

Bearwood Primary School - Computing Progression Framework

EYFS ICT

	Autumn	Spring	Summer
Development Matters Document	Provide mechanical equipment for children to play with and investigate. Suggestions: wind-up toys, pulleys, sets of cogs with pegs and boards.		
Nursery	Sensory toys Role play using home technologies Torches/ dark den resources	Cause and effect toys Bee bots- how to use (buttons not pushing) Pull back/friction toys toys	CD/ microphone speakers- independently. Photographs with cameras Bee bots- floor activity- independently using appropriately
Reception	Talking tins- recording own phrases Role play using home technologies Paint- pictures Story phones- introduction Photographs for a purpose- play Bee bots- using for a purpose- simple paths- partner work.	Complete a simple computer programme Photographs for a purpose- farm Microphones- recording T4W stories Bee Bots- obstacles, simple mats	Story phones- independently Paint- add text to pictures Bee Bots to navigate a simple given course on a mat, debugging as required. Microphones- recording invention stories

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	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Computing systems and networks	<ul style="list-style-type: none"> can identify technology can identify a computer and its main parts can use a mouse in different ways can use a keyboard to type on a computer can use the keyboard to edit text can create rules for using technology responsibly 	<ul style="list-style-type: none"> can recognise the uses and features of information technology can identify the uses of information technology in the school can identify information technology beyond school can explain how information technology helps us can explain how to use information technology safely can recognise that choices are made when using information technology 	<ul style="list-style-type: none"> Can explain how digital devices function Can identify input and output devices can recognise how digital devices can change the way we work can explain how a computer network can be used to share information can explore how digital devices can be connected can recognise the physical components of a network 	<ul style="list-style-type: none"> can describe how networks physically connect to other networks can recognise how networked devices make up the internet can outline how websites can be shared via the World Wide Web (WWW) can describe how content can be added and accessed on the World Wide Web (WWW) can recognise how the content of the WWW is created by people can evaluate the consequences of unreliable content 	<ul style="list-style-type: none"> can explain that computers can be connected together to form systems can recognise the role of computer systems in our lives can recognise how information is transferred over the internet can explain how sharing information online lets people in different places work together can contribute to a shared project online can evaluate different ways of working together online 	<ul style="list-style-type: none"> can identify how to use a search engine can describe how search engines select results can explain how search results are ranked can recognise why the order of results is important, and to whom can recognise how we communicate using technology can evaluate different methods of online communication
Creating media	<ul style="list-style-type: none"> can describe what different freehand tools do can use the shape tool and the line tools can make careful choices when painting a digital picture can explain why I chose the tools I used can use a computer on my own to paint a picture can compare painting a picture on a computer and on paper 	<ul style="list-style-type: none"> can use a digital device to take a photograph can make choices when taking a photograph can describe what makes a good photograph can decide how photographs can be improved can use tools to change an image can recognise that photos can be changed 	<ul style="list-style-type: none"> can explain that animation is a sequence of drawings or photographs can relate animated movement with a sequence of images can plan an animation can identify the need to work consistently and carefully can review and improve an animation can evaluate the impact of adding other media to an animation 	<ul style="list-style-type: none"> can identify that sound can be digitally recorded can use a digital device to record sound can explain that a digital recording is stored as a file can explain that audio can be changed through editing can show that different types of audio can be combined and played together can evaluate editing choices made 	<ul style="list-style-type: none"> can explain what makes a video effective can identify digital devices that can record video can capture video using a range of techniques can create a storyboard can identify that video can be improved through reshooting and editing can consider the impact of the choices made when making and sharing a video 	<ul style="list-style-type: none"> can review an existing website and consider its structure can plan the features of a web page can consider the ownership and use of images (copyright) can recognise the need to preview pages can outline the need for a navigation path can recognise the implications of linking to content owned by other people
KS1 – Creating Media KS2 - Programming A	<ul style="list-style-type: none"> can use a computer to write can add and remove text on a computer can identify that the look of text can be changed on a computer can make careful choices when changing text can explain why I used the tools that I chose can compare typing on a computer to writing on paper 	<ul style="list-style-type: none"> can say how music can make us feel can identify that there are patterns in music can show how music is made from a series of notes can show how music is made from a series of notes can create music for a purpose can review and refine our computer work 	<ul style="list-style-type: none"> can explore a new programming environment can identify that commands have an outcome can explain that a program has a start can recognise that a sequence of commands can have an order can change the appearance of my project can create a project from a task description 	<ul style="list-style-type: none"> can identify that accuracy in programming is important can create a program in a text-based language can explain what 'repeat' means can modify a count-controlled loop to produce a given outcome can decompose a task into small steps can create a program that uses count-controlled loops to produce a given outcome 	<ul style="list-style-type: none"> can control a simple circuit connected to a computer can write a program that includes count-controlled loops can explain that a loop can stop when a condition is met can explain that a loop can be used to repeatedly check whether a condition has been met can design a physical project that includes selection can create a program that controls a physical computing project 	<ul style="list-style-type: none"> can define a 'variable' as something that is changeable can explain why a variable is used in a program can choose how to improve a game by using variables can design a project that builds on a given example can use my design to create a project can evaluate my project

