

Biddick Hall Infant & Nursery School

Computing Progression Document



Intent

At Biddick Hall Infants and Nursery School we are committed to equip our children with the knowledge and skills to access the ever developing digital world. We aim to provide firm foundations in Computer Science whilst developing strong Digital Literacy. Our children will gain practical experiences with a wide range of up to date digital devices whilst developing an understanding the role in which in plays in daily lives. Internet and digital safety is a crucial to ensure the safe guarding of the community of Biddick Hall Infant and Nursery School. Internet safety week is a key event which recognises this however throughout the entire curriculum our children are tough how to use technology with safety and respect.

EYFS

- To explore how things work.
- To know and talk about the different factors that support their overall health and wellbeing- sensible amounts of 'screen time'.
- To be confident to try new activities and show independence, resilience and perseverance in the face of challenge.
- To explain the reasons for rules, know right from wrong and try to behave accordingly.
- Safely use and explore materials, tools and techniques, experimenting with colour, design, texture, form and function.

National Curriculum for Design and Technology

Key stage 1

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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

	Knowledge and Skills	Visits, Visitors, Resources Partnership with the ICT in School team TBC including visits and visitors.	Key Vocab	End Points Challenge For Higher Achievers	Supporting End Points For SEND
Year 1 Autumn 1 Technology around us	To identify technology I can explain technology as something that helps us I can locate examples of technology in the classroom I can explain how these technology examples help us To identify a computer and its main parts	lpads, Chromebooks, purple mash (2paint), log in cards.	Technology, computer, mouse, trackpad, keyboard, screen, double-click, typing	Pupils will be supported through; being provided the opportunity to	Pupils will be supported through; increased levels of scaffolding and

	<p>I can name the main parts of a computer I can switch on and log into a computer I can use a mouse to click and drag To use a mouse in different ways I can use a mouse to open a program I can click and drag to make objects on a screen I can use a mouse to create a picture To use a keyboard to type on a computer I can say what a keyboard is for I can type my name on a computer I can save my work to a file To use the keyboard to edit text I can open my work from a file I can use the arrow keys to move the cursor I can delete letters To create rules for using technology responsibly I can identify rules to keep us safe and healthy when we are using technology in and beyond the home I can give examples of some of these rules I can discuss how we benefit from these rules</p>			<p>explain their understanding of activities as an expert.</p> <p>being provided with possibilities to extend the project work by adding more complexities.</p> <p>Being mentors to other ensuring they share their computing knowledge.</p>	<p>modelling during knowledge development. the use of pictures and words to describe what they want to do.</p> <p>talking about their own and other people's work in simple terms.</p> <p>children to be provided with worked examples which can become 'faded worked examples' as children develop understanding and confidence.</p>
<p>Year 2 Autumn 1</p> <p>Information technology around us</p>	<p>To recognise the uses and features of information technology I can identify examples of computers I can describe some uses of computers I can identify that a computer is a part of IT To identify the uses of information technology in the school I can identify examples of IT I can sort school IT by what it's used for I can identify that some IT can be used in more than one way To identify information technology beyond school I can find examples of information technology I can sort IT by where it is found I can talk about uses of information technology To explain how information technology helps us I can recognise common types of technology I can demonstrate how IT devices work together I can say why we use IT To explain how to use information technology safely I can list different uses of information technology I can talk about different rules for using IT</p>	<p>Click View videos, Gdrive, chrome books, log in cards, Broken down computer.</p>	<p>Information technology (IT), computer, barcode, scanner</p>		<p>opportunities to suggest what to do next and the possibility of providing 'subgoals' which break up learning into smaller manageable steps.</p> <p>communication with parents about skills and talents.</p>

