







Challenge, Equality & Opportunity

Computing Curriculum 25/26

Whole School Curriculum Intent:

<i>We can build knowledge and skills</i>	<i>We are creative</i>	<i>We are resilient</i>	<i>We understand ourselves and each Other</i>
 <p>We strive for all of our children to have competency in the basic skills of reading, writing, maths and communication to underpin their learning, give them access to the broader curriculum and build their confidence as learners.</p> <p>We want our children to know more, remember more and be able to do more as a result of every learning experience across the curriculum.</p>	<p>We want our children to be creative in their thinking so that they use their knowledge and skills to solve problems and create new knowledge, skills, thoughts and objects which give them enjoyment and inspire them to take their learning further.</p> 	 <p>We need our children to develop independence and resilience so that they are able to grow as thinkers and learners.</p>	<p>We aim for our children to develop empathy, awareness, respect and tolerance in-keeping with the school's No Outsiders values.</p> <p>We also want all of our children to understand themselves and be ready for the next steps in their education and the wider world.</p> 
<i>What does this look like?</i>			
<p>Achieve well in reading, writing and communication, including being at the age related expectation in early reading and phonics.</p> <p>Can build on previous learning.</p> <p>Can access new learning experiences.</p> <p>Value and enjoy success in the core subjects.</p> <p>Choose reading and use reading effectively.</p> <p>Apply maths, reading, writing and communication across the curriculum.</p>	<p>Reflect, adapt and develop ideas.</p> <p>Explore concepts.</p> <p>Make links across the curriculum.</p> <p>Ask questions and are curious.</p> <p>Use initiative.</p> <p>Hypothesise and generate ideas</p> <p>Communicate learning.</p> <p>Direct own learning through range of skills.</p> <p>Can argue and use evidence.</p>	<p>Bounce back and try again.</p> <p>Try new things and take risks.</p> <p>Manage their own things, time and learning as appropriate.</p> <p>Engage with extra-curricular activities.</p> <p>Solve problems through perseverance.</p> <p>Work towards a goal.</p>	<p>Listen to others.</p> <p>Can work in a group and cooperate with others. Assess own success and learning.</p> <p>Take turns and are patient.</p> <p>Use manners and are polite in interactions with everyone.</p> <p>Can manage emotions and support others.</p> <p>Show respect.</p> <p>Are kind and begin to show compassion.</p> <p>Can follow the Golden Rules.</p> <p>Can express themselves.</p>

Computing Intent

We can build knowledge and skills

We provide a computing curriculum that is ambitious and encourages critical thinking.

Children learn about the three main strands of the computing curriculum; Computer Science, Digital Literacy and Information Technology, and develop an understanding of the nature and purpose of their digital world and how it effects their lives.

Our Computing Curriculum uses the National Centre for Computing Education's computing taxonomy to ensure comprehensive coverage of the subject.

We teach new concepts by first unpacking complex terms and ideas, exploring these ideas in unplugged and familiar contexts, then repacking this new understanding into the original concept. This approach helps pupils develop a secure understanding of complex concepts.

Children develop a deepening knowledge of how computers and their systems work and how they are designed.

The curriculum is planned and taught to embed and develop key life skills, so that children can become effective problem solvers.

We are Creative

We enrich children's experiences by providing children with opportunities to work practically with physical computing resources such as bee bots and Micro:bits.

Children discuss their computing experiences and thinking in each lesson.

Children are provided with opportunities to design, test and evaluate algorithms and presentations.

We use project-based learning activities to provide pupils with the opportunity to apply and consolidate their knowledge and understanding.

Our curriculum enables our children to share what they have learnt in a creative way, through Green Screen, Book creator, and much more. We encourage the children to think carefully about how they will share their ideas to present their work in a clear and well-presented manner.

Children are provided with opportunities to use a variety of apps and programmes to express their thinking and learning.

We are Resilient

Children use a wide vocabulary of appropriate and accurate computing terms.

We are confident to tinker with new technology and programmes, try new things and solve problems when programmes and technology do not work.

