



Beaufort Primary School

Computing Curriculum



All children must agree to the acceptable use agreement.

Computing should be taught 1 x weekly. Touch typing 1 x weekly (Purple Mash) – 10-minute starter activity at the start of every lesson.

The areas of the curriculum

The Computing curriculum is divided into three areas, Digital Wellbeing, Information Technology (Key skills) and Computer Science.

Digital Wellbeing: Online Safety will be taught throughout the academic year. Where possible, parents will be involved with this learning. We will encourage children to be critically aware of information they find online and how to think about whether to accept it. As a school we will actively participate in Safer Internet Day each year.




Information Technology (Key Skills): The following areas are covered: Using a computer, keyboard skills, Digital Research, Data Handling, Modelling, Data Logging, Text and graphics and Multimedia / digital imaging.

Computer Science: The core of computing is computer science, in which pupils are taught the principles of information and computation, and how digital systems work (coding).

Glossary

Debugging	Debugging is the process of identifying and removing errors from computer hardware or software.
Algorithm	An algorithm is a set of step-by-step instructions for solving a problem or accomplishing a task.
Program	A stored set of instructions encoded in a language understood by the computer that does some form of computation, processing input and/or stored data to generate output.
Input	The data provided to a computer system, such as via a keyboard, mouse, microphone, camera or physical sensors
Output	the information produced by a computer system for its user, typically on a screen, through speakers or on a printer.

Resources to use: PurpleMash (2DIY, 2Code, 2Paint), NCCE, Scratch, Barefoot unplugged lesson, Internet legends book, Excel, PowerPoint, Word, Charanga, Chrome Music Lab, https://www.thinkuknow.co.uk/4_7/4-5/

Year group	THEMES/TOPICS Cross curricular ideas/links in yellow	EXPERIENCES   	KNOWLEDGE AND SKILLS		
			Digital Well being	Information Technology (Key skills)	Computer Science
N/R			WALT use online devices with an adult.	To recognise basic technology and its functions.	N/A
1	<p>Maths Focus Recording how the children come to school using pictograms Links to Maths?</p> <p>Maze explorers Program Bee-Bot to complete the maze. Purple Mash 2GO Can your Bee-Bot travel around a map of the UK?</p> <p>LEGO Builders Purple Mash 2DIY. Creating instructions for friend to build a LEGO model Could you create an animal? Links to Science</p> <p>Animated stories Purple Mash – 2Create (Can you create a dinosaur? link to History topic)</p> <p>Coding Purple Mash – 2Code to create own program Can you create a 2code programme related to fireworks/bonfire night?</p>	<p>Internet safety day (Yearly)</p> <p>Computing week (arranged yearly by computing lead)</p> <p>Publishing written work</p> <p>Setting 2dos on Purple Mash</p> <p>Programming Bee-Bots</p> <p>Following instructions to build LEGO</p> <p>Barefoot unplugged lessons</p>	<p>https://www.thinkuknow.co.uk/4_7/4-5/</p> <p>WALT describe ways of protecting ourselves online. (PM – U1.1)</p> <p>WALT know why I need to be safe online and what to do if I feel unsafe. (Internet safety day)</p> <p>WALT know not share personal details online. (PM – U1.1)</p> <p>WALT be respectful to others online. (Internet safety day)</p> <p>WALT consider the types of technology used in the world (PM – U1.9)</p>	<p>WALT use backspace (PM – U1.1)</p> <p>WALT log on & off a computer with support (PM – U1.1)</p> <p>WALT save work into designated folders and appropriately name the saved work (PM – U1.1) (PM – U1.6)</p> <p>WALT type simple words/sentences and change word fonts. (PM – U1.6)</p> <p>WALT use tools of 2Create a story (PM – U1.6)</p> <p>WALT add animation to a page (PM – U1.6)</p> <p>WALT add sound/music/voice recordings to a page (PM – U1.6)</p>	<p>WALT sort items using a range of criteria (PM – U1.2)</p> <p>WALT understand that data can be represented in picture format (PM – U1.3)</p> <p>WALT use pictograms to record (PM – U1.3)</p> <p>WALT ‘talk’ instructions out loud. (PM – U1.4)</p> <p>WALT understand computers are just following instructions that we give them. (PM – U1.4) (PM – U1.7)</p> <p>WALT give sequenced instructions to a friend and follow their instructions to move around. (PM – U1.4)</p> <p>WALT describe what happens when we press a button on a robot. (Bee-Bot)</p> <p>WALT predict what will happen in a short sequence of instructions. (PM – U1.4) (PM – U1.7)</p> <p>WALT know that debugging is when we look for mistakes. (PM – U1.5) (Bee-</p>