		<p>I can say how rules can help keep me safe</p> <p>To recognise that choices are made when using information technology</p> <p>I can identify the choices that I make when using IT</p> <p>I can use IT for different types of activities</p> <p>I can explain the need to use IT in different ways</p>				
	<p>Year 1 Autumn 2</p> <p>Making Music</p>	<p>To say how music can make us feel</p> <p>I can identify simple differences in pieces of music</p> <p>I can describe music using adjectives</p> <p>I can say what I do and don't like about a piece of music</p> <p>To identify that there are patterns in music</p> <p>I can create a rhythm pattern</p> <p>I can play an instrument following a rhythm pattern</p> <p>I can explain that music is created and played by humans</p> <p>To experiment with sound using a computer</p> <p>I can connect images with sounds</p> <p>I can use a computer to experiment with pitch</p> <p>I can relate an idea to a piece of music</p> <p>To use a computer to create a musical pattern</p> <p>I can identify that music is a sequence of notes</p> <p>I can explain how my music can be played in different ways</p> <p>I can refine my musical pattern on a computer</p> <p>To create music for a purpose</p> <p>I can create a rhythm which represents an animal I've chosen</p> <p>I can create my animal's rhythm on a computer</p> <p>I can add a sequence of notes to my rhythm</p> <p>To review and refine our computer work</p> <p>I can review my work</p> <p>I can explain how I changed my work</p>	<p>Chrome books, Chrome music Lab, GDrive</p>	<p>Open, edit</p>		
	<p>Year 2 Autumn 2</p> <p>Digital Photography</p>	<p>To use a digital device to take a photograph</p> <p>I can recognise what devices can be used to take photographs</p> <p>I can talk about how to take a photograph</p> <p>I can explain what I did to capture a digital photo</p> <p>To make choices when taking a photograph</p> <p>I can explain the process of taking a good photograph</p> <p>I can take photos in both landscape and portrait format</p>	<p>IPads, Mini Lego figures, light sources, dark tents</p>	<p>Device, camera, photograph, capture, image, digital, land scape, portrait, framing, subject, compose, light source, flash, focus, background, edit, filter, format</p>		

		<p>I can explain why a photo looks better in portrait or landscape format</p> <p>To describe what makes a good photograph</p> <p>I can identify what is wrong with a photograph</p> <p>I can discuss how to take a good photograph</p> <p>I can improve a photograph by retaking it</p> <p>To decide how photographs can be improved</p> <p>I can explore the effect that light has on a photo</p> <p>I can experiment with different light sources</p> <p>I can explain why a picture may be unclear</p> <p>To use tools to change an image</p> <p>I can recognise that images can be changed</p> <p>I can use a tool to achieve a desired effect</p> <p>I can explain my choices</p> <p>To recognise that photos can be changed</p> <p>I can apply a range of photography skills to capture a photo</p> <p>I can recognise which photos have been changed</p> <p>I can identify which photos are real and which have been changed</p>				
	<p>Year 1 Spring 1</p> <p>Digital Painting</p>	<p>To describe what different freehand tools do</p> <p>I can make marks on a screen and explain which tools I used</p> <p>I can draw lines on a screen and explain which tools I used</p> <p>I can use the paint tools to draw a picture</p> <p>To use the shape tool and the line tools</p> <p>I can make marks with the square and line tools</p> <p>I can use the shape and line tools effectively</p> <p>I can use the shape and line tools to recreate the work of an artist</p> <p>To make careful choices when painting a digital picture</p> <p>I can choose appropriate shapes</p> <p>I can make appropriate colour choices</p> <p>I can create a picture in the style of an artist</p> <p>To explain why I chose the tools I used</p> <p>I can explain that different paint tools do different jobs</p> <p>I can choose appropriate paint tools and colours to recreate the work of an artist</p> <p>I can say which tools were helpful and why</p> <p>To use a computer on my own to paint a picture</p>	<p>Chromebooks, I pads, Purple mash (2paint)</p> <p>Internet safety week- Adults in for shared lesson and talk</p>	<p>Program, tool, paintbrush, erase, fill, undo, shape tool, line tool, brush style, brush size, computers.</p>		