Children ask and answer questions with confidence, drawing on computing knowledge.

We Understand Ourselves and Each Other

Children develop their understanding of the world by putting themselves at the centre of their digital world.

We work collaboratively to develop computing skills, develop communication and critical thinking skills.

Children understand how to be a competent and responsible 'digital citizen'.

Computing Implementation

We follow the Teach Computing Programmes of Study in Key Stage One and Two. Computing knowledge and skills are taught progressively. Our computing curriculum is designed to address the three main strands of the computing curriculum through the teaching of four key units and to develop an understanding of the nature and purpose of the digital world and how it effects our lives.

Progression in Computing

	R	Year 1	Year 2	Year 3	Year 4
Knowledge					
Computer Systems and Networks	Identify some technology in the classroom and at home.	<p>Technology around us to identify technology.</p> <p>Using technology- identify a computer and its main parts.</p> <p>Understand what a mouse is for</p> <p>Understand what a keyboard is for</p> <p>Understand how to use a computer responsibly</p>	<p>Recognise the uses and features of information technology</p> <p>Identify the uses of information technology in the school.</p> <p>Identify information technology beyond school.</p> <p>Explain how information technology helps us.</p> <p>Explain how to use information technology safely.</p> <p>Recognise that choices are made when using information technology.</p>	<p>Explain how digital devices function.</p> <p>Identify input and output devices.</p> <p>Recognise how digital devices can change how we work.</p> <p>Explain how a computer network can be used to share information.</p> <p>Explain how digital devices can be connected.</p> <p>Recognise the physical components of a network.</p>	<p>Explain how networks physically connect to other networks.</p> <p>Recognise how networked devices make up the internet.</p> <p>Outline how websites can be shared via the world wide web.</p> <p>Describe how content can be added and accessed on the WWW.</p> <p>Recognise how the content of the WWW is created by people.</p> <p>Evaluate the consequences of unreliable content.</p>
Creating Media	<p>Know how to colour in a picture on the paint sparkle app.</p> <p>Know that the camera app will take a digital photograph.</p> <p>Know that I can use the draw and tell app to insert text.</p>	<p>Describe what different freehand tools do on a paint program</p> <p>Explain why I chose the tools I used</p> <p>Compare painting a picture on a computer and on paper</p> <p>Understand that I can use a computer to write and know the</p>	<p>Know that a digital device can take a photograph</p> <p>Describe what makes a good photograph</p> <p>Decide how photographs can be improved</p> <p>Recognise that photos can be changed</p>	<p>Explain that animation is a sequence of drawings or photographs.</p> <p>Relate animated movement with a sequence of images.</p> <p>Know and understand the importance of working consistently and carefully.</p>	<p>Understand that sound can be recorded.</p> <p>Explain that audio recordings can be edited.</p> <p>Recognise the different parts of creating a podcast project.</p>

		<p>difference to writing on paper</p> <p>Explain why I used the tools that I chose</p> <p>Compare writing on a computer to writing on paper</p>	<p>Understand that music can make us feel different ways</p> <p>Know that there are patterns in music</p> <p>Understand that sound can be changed using a computer</p>	<p>Review and understand how to improve an animation.</p> <p>Evaluate the impact of adding other media to an animation.</p> <p>Recognise how text and images convey information.</p> <p>Recognise that text and layout can be edited.</p> <p>Understand how to add content to a desktop publishing publication.</p> <p>Consider how different layouts can suit different purposes.</p> <p>Consider the benefits of desktop publishing.</p>	<p>Know how to use audio editing skills independently.</p> <p>Understand how to combine audio to enhance a podcast project.</p> <p>Evaluate the effective use of audio.</p> <p>Understand that the composition of digital images can be changed.</p> <p>Know that colours can be changed in digital images.</p> <p>Understand how cloning can be used in photo editing.</p> <p>Understand that images can be combined.</p> <p>Know how to create my own photo project.</p>
Programming	<p>Develop an awareness of algorithms through the characteristics of effective learning.</p> <p>Playing and exploring – engagement – moving robots following instructions, exploring how objects/characters travel.</p> <p>Active Learning – Put instructions into order practically, following instructions and programming toys.</p>	<p>Understand that an algorithm is a set of instructions used to solve a problem or achieve an objective.</p> <p>Know that an algorithm is written for a computer is called a program.</p> <p>Use logical reasoning to predict the behaviour of simple programs.</p> <p>Children can explain ways in which different technology can help us.</p>	<p>Understand what algorithms are and how they are implemented as programs on digital devices.</p> <p>Understand that programs execute by following precise and unambiguous instructions.</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.</p> <p>Solve problems by decomposing programs 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</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</p>