					<p>Bots)</p> <p>WALT create, understand and change algorithms (PM – U1.5)</p> <p>WALT use code to make a computer program (PM – U1.7)</p> <p>WALT understand objects, actions and events in coding and know how to operate them (PM – U1.7)</p> <p>WALT use and navigate a spreadsheet to add data (PM – U1.8) (2Calculate)</p>
2	<p>Researchers Research how children in your class come to school. Record the data using a pictogram (Purple Mash) Links to Maths?</p> <p>Guess who? Create your own version of Guess Who using a binary tree (Purple Mash) Can you create this for Kings and Queens? – History Castle topic</p> <p>Musicians Create music using Charanga / Purple Mash 2Sequence</p> <p>Emails to Santa (Christmas) Purple Mash Links to Polar express History/Geography topic?</p> <p>Maths Ice cream shop Purple Mash 2Calculate Links to Maths?</p>	<p>Internet safety day (Yearly)</p> <p>Computing week (arranged yearly by computing lead)</p> <p>Publishing written work</p> <p>Setting 2dos on Purple Mash</p> <p>Programming Bee-Bots</p> <p>Following instructions to build LEGO</p> <p>Barefoot unplugged lessons</p>	<p>https://www.thinkuknow.co.uk/4-7/4-5/</p> <p>WALT describe ways of protecting ourselves online. (Internet safety day)</p> <p>WALT know how and why I need to be safe online and what to do if I feel unsafe. (Internet safety day)</p> <p>WALT be respectful to others online. (Internet safety day)</p> <p>WALT perform searches in an Swiggle search (PM – U2.2) (PM – U.2.5)</p> <p>WALT safely use email to communicate (PM – U2.2) (PM - 2Email – Santa)</p> <p>WALT think critically about information online (PM – U2.2) (PM – U2.5)</p> <p>WALT understand what a digital footprint is and give examples of what you wouldn't want as a digital footprint (PM – U2.2)</p>	<p>WALT use the function of caps lock. (written work)</p> <p>WALT save work with an appropriate file name (written work)</p> <p>WALT independently log on & off a computer</p> <p>WALT retrieve work from a saved folder. (written work)</p> <p>WALT cut/copy/paste (PM – U2.3)</p> <p>WALT send work to a printer. (written work)</p> <p>WALT understand the difference between left and right click.</p> <p>WALT use backspace and delete. (written work)</p>	<p>WALT share the order that things are to be done in order and talk about this as an algorithm. (PM – U2.1)</p> <p>WALT program a robot or software to do a particular task, using directions such as; forward, backward, turn (Bee-bot)</p> <p>WALT evaluate a friend's program and tell them what will happen, including debugging. (PM – U2.1)</p> <p>WALT program software to make objects move. (PM – U2.1)</p> <p>WALT use logical reasoning to predict the behaviour of simple program in coding (PM – U2.1)</p> <p>WALT understand what debugging means and debug a simple program (PM – U2.1)</p> <p>WALT use spreadsheets to solve mathematical problems (PM – U2.3)</p>