		<p>I can make dots of colour on the page I can change the colour and brush sizes I can use dots of colour to create a picture in the style of an artist on my own To compare painting a picture on a computer and on paper I can explain that pictures can be made in lots of different ways I can spot the differences between painting on a computer and on paper I can say whether I prefer painting using a computer or using paper</p>				
	<p>Year 2 Spring 1 Robot Algorithms</p>	<p>To describe a series of instructions as a sequence I can follow instructions given by someone else I can choose a series of words that can be acted out as a sequence I can give clear instructions To explain what happens when we change the order of instructions I can use the same instructions to create different algorithms I can use an algorithm to program a sequence on a floor robot I can show the difference in outcomes between two sequences that consist of the same instructions To use logical reasoning to predict the outcome of a program I can follow a sequence I can predict the outcome of a sequence I can compare my prediction to the program outcome To explain that programming projects can have code and artwork I can explain the choices that I made for my mat design I can identify different routes around my mat I can test my mat to make sure that it is usable To design an algorithm I can explain what my algorithm should achieve I can create an algorithm to meet my goal I can use my algorithm to create a program To create and debug a program that I have written I can test and debug each part of the program I can plan algorithms for different parts of a task</p>	<p>Blue Bots, mats, iPads. Internet safety week- Adults in for shared lesson and talk</p>	<p>Instruction, sequence, clear, unambiguous, algorithm, program, order, prediction, route, mat, debugging, decomposition</p>		

		I can put together the different parts of my program				
<p>Spring 2- Lego Programming Project TBC This will include Lego resources and visitors</p>						
	<p>Year 1 Summer 1 – Moving Robots</p>	<p>To explain what a given command will do I can predict the outcome of a command on a device I can match a command to an outcome I can run a command on a device To act out a given word I can follow an instruction I can recall words that can be acted out I can give directions To combine ‘forwards’ and ‘backwards’ commands to make a sequence I can compare forward and backward movements I can start a sequence from the same place I can predict the outcome of a sequence involving ‘forwards’ and ‘backwards’ commands To combine four direction commands to make sequences I can compare left and right turns I can experiment with ‘turn’ and ‘move’ commands to move a robot I can predict the outcome of a sequence involving up to four commands To plan a simple program I can explain what my program should do I can choose the order of commands in a sequence I can debug my program To find more than one solution to a problem I can identify several possible solutions I can plan two programs I can use two different programs to get to the same place</p>	Blue Bots, Mats, Ipads	Forwards, backwards, turn, clear, go, commands, instructions directions, left, right, algorithm, program, route		
	<p>Year 2 Summer 1</p>	<p>To create an animated story of a Roman Soldier I can plan a storyboard with moving elements, speech, sound and transitions.</p>	Chromebooks, purple mash (code app)	Storyboard, algorithm, transitions,		

	Digital Romans	Using prior knowledge of programming and algorithms: I can add multiple background. I can add characters and objects, including movement and interactions. I can add written and recorded speech. I can add an interactive button.		background, interaction, recording, interactive, program		
	Year 1 Summer 2 Digital Zoo	To create an animated story based around a zoo. I can select appropriate background and characters. I can understand the different functions of the programming buttons. I can make my animal move by creating precise algorithms. I can make the animals speak by adding text. I can debut my program. I can edit and improve my algorithm. I can save, retrieve, edit and share my animation.	Ipads, scratch junior (app and desktop version)	Debug, algorithm, animation, programme, tool, button, repeat, function, save, retrieve, edit, share		
	Year 2 Summer 2 Digital Writing a celebration of Biddick Hall Infants	To create a leaflet advertising Biddick Hall infant School To use a computer to write I can open a word processor I can recognise keys on a keyboard I can identify and find keys on a keyboard To add and remove text on a computer I can enter text into a computer I can use letter, number, and space keys I can use backspace to remove text To identify that the look of text can be changed on a computer I can type capital letters I can explain what the keys that I have learnt about already do I can identify the toolbar and use bold, italic, and underline To make careful choices when changing text I can select a word by double-clicking I can select all of the text by clicking and dragging I can change the font To explain why I used the tools that I chose I can say what tool I used to change the text I can decide if my changes have improved my writing I can use 'undo' to remove changes	Chromebooks, Purple mash (blank leaflets)	Word processor, keyboard, keys, type, space, backspace, text cursor, Caps lock, shift, toolbar, bold, italic, underline, mouse, select, font, undo redo, font, format		

		<p>To compare writing on a computer with writing on paper I can write a message on a computer and on paper I can compare using a computer with using a pencil and paper I can say which method I like best</p>				
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