	Creating and Thinking Critically - Predicting outcomes, matching symbols to instructions/grids.			algorithms and programs.	and correct errors in algorithms and programs.
Data and Information	Know that objects can be grouped.	<p>Identify that objects can be counted.</p> <p>Describe objects in different ways.</p> <p>Understand how to compare groups of objects.</p> <p>Answer questions about groups of objects.</p>	<p>Recognise that we can count and compare using tally charts.</p> <p>Recognise that objects can be represented as pictures.</p> <p>Understand what an attribute is.</p> <p>Recognise that people can be describes as attributes.</p> <p>Explain that we can present information using a computer.</p>	<p>Identify the attributes needed to collect data about an object.</p> <p>Understand what a database is.</p> <p>Explain why it is helpful for a database to be well structured.</p> <p>Plan the structure of a branching database.</p>	<p>Explain that data gathered over time can be used to answer questions.</p> <p>Explain that a data logger collects 'data points' from sensors over time.</p> <p>Recognise how a computer can help us analyse data.</p> <p>Identify the data needed to answer questions.</p> <p>Use data from sensors to answer questions.</p>
Digital Literacy SWGfL Project EVOLVE	<p>Understand some uses of technology for communication.</p> <p>Understand that there are some rules we need to follow to keep us safe online.</p>	<p>Understand the different methods of communication (e.g. email, online forums etc).</p> <p>Know that websites sometimes include pop-ups that take them away from the main site.</p> <p>Begin to evaluate websites and know that everything on the internet is not true.</p> <p>Know that it is not always possible to copy some text and pictures from the internet.</p> <p>Know that personal information should not be shared online.</p> <p>Know they must tell a trusted adult immediately if anyone</p>	<p>Know that personal information should not be shared online.</p> <p>Know the difference between email and communication systems such as blogs and wikis.</p> <p>Know that bookmarking is a way to find safe sites again quickly.</p> <p>Know they must tell a trusted adult immediately if anyone tries to meet them via the internet.</p>	<p>Understand the need for rules to keep them safe when exchanging learning and ideas online.</p> <p>Recognise that information on the internet may not be accurate or reliable and may be used for boas, manipulation or persuasion.</p> <p>Understand that the internet contains fact, fiction and opinion and begin to distinguish between them.</p> <p>Understand the need to keep personal information and passwords private.</p> <p>Understand that if they make personal</p>	<p>Use strategies to verify information, e.g. cross-checking</p> <p>Understand the need for caution when using an internet search for images and what to do if they find an unsuitable image</p> <p>Understand that copyright exists on most digital images, video and recorded music.</p> <p>Know difference between online communication tools used in school and those used at home.</p> <p>Understand the need to develop an alias for some public online use.</p> <p>Understand that the outcome of internet</p>

		tries to meet them via the internet.		<p>information available online it may be seen and used by others.</p> <p>Know how to respond if asked for personal information or feel unsafe about content of a message.</p> <p>Recognise that cyber bullying is unacceptable and will be sanctioned in line with the school's policy.</p> <p>Know how to report an incident of cyber bullying.</p>	searches at home may be different than at school.
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Skills

