

3. Computing Curriculum Depth Map



At BHPS we provide children with a challenging and engaging computing curriculum by offering discrete lessons and integrating computing and ICT across the curriculum. By the end of Key Stage 2, we want our children to use ICT purposefully, creatively and with discernment. We want to equip them with the skills required to live and work in a digital age and be active participants in a digital world. We motivate and enthuse pupils by integrating computing through cross-curricular themes, creating deep links with mathematics, science, geography and art. We enable them to develop an understanding of how computers and computer systems (both real and artificial) work and how they are designed and programmed. They develop skills in using increasingly sophisticated hardware and software to manipulate information in the process of problem solving, communicating, recording and expressive work. Above all, we promote the safe and purposeful use of technology.

Our computing curriculum is designed to allow children time to think, discuss, practise, explore and embed. This allows time for teaching, practice and repetition – both in a year group and across both key stages. Curriculum coverage is mapped out carefully from EYFS to Year 6 which allows some key concepts to be developed at a deeper level of learning, understanding and mastery. Fundamental knowledge and skills are covered at key points throughout the primary phase and repeated to allow pupils to build on what has been taught before. These are highlighted in green in the Curriculum Depth Map below.

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
E-Safety – SMART rules (Kidsmart)	E-Safety – SMART Rules (Kidsmart)	E-Safety – trusted adults, Hector’s World	E-Safety – fact & opinion, CEOP Cyber café Lessons 1-4	E-Safety – evaluating information, validity of websites, malicious adult contact, CEOP Cyber café Lessons 5-9)	E-Safety - CEOP ‘Jigsaw’ and ‘Where’s Klaus?’ resources
Computing – controlling digital devices (Bee Bot, Alex) Changing the variables in simulations (Daisy the Dinosaur)	Computing – controlling & predicting digital devices (2Go) Writing & recording algorithms (2Code Chimp), 2Go	Writing & debugging algorithms – 2Code Gibbon, Scratch changing the variables in simulations and using them to make and test predictions (Scratch) Recording the outcome of choices in a simulation systematically to help achieve an outcome (2DIY) Communicating – multimedia (PowerPoint)	Creating a program which includes sequence, selection, repetition and procedures (Logo) Using logical reasoning to detect and correct errors in algorithms and programs (Scratch)	Solving a problem by breaking it down into smaller parts (Kodu) Producing a program to accomplish a specific goal which includes variables and a range of inputs and outputs (Scratch, 2 Code – Coding Principles)	Produce a program to accomplish a specific goal which includes variables and a range of inputs and outputs (Kodu, Light Bot) Evaluating online games and designing their own, including rules.

<p>Finding out – creating pictograms (2Count)</p>	<p>Inputting data into a simple, pre-prepared database program and using it to answer simple questions (2Investigate)</p>	<p>Creating a simple database with different types of fields and records (2Investigate)</p> <p>Using a database to answer questions by using and / or, greater than, less than etc. (2Investigate)</p> <p>Using a variety of graphs to display the information, including pie charts, and discuss which type of graph works best for different kinds of data (2Investigate)</p>	<p>Collecting and entering information accurately into a spreadsheet (Excel)</p> <p>Using a variety of graphs to display the information, including pie charts and discussing what works best for different kinds of data (Excel)</p>	<p>Creating a database using more complex setup tools (e.g. keywords) to answer specific questions (2Investigate)</p> <p>Recognising when data is implausible by checking `data for accuracy against predicted or expected outcomes (2Investigate)</p>	<p>Creating tables and graphs with more than one variable (Excel)</p> <p>Using the features of a spreadsheet to answer questions by producing graphs, using sort and filter features (Excel)</p> <p>Entering labels, number and formulae into a spreadsheet. (Excel)</p> <p>Changing data in a spreadsheet to answer ‘what if...?’ questions & check predictions (Excel)</p>
<p>Images – using art software to create an image (2Paint)</p>	<p>Images - sequencing, deleting and crop images with support (Photo Story)</p> <p>Inserting a clipart image (Word)</p>	<p>Images – using the ‘Print Screen’ function to capture and crop images. (Word)</p>	<p>Images - editing photos and pictures using crop, brightness and contrast tools. (Photo Simple)</p>	<p>Images –creating images for use in other applications</p> <p>Scanning an object for use in another presentation</p>	
<p>Text – Using a keyboard to enter and edit text (space bar, backspace, delete, enter/return, font size/style, shift/caps lock and arrow keys) (Word)</p>	<p>Text - using a keyboard to enter and edit text (highlight, type characters using shift function, embolden, centre, justify, insert word art, cut, copy, paste) (Word)</p> <p>Text – sending an email (2Email)</p>	<p>Text – sending an email with an attachment (2Email)</p>			<p>Text – choosing different page setups (e.g. booklet, banner) when creating a document</p> <p>Using text formatting tools including headers, footers and body text. (Word)</p>
<p>Sound – recording sounds & playing back (ipad, talking tins)</p>	<p>Sound – arranging a musical sequence where musical phrases are represented by icons. Exploring changing</p>	<p>Sound – Creating and editing music and soundtracks using music apps or software</p>	<p>Sound – creating music (Garage Band)</p>	<p>Sound – creating music for use in another program (Garage Band)</p>	<p>Sound – use a range of devices to create music for use in other applications. (Garageband, Movie Maker.)</p>

	speed, volume etc (2Sequence)	(2Compose, 2Synthesise)			Audacity)
Multimedia - Combining images and text to create a simple presentation using different layouts (2 Publish)	Multimedia - combining images, narration and text to produce a simple presentation (PowerPoint) Creating a simple stop frame animation (2Animate)	Multimedia - creating a digital text which involves making choices (PowerPoint) Making use of effects, including transitions and animations to enhance their presentations (PowerPoint)	Multimedia – Importing images and sound into editing software and combining clips to make longer sequences. Add titles and credits (Photo Story)		Multimedia - importing video and sound into editing software and combine clips to make longer sequences. Add titles and credits. Movie Maker and Audacity.
Computer systems - saving and printing with support	Computer systems - recognising common uses of technology Saving & printing independently Using simple search engines	Computer systems – discussing how technology is used extensively in people’s working and personal lives e.g. selling, research, communicating, sharing, and managing information.	Computer systems - discussing the impact of ICT on society.	Computer systems – understanding computer networks including the internet	Computer systems - understanding the implications of having inaccurate data in the real world e.g. doctor, police, school, commerce.