-style-type: none"> • I can write algorithms for everyday tasks • I can use logical reasoning to predict the outcome of algorithms • I understand decomposition is breaking objects/processes down • I can implement simple algorithms on digital devices (Bee Bots, Apps: Daisy the Dino) • I can debug algorithms 	<ul style="list-style-type: none"> • I can create algorithms for use when programming • I can decompose tasks (such as animations) into separate steps to create an algorithm • I understand abstraction is focusing on important information • I can identify patterns in an algorithm I can use repetition in algorithms 	<ul style="list-style-type: none"> • I can use abstraction to focus on what's important in my design • I can write increasingly more precise algorithms for use when programming. • I can use simple selection in algorithms • I can use logical reasoning to detect and correct errors in programs 	<ul style="list-style-type: none"> • I can solve problems by decomposing them into smaller parts • I can use selection in algorithms • I can recognise the need for conditions in repetition within algorithms • I can use logical reasoning to explain how a variety of algorithms work • I can use logical reasoning to detect and correct errors in algorithms • I can evaluate my work and identify errors 	<ul style="list-style-type: none"> • I can recognise, and make use, of patterns across programming projects • I can write precise algorithms for use when programming • I can identify variables needed and their use in selection and repetition • I can decompose code into sections for effective debugging • I can critically evaluate my work and suggest improvements

CODING AND PROGRAMMING

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<ul style="list-style-type: none"> • I can use a mouse, touch screen or appropriate access device to target and select options on screen • I can input a simple sequence of commands to control a digital device with support (Bee Bot) 	<ul style="list-style-type: none"> • I can create a simple program e.g. sequence of instructions for a Bee Bot • I can use sequence in programs I can locate and fix bugs in my program 	<ul style="list-style-type: none"> • I can create a simple program e.g. sequence of instructions for a Bee Bot • I can use sequence in programs I can locate and fix bugs in my program 	<ul style="list-style-type: none"> • I can design and create programs • I can write programs that accomplish specific goals • I can use repetition in programs I can work with various forms of input 	<ul style="list-style-type: none"> • I can use simple selection in programs • I can work with various forms of output • I can use logical reasoning to systematically detect and correct errors in programs • I can work with various forms of output 	<ul style="list-style-type: none"> • I can create programs by decomposing them into smaller parts • I can use selection in programs • I can use conditions in repetition commands • I can work with variables • I can create programs that control or simulate physical systems • I can evaluate my work and identify errors 	<ul style="list-style-type: none"> • I can use a range of sequence, selection and repetition commands combined with variables as required to implement my design • I can create procedures to hide complexity in programs • I can identify and write generic code for use across multiple projects • I can critically evaluate my work and suggest improvements • I can identify and use basic HTML tags (See Computer Networks objectives)

COMPUTER NETWORKS (KS2 ONLY)

Year 3	Year 4	Year 5	Year 6
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<ul style="list-style-type: none"> • I understand that computers in a school are connected together in a network • I understand why computers are networked • I understand the difference between the Internet and the World Wide Web (WWW) 	<ul style="list-style-type: none"> • I understand that servers on the Internet are located across the planet • I understand how email is sent across the Internet • I understand how the Internet enables us to collaborate 	<ul style="list-style-type: none"> • I understand how we view web pages on the Internet • I use search technologies effectively • I understand that web spiders index the web for search engines • I appreciate how pages are ranked in a search engine 	<ul style="list-style-type: none"> • I understand what HTML is and recognize HTML tags • I know a range of HTML tags and can remix a web page • I can create a webpage using HTML
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COMPUTER SCIENCE VOCABULARY

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
On Off Switch Backwards Forward Instruction Sound Moving	Action Algorithm Arrow Background input Challenge Code Criteria Debug Direction event Left turn object output Program Rewind Right turn run Sort sound Undo when clicked	Button Collision Detected Design Mode Key Pressed Nesting Predict Sequence Test Text Timer Execute Properties Scale Scene When swiped	Alert Blocks of Commands Develop Flowchart Plan Procedure Repeat Values	Abbreviations: RT, LT, BK, FD Code block Co-ordinates If/else Logo Motherboard Number variable Objects Prompt Prompt for input Repeat until Selection types Variable Variable value	2D 3D Abstraction Decomposition Function Interactive Modelling Perspective Physical system Playability Score Screenshot Simplify/simplified Stimulation Tab	Called Developer Get input Launch command Router User input LAN local area WAN wide area