Computer Systems and Networks	Use an iPad to operate apps paint sparkle and draw and tell.	<p>Use a mouse in different ways.</p> <p>Use a keyboard to type on a computer.</p> <p>Use the keyboard to edit text.</p> <p>Use a computer responsibly</p>	<p>List different uses of information technology</p> <p>Identify the choices that they make when using IT</p> <p>Use IT for different types of activities</p>	<p>Follow a process</p> <p>Classify input and output devices</p> <p>Design a digital device</p> <p>Demonstrate how information can be passed between devices</p>	<p>Demonstrate how information is shared across the internet</p> <p>Describe networked devices and how they connect</p> <p>Describe how to access websites on the WWW</p> <p>Describe where websites are stored when uploaded to the WWW</p>
Creating Media	<p>Use paint sparkle app to create a digital drawing.</p> <p>Use draw and tell to create a picture and add a word.</p>	<p>Draw lines on a screen and explain which tools I used</p> <p>Make marks on a screen and explain which tools I used</p> <p>Use a computer on my own to paint a picture</p> <p>Use the shape and line tools effectively</p> <p>Create a picture in the style of an artist</p> <p>Choose appropriate paint tools and colours to recreate the work of an artist</p> <p>Change the colour and brush sizes</p> <p>Identify and find keys on a keyboard</p> <p>Open up a word processor</p>	<p>Capture a digital photo using a device</p> <p>Identify devices which can be used to take photographs</p> <p>Demonstrate the process of taking a good photograph</p> <p>Take photos in both landscape and portrait format</p> <p>Improve a photograph by retaking it</p> <p>Experiment with different light sources</p>	<p>Create an effective flip book—style animation</p> <p>Draw a sequence of pictures</p> <p>Create an effective stop-frame animation</p> <p>Predict what an animation will look like</p> <p>Break down a story into settings, characters and events</p> <p>Create a storyboard</p>	<p>Identify the input and output devices used to record and play sound</p> <p>Use a computer to record audio</p> <p>Inspect the soundwave view to know where to trim a recording</p> <p>Re-record a voice to improve a recording</p> <p>Plan appropriate content for a podcast</p> <p>Save my project so</p>