	<p>Create a gallery based on an artist (Art link?) Purple Mash 2Paint</p> <p>Create using publisher poster to advertise KS1 nativity</p>				<p>WALT use images in a spreadsheet (PM – U2.3)</p> <p>WALT use data in a spreadsheet to make a block graph (PM – U2.3) (PM-U2.8)</p> <p>WALT use a construct questions with yes or no answers (PM – U.2.4) (2Question)</p> <p>WALT used the tools on 2Paint to create an effective picture (PM-U2.6)</p> <p>WALT add clipart to 2paint (PM-U2.6)</p> <p>WALT use 2sequence to create our own tune, using speed up and slow down (PM-U2.7)</p> <p>WALT change the volume of background songs in 2Sequence (PM-U2.7)</p> <p>WALT make a quiz using 2Quiz (PM-U2.8)</p>
3	<p>Become market researchers – collect & record data from across the school/local community (Links to Maths)</p> <p>Presenting Creating a topic based PowerPoint to present to the rest of the class (Ancient Egypt, Stone/Iron age or Romans)</p> <p>Emailing Could you email Boudica? (History Topic link)</p>	<p>Internet safety day (yearly)</p> <p>Computing week (arranged yearly by computing lead)</p> <p>Publishing written work</p> <p>PowerPoint project work</p> <p>Coding – Purple Mash 2code or scratch</p>	<p>Internet Legends Think before you share WALT consider what information I share online and who with.</p> <p>Check it's real WALT watch out for phishing and scams and to report questionable activity.</p> <p>WALT refine One-word searches on a child friendly search engine (Swiggle)</p> <p>WALT know how to be a discerning consumer of information online, including and understanding that</p>	<p>WALT log off and shut down computers correctly.</p> <p>WALT resize pictures added to work. (PM-U3.9)</p> <p>WALT know the difference between save and save as. (written work)</p> <p>WALT understand how to use the shift key. (written work)</p> <p>WALT undo and redo. (written work)</p>	<p>WALT describe the algorithm needed for a simple task (PM-U3.1)</p> <p>WALT create algorithms to solve simple problems. (PM-U3.1)</p> <p>WALT know how we can change the order of instructions to make something react differently (PM-U3.1)</p> <p>WALT test and evaluate programs and recognise the need to debug. (PM-U3.1)</p> <p>WALT apply and use repeated commands. (PM-U3.1)</p> <p>WALT add a timer in code as a command</p>

	<p>Create using publisher poster to advertise School Christmas Fayre</p>	<p>Barefoot unplugged lessons</p> <p>Internet legends lessons (book-unplugged)</p>	<p>information, including search engines, is ranked, selected and targeted (L4L).</p> <p><u>Protect yourself</u> WALT take responsibility for protecting important information by creating strong passwords. (PM-U3.5)</p> <p>WALT Understand why social media, some computer games and online gaming for example are age restricted (L4L).</p> <p><u>Respect each other</u> WALT have a positive digital footprint and treats others the way we wish to be treated online.</p> <p>WALT report negative behaviour online as the internet can be a negative place where online abuse, trolling, bullying and harassment can take place, which can have a negative impact on mental health. (L4L)</p> <p><u>When in doubt, discuss</u> WALT report negative online behaviour/ content that makes me feel uncomfortable</p> <p>WALT recognise the benefits of rationing time spent online, the risks of excessive time spent on electronic devices and the impact of positive and negative content online on their own and others'</p>	<p>WALT use different ways to highlight text. (written work)</p> <p>WALT apply changes to text e.g. bold, italic or underline and distinguish when to use these (written work)</p> <p>WALT change font type, size and colour and to know when it is appropriate. (written work)</p> <p>WALT create a PowerPoint and add slides (PM-U3.9) WALT use pictures and animations in PowerPoint (PM-U3.9)</p> <p>WALT add timing in PowerPoint (PM-U3.9)</p> <p>WALT copy & paste images into a document (written work) (PM-U3.9)</p> <p>WALT attach work to an email (PM-U3.5)</p> <p>WALT use CC in an email (PM-U3.5)</p>	<p>(PM-U3.1)</p> <p>WALT use the repeat command in coding (PM-U3.1)</p> <p>WALT use a spreadsheet program to automatically create graphs (PM-U3.3)</p> <p>WALT use the 'more than', 'less than' and 'equals' tool to compare to work out calculations (PM-U3.3)</p> <p>WALT open and respond to emails (PM-U3.5)</p> <p>WALT create a brand database (PM-U3.6)</p> <p>WALT present data in an appropriate graph and explain our reasoning (PM-U3.8)</p>
4	<p>Become market researchers – collect & record data from across the school/local community (Links to Maths)</p> <p>Architects (use Google Maps & design a Tudor home on Purple Mash – History Topic link)</p>			<p>WALT use bullet points (written work)</p> <p>WALT bookmark a web page by creating a favourite (PM 4.7)</p> <p>WALT use print options to print in a desired way (written work)</p> <p>WALT take Screen Shots (written work)</p>	<p>WALT program efficiently by giving fewer, more precise instructions. (PM 4.1)</p> <p>WALT apply logical thinking, imagination and creativity to design a program (PM 4.1)</p> <p>WALT identify a variety of tools to create a program. (PM 4.1)</p> <p>WALT use IF and Repeat commands in</p>