INFORMATION TECHNOLOGY VOCABULARY

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Buttons Collect Command Computer Count Equipment Keyboard Keys	Arrow keys Backspace key cursor cell tool cells clipart Collate Columns	Animated Avatar Binary tree Copy and paste Database Equal tool Lock tool Presentation	Advance mod Animation Audio Bar chat Block graph Branching Database Charts	Average Background Bold Charts Flipbook Formula Formula wizard Frame	Document Find Formatting Merge cells Record Sort, group and Arrange Statistics and	Blog post Calculate Cell reference Count (how many Tool) Icon Range Row

Monitor Mouse Movement Organise Phone Camera Remote Set of photos Type	Count tool Data Delete key Image toolbox Lock tool Move Pictogram Rows Speak tool Spreadsheet	Question Soundtrack Space bar key Volume	Design templates Field Font Graphing Line graph Media Question Slide Slideshow Spin tool Stimulation Symbols = < > Text box Transition	Italic Play Random tool Stop motion Timer Underline	Reports Table Text wrapping Word processing	Sum style Workbook
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DIGITAL LITERACY VOCABULARY

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Choices Create Internet Information Share Technology Website	Animation Avatar Display board E-book File Font Log in username Logout My Work Notification Password Save Sound effect Tools Topics	Attachment Digital footprint Display board Email Internet browser Network Online safety Save Search Search engine Searching Sharing Template Wireless WWW	Address book Attachment Blog Cc Communication Compose Concept map Email Formatting PEGI rating Save to draft Send Spoof website Webpage Website	Computer virus Cookies Copyright Identify theft Malware Phishing Plagiarism Spam	Bibliography Citations Encryption Reference Reputable Shared image Smart rules	Spoof website

Cycle A

	Years 1 & 2	Years 3 & 4	Years 5 & 6
Autumn 1	Computing systems and networks – Technology around us	Computing systems and networks – Connecting computers	Computing systems and networks - Communication and collaboration
Autumn 2	Creating media – Digital painting	Creating media - Stop-frame animation	Creating media – Video production
Online Safety	SMART rules, logging on/off, Online relationships Online reputation Online bullying	SMART rules, logging on/off, Online relationships Online reputation Online bullying	SMART rules, logging on/off, Online relationships Online reputation Online bullying
Spring 1	Programming A – Moving a robot	Programming A – Sequencing sounds	Programming B – Selection in quizzes
Spring 2	Data and information – Grouping data	Data and information – Branching databases	Data and information - Introduction to Spreadsheets
Online Safety	Self-image & identity Health, wellbeing & lifestyle	Self-image & identity Health, wellbeing & lifestyle	Self-image & identity Health, wellbeing & lifestyle
Summer 1	Creating media – Digital writing	Creating media – Desktop publishing	Creating media – Web Page creation
Summer 2	Programming B - Programming animations	Programming B – Events and actions in programmes	Programming B - Sensing movement
National Online Safety	Copyright & ownership Privacy & security Managing online information	Copyright & ownership Privacy & security Managing online information	Copyright & ownership Privacy & security Managing online information

Cycle B

	Years 1 & 2	Years 3 & 4	Years 5 & 6
Autumn 1	Computing systems and networks – IT around us	Creating media – The internet	Computing systems and networks - Systems and searching
Autumn 2	Creating media – Digital photography	Programming A – Repetition in shapes	Creating media – Introduction to vector graphics
National Online Safety	SMART rules, logging on/off, Online relationships Online reputation Online bullying	SMART rules, logging on/off, Online relationships Online reputation Online bullying	SMART rules, logging on/off, Online relationships Online reputation Online bullying
Spring 1	Programming A – Robot algorithms	Data and information – Data logging	Programming A – Variables in games
Spring 2	Data and information – Pictograms	Creating media – Photo editing	Creating media - Video production
National Online Safety	Self-image & identity Health, wellbeing & lifestyle	Self-image & identity Health, wellbeing & lifestyle	Self-image & identity Health, wellbeing & lifestyle
Summer 1	Creating media – Digital music	Data and information – Pictograms	Programming A – Selection in physical computing
Summer 2	Programming B - Programming quizzes	Programming B – Repetition in games	Creating media – 3D Modelling
National Online Safety	Copyright & ownership Privacy & security Managing online information	Copyright & ownership Privacy & security Managing online information	Copyright & ownership Privacy & security Managing online information