		<p>Enter text into a computer. Use backspace to remove text and use letter, number, and space keys.</p> <p>Identify the toolbar and use bold, italic, and underline</p> <p>Type capital letters</p> <p>Change the font</p> <p>Select all of the text by clicking and dragging</p> <p>Select a word by double-clicking</p> <p>Use 'undo' to remove changes</p>	<p>Explore the effect that light has on a photo</p> <p>Use a tool to achieve a desired effect</p> <p>Apply a range of photography skills to capture a photo</p> <p>Identify which photos are real and which have been changed</p> <p>Create a rhythm pattern</p> <p>Play an instrument following a rhythm pattern</p> <p>Use a computer to experiment with pitch</p> <p>Refine my musical pattern on a computer</p> <p>Add a sequence of notes to my rhythm</p> <p>Create a rhythm which represents an animal I've chosen on a computer</p>	<p>Review a sequence of frames to check my work</p> <p>Use onion skinning to help make small changes between frames</p> <p>Improve an animation based on feedback</p> <p>Add other media to an animation</p> <p>Identify the advantages and disadvantages of using text and images</p> <p>Change font style, size, and colours for a given purpose</p> <p>Create a template for a particular purpose</p> <p>Choose the best locations for my content</p> <p>Make changes to content after I've added it</p> <p>Paste text and images to create a magazine cover</p> <p>Choose a suitable layout for a given purpose</p> <p>Match a layout to a purpose</p>	<p>the different parts remain editable</p> <p>Improve voice recordings</p> <p>Record content following a plan</p> <p>Review the quality of recordings</p> <p>Arrange multiple sounds to create the effect I want</p> <p>Open a project to continue working on it</p> <p>Choose appropriate edits to improve my podcast</p> <p>Improve an image by rotating it</p> <p>Use photo editing software to crop an image</p> <p>Experiment with different colour effects</p> <p>Add to the composition of an image by cloning</p> <p>Remove parts of an image using cloning</p> <p>Experiment with tools to select and copy part of an image</p> <p>Use a range of tools to copy between images</p> <p>Choose suitable images for a project</p> <p>Create a project that is a combination of other images</p> <p>Combine text and an image to complete the project</p>
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Programming	Move bee bots following given instructions. Give verbal instructions e.g. how to make a jam sandwich.	Match a command to an outcome	Follow instructions given by someone else	Identify the objects in a Scratch project (sprites, backdrops)	Create a code snippet for a given purpose
		Predict the outcome of a command on a device	Give clear instructions	Create a program following a design	Program a computer by typing commands
		Run a command on a device	Use an algorithm to program a sequence on a floor robot	Create a sequence of connected commands	Test my algorithm in a text-based language
		Follow an instruction and give directions Start a sequence from the same place	Use the same instructions to create different algorithms	Start a program in different ways	Use a template to create a design for my program
		Experiment with turn and move commands to move a robot	Follow a sequence	Combine sound commands	Write an algorithm to produce a given outcome
		Choose the order of commands in a sequence	Identify different routes around my mat	Order notes into a sequence	Use a count-controlled loop to produce a given outcome
		Debug my program	Create an algorithm to meet my goal	Build a sequence of commands	Use a count-controlled loop to produce a given outcome
		Identify several possible solutions	Use my algorithm to create a program	Make design choices for my artwork	Choose which values to change in a loop
		Plan two programs	Plan algorithms for different parts of a task	Identify and name the objects I will need for a project	Use a procedure in a program
		Use two different programs to get to the same place	Put together the different parts of my program	Implement my algorithm as code	Design a program that includes count-controlled loops
		Find and use commands to move a sprite	Test and debug each part of the program	Choose which keys to use for actions and explain my choices	Develop my program by debugging it
		Use a Start block in a program	Identify the start of a sequence	Choose a character for my project	Make use of my design to write a program
		Use more than one block by joining them together	Change the outcome of a sequence of commands	Choose a suitable size for a character in a maze	Modify a snippet of code to create a given outcome
		Change the value of blocks	Match two sequences with the same outcome	Program movement	Modify loops to produce a given outcome
		Find blocks that have numbers	Build the sequences of blocks I need	Choose blocks to set up my program	Re-use existing code snippets on new sprites
		Add blocks to each of my sprites	Choose backgrounds for the design	Use a programming extension	Develop my own design explaining what my project will do
		Delete a sprite		Build more sequences of commands to make my design work	
		Choose appropriate artwork for my project		Choose suitable keys to turn on additional features	Select key parts of a given project to use in my own design
		Create an algorithm for each sprite			

		<p>Add programming blocks based on my algorithm</p> <p>Test the programs I have created</p> <p>Use sprites that match my design</p>	<p>Choose characters for the design</p> <p>Create a program based on the new design</p> <p>Build sequences of blocks to match my design</p> <p>Choose the images for my own design</p> <p>Create an algorithm</p> <p>Debug my program</p>	<p>Match a piece of code to an outcome</p> <p>Modify a program using a design</p> <p>Test a program against a given design</p> <p>Implement my design</p>	<p>Build a program that follows my design</p> <p>Refine the algorithm in my design</p>
Data and Information	<p>Work together as a group to sort and group objects in different ways.</p> <p>Say which group has the most and which has the fewest.</p>	<p>Match objects to groups</p> <p>Group and count objects</p> <p>Find objects with similar properties</p> <p>Record how many objects are in a group</p> <p>Compare groups of objects</p> <p>Record and share what I have found</p>	<p>Compare totals in a tally chart</p> <p>Record data in a tally chart</p> <p>Represent a tally count as a total</p> <p>Enter data onto a computer</p> <p>Use a computer to view data in a different format</p> <p>Use pictograms to answer simple questions about objects</p> <p>Organise data in a tally chart</p> <p>Use a tally chart to create a pictogram</p> <p>Create a pictogram to arrange objects by an attribute</p> <p>Tally objects using a common attribute</p> <p>Collect the data I need</p> <p>Create a pictogram and draw conclusions from it</p>	<p>Create two groups of objects separated by one attribute</p> <p>Investigate questions with yes/no answers</p> <p>Make up a yes/no question about a collection of objects</p> <p>Arrange objects into a tree structure</p> <p>Create a group of objects within an existing group</p> <p>Select an attribute to separate objects into groups</p> <p>Group objects using my own yes/no questions</p> <p>Select objects to arrange in a branching database</p> <p>Test my branching database to see if it works</p> <p>Create yes/no questions using given attributes</p> <p>Create a physical version of a branching database</p> <p>Create questions</p>	<p>Choose a data set to answer a given question</p> <p>Identify data that can be gathered over time</p> <p>Explain what data can be collected using sensors</p> <p>Identify that data from sensors can be recorded</p> <p>Use data from a sensor to answer a given question</p> <p>Identify the intervals used to collect data</p> <p>Sort data to find information</p> <p>View data at different levels of detail</p> <p>Use a data logger to collect data</p> <p>Interpret data that has been collected using a data logger</p>