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Data and information	<p>can label objects</p> <p>can identify that objects can be counted</p> <p>can describe objects in different ways</p> <p>can count objects with the same properties</p> <p>can compare groups of objects</p> <p>can answer questions about groups of objects</p>	<p>can recognise that we can count and compare objects using tally charts</p> <p>can recognise that objects can be represented as pictures</p> <p>can create a pictogram</p> <p>can select objects by attribute and make comparisons</p> <p>can recognise that people can be described by attributes</p> <p>can explain that we can present information using a computer</p>	<p>can create questions with yes/no answers</p> <p>can identify the object attributes needed to collect relevant data</p> <p>can create a branching database</p> <p>can explain why it is helpful for a database to be well structured</p> <p>can identify objects using a branching database</p> <p>can compare the information shown in a pictogram with a branching database</p>	<p>can explain that data gathered over time can be used to answer questions</p> <p>can use a digital device to collect data automatically</p> <p>can explain that a data logger collects 'data points' from sensors over time</p> <p>can use data collected over a long duration to find information</p> <p>can identify the data needed to answer questions</p> <p>can use collected data to answer questions</p>	<p>can use a form to record information</p> <p>can compare paper and computer-based databases</p> <p>can outline how grouping and then sorting data allows us to answer questions</p> <p>can explain that tools can be used to select specific data</p> <p>can explain that computer programs can be used to compare data visually</p> <p>can apply my knowledge of a database to ask and answer real-world questions</p>	<p>can identify questions which can be answered using data</p> <p>can explain that objects can be described using data</p> <p>can explain that formulas can be used to produce calculated data</p> <p>can apply formulas to data, including duplicating</p> <p>can create a spreadsheet to plan an event</p> <p>can choose suitable ways to present data</p>
KS1 – Programing A KS2 - Creating media	<p>can explain what a given command will do</p> <p>can act out a given word</p> <p>can combine forwards and backwards commands to make a sequence</p> <p>can combine four direction commands to make sequences</p> <p>can plan a simple program</p> <p>can find more than one solution to a problem</p>	<p>can describe a series of instructions as a sequence</p> <p>can explain what happens when we change the order of instructions</p> <p>can use logical reasoning to predict the outcome of a program (series of commands)</p> <p>can explain that programming projects can have code and artwork</p> <p>can design an algorithm</p> <p>can create and debug a program that I have written</p>	<p>can recognise how text and images convey information</p> <p>can recognise that text and layout can be edited</p> <p>can choose appropriate page settings</p> <p>can add content to a desktop publishing publication</p> <p>can consider how different layouts can suit different purposes</p> <p>can consider the benefits of desktop publishing</p>	<p>can explain that digital images can be changed</p> <p>can change the composition of an image</p> <p>can describe how images can be changed for different uses</p> <p>can make good choices when selecting different tools</p> <p>can recognise that not all images are real</p> <p>can evaluate how changes can improve an image</p>	<p>can identify that drawing tools can be used to produce different outcomes</p> <p>can create a vector drawing by combining shapes</p> <p>can use tools to achieve a desired effect</p> <p>can recognise that vector drawings consist of layers</p> <p>can group objects to make them easier to work with</p> <p>can evaluate my vector drawing</p>	<p>can use a computer to create and manipulate three-dimensional (3D) digital objects</p> <p>can compare working digitally with 2D and 3D graphics</p> <p>can construct a digital 3D model of a physical object</p> <p>can identify that physical objects can be broken down into a collection of 3D shapes</p> <p>can design a digital model by combining 3D objects</p> <p>can develop and improve a digital 3D model</p>
Programming B	<p>can choose a command for a given purpose</p> <p>can show that a series of commands can be joined together</p> <p>can identify the effect of changing a value</p> <p>can explain that each sprite has its own instructions</p> <p>can design the parts of a project</p> <p>can use my algorithm to create a program</p>	<p>can explain that a sequence of commands has a start</p> <p>can explain that a sequence of commands has an outcome</p> <p>can create a program using a given design</p> <p>can change a given design</p> <p>can create a program using my own design</p> <p>can decide how my project can be improved</p>	<p>can explain how a sprite moves in an existing project</p> <p>can create a program to move a sprite in four directions</p> <p>can adapt a program to a new context</p> <p>can develop my program by adding features</p> <p>can identify and fix bugs in a program</p> <p>can design and create a maze-based challenge</p>	<p>can develop the use of count-controlled loops in a different programming environment</p> <p>can explain that in programming there are infinite loops and count controlled loops</p> <p>can develop a design that includes two or more loops which run at the same time</p> <p>can modify an infinite loop in a given program</p> <p>can design a project that includes repetition</p> <p>can create a project that includes repetition</p>	<p>can explain how selection is used in computer programs</p> <p>can relate that a conditional statement connects a condition to an outcome</p> <p>can explain how selection directs the flow of a program</p> <p>can design a program which uses selection</p> <p>can create a program which uses selection</p> <p>can evaluate my program</p>	<p>can create a program to run on a controllable device</p> <p>can explain that selection can control the flow of a program</p> <p>can update a variable with a user input</p> <p>can use a conditional statement to compare a variable to a value</p> <p>can design a project that uses inputs and outputs on a controllable device</p> <p>can develop a program to use inputs and outputs on a controllable device</p>