			<p>Share what I have found out using a computer</p> <p>Use a computer program to present information in different ways</p>	<p>that will enable objects to be uniquely identified</p> <p>Independently create questions to use in a branching database</p> <p>Create a branching database that reflects my plan</p> <p>Work with a partner to test my identification tool</p>	
Digital Literacy	<p>Follow the school's safer internet rules. Follow the TAG approach if they are ever unsure when using iPads in school.</p>	<p>Follow the school's safer internet rules. Use the search engines agreed by the school. Act if they find something inappropriate online or something they are unsure of (including identifying people who can help; minimising screen; online reporting using school system etc). Use the internet for learning and communicating with others, making choices when navigating through sites. Recognise advertising on websites and learn to ignore it. Use a password to access the secure network.</p>	<p>Follow the school's safer internet rules. Use the search engines agreed by the school. Act if they find something inappropriate online or something they are unsure of (including identifying people who can help; minimising screen; online reporting using school system etc). Use the internet for learning and communicating with others, making choices when navigating through sites. Recognise advertising on websites and learn to ignore it. Use a password to access the secure network.</p>	<p>Follow the school's safer internet rules. Recognise the difference between the work of others which has been copied (plagiarism) and re-structuring and re-presenting materials in ways which are unique and new. Begin to identify when emails should not be opened and when an attachment may not be safe. Explain how to use email safely. Use different search engines.</p>	<p>Follow the school's safer internet rules. Recognise the difference between the work of others which has been copied (plagiarism) and re-structuring and re-presenting materials in ways which are unique and new. Begin to identify when emails should not be opened and when an attachment may not be safe. Explain how to use email safely. Use different search engines.</p>
Building on previous knowledge and skills					
Programming		<p>Build on the work of EYFS by exploring computational thinking and everyday contexts. For example:</p> <p>-How to build a duplo model</p>	<p>Building on the work of Year One, children should be able to turn their algorithms into programs by making a robot. They will also be able to digitally</p>	<p>Building on the work of Year Two, children should be able to develop more complex algorithms and programs using sequencing.</p>	<p>Building on the work of Year Three, children will be able to add challenge by adding repetition and repeated sequences in programs.</p>

		-How to get changed for PE -How to make a sandwich	write using a computer.	Children should be able to give instructions, make predictions, design an algorithm and debug a program.	
Computer systems and networks		Building on knowledge from EYFS children should be confident and competent in using the camera and photo album apps on the iPads. They will understand how to open and close apps on the iPad and lock the iPad.	Building on knowledge from Year One, the children will have had experience in using the laptops and understand the basic parts.	Building on knowledge from Year Two, the children will have had experience using the laptops and identify information technology and its uses.	Building on knowledge from Year Three, children will be able to competently use the laptops and understand how information technology is used in school. They will understand what a network is and be able to give some examples.
Creating Media		Building on knowledge from EYFS children should be confident and competent in using the pic collage and sparkle drawing apps to create digital drawings.	Building on knowledge from Year One, children will be able to use a computer to create their own digital painting. They will be able to use a digital keyboard to produce digital writing.	Building on knowledge from Year Two, children will be able to use a digital device such as an iPad to take a photograph. They will have explored digital music and will have created their own music for a purpose.	Building on knowledge from Year Three, children will be able to use stop frame animation to create their own animation. They will be able to use a desktop publishing publication.
Data and Information		Building on knowledge from EYFS children should have an idea of how data might be collected.	Building on knowledge from Year One, children will be able to group data and compare groups.	Building on knowledge from Year Two, children will be able to enter data to create a pictogram.	Building on knowledge from Year Three, children will be able to plan and create a branching database.
Vocabulary					
Computer Systems and Networks	App, lock, swipe, camera, technology	technology, computer, mouse, trackpad, keyboard, screen, double-click, typing.	Information technology (IT), computer, barcode, scanner/scan	digital device, input, process, output, program, digital, non-digital, connection, network, switch, server, wireless access point, cables, sockets	internet, network, router, security, switch, server, wireless access point (WAP), website, web page, web address, routing, web browser, World Wide Web, content, links, files, use, download, sharing, ownership, permission, information,

					accurate, honest, content, adverts
Creating Media	Tool, paint, brush, colour, fill	paint program, tool, paintbrush, erase, fill, undo, shape tools, line tool, fill tool, undo tool, colour, brush style, brush size, pictures, painting, computers, word processor, keyboard, keys, letters, type, numbers, space, backspace, text cursor, capital letters, toolbar, bold, italic, underline, mouse, select, font, undo, redo, format, compare, typing, writing.	music, quiet, loud, feelings, emotions, pattern, rhythm, pulse, pitch, tempo, rhythm, notes, create, emotion, beat, instrument, open, edit, device, camera, photograph, capture, image, digital, landscape, portrait, framing, subject, compose, light sources, flash, focus, background, editing, filter, format, framing, lighting.	text, images, advantages, disadvantages, communicate, font, style, landscape, portrait, orientation, placeholder, template, layout, content, desktop publishing, copy, paste, purpose, benefits, animation, flip book, stopframe, frame, sequence, image, photograph, setting, character, events, onion skinning, consistency, evaluation, delete, media, import, transition.	audio, microphone, speaker, headphones, input device, output device, sound, podcast, edit, trim, align, layer, import, record, playback, selection, load, save, export, MP3, evaluate, feedback, image, edit, digital, crop, rotate, undo, save, adjustments, effects, colours, hue, saturation, sepia, vignette, image, retouch, clone, select, combine, made up, real, composite, cut, copy, paste, alter, background, foreground, zoom, undo, font.
Programming	Instructions, forwards, backwards, left, right, move	Bee-Bot, forwards, backwards, turn, clear, go, commands, instructions, directions, left, right, route, plan, algorithm, program, ScratchJr, command, sprite, compare, programming, area, block, joining, start, run, program, background, delete, reset, algorithm, predict, effect, change, value, instructions, design.	instruction, sequence, clear, unambiguous, algorithm, program, order, prediction, artwork, design, route, mat, debugging, decomposition, sequence, command, program, run, start, outcome, predict, blocks, design, actions, sprite, project, modify, change, algorithm, build, match, compare, debug, features, evaluate, decomposition, code.	Scratch, programming, blocks, commands, code, sprite, costume, stage, backdrop, motion, turn, point in direction, go to, glide, sequence, event, task, design, run the code, order, note, chord, algorithm, bug, debug, code, motion, event, sprite, algorithm, logic, move, resize, extension block, pen up, set up, pen, design, action, debugging, errors, setup, code, test, debug, actions.	Logo (programming environment), program, turtle, commands, code snippet, algorithm, design, debug, pattern, repeat, repetition, count-controlled loop, value, trace, decompose, procedure, Scratch, programming, sprite, blocks, code, loop, repeat, value, infinite loop, count-controlled loop, costume, repetition, forever, animate, event block, duplicate, modify, design, algorithm, debug, refine, evaluate.
Data and Information	Group, how many, most, least	object, label, group, search, image, property, colour, size, shape, value, data set, more, less, most, fewest, least, the same	more than, less than, most, least, common, popular, organise, data, object, tally chart, votes, total, pictogram, enter, data, compare, objects, count, explain, attribute,	attribute, value, questions, table, objects, branching, database, objects, equal, even, separate, structure, compare, order, organise, selecting, information, decision tree.	data, table, layout, input device, sensor, logger, logging, data point, interval, analyse, dataset, import, export, logged, collection, review, conclusion.

			group, same, different, conclusion, block diagram, sharing		
Digital Literacy	Online, offline, help, technology, communicate, belong (to me), password	Online, offline, information, trust, emotions, technology, considerate, risks, consent, permission, password, private, protect, title, copy	Information, trust, emotions, technology, considerate, risks, consent, permission, password, private, protect, title, copy, consent, permission, search, engine, navigate, device ownership	Image, identity, represent, representations, interact, perceive, modified, altered, content, permission respect, impersonate, persuade, inappropriate, restrictions, persuade, sources	Online community, consequences, private, digital personality, reputation, anonymity, concern, accuracy, stereotype, hoax, misinformation, terms and conditions

More information about the relationship between the curriculum and the school's plans can be found in the Long Term Plan for Computing.

Delivery of the Computing Curriculum:

Computing is taught as part of continuous provision and as discrete lessons in Reception.

In KS1 and 2, we use the Teach Computing Curriculum which is structured into units. For these units to be coherent, the lessons within a unit must be taught in order. Each element will consist of 5 or 6 lessons which are usually taught discretely. It can be taught weekly across the half terms or some units can be delivered on a Computing focus day or across several afternoons. We have built in flexibility to ensure that Computing is not 'squeezed' out of the busy curriculum and it is taught in the most appropriate way for each year group or class. In Key Stage 1 and 2 there is timetabled access to laptops or Ipads for computing lessons.

Please see Long Term Plan for Computing for more information.

Computing is not usually planned to match other topics in the curriculum but the units can be adapted where natural links form between Computing and other subjects, for example when presenting information or data. Teachers meet with the Computing lead to discuss this and ensure that any adaptations still include coverage of the Havannah Computing Curriculum.

A Typical Computing Lesson at Havannah First School

Each KS1 and 2 lesson typically follows the following format:

1. Fast recall (retrieval) of the previous lesson's content (knowledge and skills).
2. Introduction to the computing element and knowledge and skills in the context of the question being investigated or learning objective during this lesson.
3. Children practising and exploring (tinkering with new equipment and software) as they apply and further develop their knowledge and skills to formulate an answer to the investigative question or learning objective.
4. Evaluation learning and formulation of an answer to the investigative question or learning objective set at the beginning of the lesson.

Lesson structures can vary to suit the content and the objective.

Children will largely work within the classroom setting, with Computing specialists (GEM Education) working with each class least once a year.

Computing evidence saved onto individual Seesaw accounts will keep an ongoing record of children's learning and progress. Children will be encouraged to look back at their own prior learning and recall their learning, being encouraged to use computing specific vocabulary.

Vocabulary is built upon and used in each lesson. Expectations of the vocabulary that is expected to be learned and used is also in this document.

SOURCES OF SUPPORT, INFORMATION AND GUIDANCE FOR TEACHERS

<https://teachcomputing.org/curriculum>

<https://www.barefootcomputing.org/>

<https://microbit.org/teach/lessons/?filters=age-07-11yrs>

<https://www.stem.org.uk/primary>

https://www.thinkuknow.co.uk/4_7/

<https://www.projectevolve.co.uk>

<https://www.bbc.co.uk/bitesize/subjects/zyhbwmn>