	<p>Game makers Create a playable game in coding (Could this be Rainforest themed? Link to Geography)</p> <p>Music – Compose a piece of music online (Science – sound link)</p> <p>Animations – Create an animation (Links to History & Geography)</p> <p>Presenting - Creating a topic based PowerPoint to present to the rest of the class (Planning a UK holiday Road trip)</p> <p>Create using Publisher flyer to advertise LKS2 Christmas carols</p> <p>Create using publisher poster to advertise Firework night</p>		<p>mental and physical well-being (L4L - link)</p>	<p>WALT create a folder to save (written work)</p> <p>WALT align text. (written work)</p> <p>WALT add special effects to presentations and use presentation mode to present (presentation work)</p> <p>WALT analyse reliability of internet searches (PM 4.7)</p> <p>WALT open multiple web pages on new tabs without leaving the original search. (PM 4.7)</p>	<p>coding (PM 4.1)</p> <p>WALT plan algorithms to sequence more complex programs. (PM 4.1)</p> <p>WALT add formulae to a spreadsheet cell (PM 4.3)</p> <p>WALT interpret line graphs to estimate values (PM 4.3)</p> <p>WALT add backgrounds and sounds to animations (PM 4.6)</p> <p>WALT understand and recall the different parts that make a computer (PM 4.8)</p> <p>WALT compose a piece of music using an online program (PM 4.9)</p>
5	<p>Bloggers – weekly blogs which can be shared with parents/on the school website</p> <p>Become market researchers – collect & record data from across the school/local community (Links to Maths)</p>			<p>WALT create and adapt folders (saving written work)</p> <p>WALT orient the page view and page size and print on different sized paper. (PM 5.6)</p> <p>WALT move a word/sentence by lassoing the text and dragging it to a new position. (presentation/written work)</p>	<p>WALT analyse and understand the reliability of websites and know that some search results are sponsored.</p> <p>WALT navigate Google Maps and Google Street view to identify places.</p> <p>WALT use ‘repeat’ commands, ‘if’ statements and ‘then’ statements to make programs more efficient. (PM 5.1)</p>

	<p>Be Code breakers (morse code) create codes off the computer for friends to crack</p> <p>School cake sale Plan a school cake sale using spread sheets (Links to L4L)</p> <p>Computer game designers Design your own computer game based on your topic (History - Mayan's?)</p> <p>2D model</p> <p>Create using publisher flyers for advertising UKS2 carol service</p> <p>Create using publisher posters to advertise School Summer fayre</p>			<p>WALT add timings to a presentation so that it runs independently. (presentation work)</p> <p>WALT perform internet searches using a substitute word. (research work)</p>	<p>WALT apply a range of inputs to control our programs. (PM 5.1)</p> <p>WALT apply logical reasoning to detect and debug mistakes. (PM 5.1)</p> <p>WALT decompose a problem into smaller parts to design an algorithm for a specific outcome and use it to write a program. (PM 5.1)</p> <p>WALT use a variable to increase programming possibilities. (PM 5.1)</p> <p>WALT change an input to a program to achieve a different output. (PM 5.1)</p> <p>WALT use spreadsheet formulae to calculate area and perimeter (P 5.3)</p> <p>WALT create a class database (PM 5.4)</p> <p>WALT design a game including themes, backgrounds and characters (PM.5.5) WALT evaluate and improve our own and peers computer games (PM 5.5)</p> <p>WALT design, create and print a 3D model (PM 5.6)</p>
6	<p>Develop an App (Purple Mash) – Could this be linked to Europe (Geography)</p> <p>Spreadsheets – create to show spend and profit from a school enterprise project – ration café? (Links to History topic & L4L)</p>			<p>WALT copy and paste from the Internet into MS Word removing Web formatting. (research/written work)</p> <p>WALT save a copy of a document as a pdf file. (research/written work)</p> <p>WALT insert and manipulate Word art. (presentation work)</p>	<p>WALT recognise the need to use a variable to achieve a required output (PM 6.1)</p> <p>WALT create a playable game with a timer and a scorer (PM 6.1)</p> <p>WALT use flowcharts to test and debug a program (PM 6.1)</p> <p>WALT use spreadsheets to create formula to work out probability and price (PM 6.3)</p>

	<p>Quizzers – Create a quiz based on electricity (Links to Science)</p> <p>Support creating end of school year book.</p> <p>Create a presentation for open day, which promotes the school</p> <p>Create using publisher flyers for advertising end of school production.</p>			<p>WALT select, copy and paste objects or groups of objects. (research/presentation work)</p>	<p>WALT create an effective class blog (PM 6.4)</p> <p>WALT create a picture based quiz for young children using 2DIY (PM 6.7)</p> <p>WALT use formulae for percentages, averages, max and min in spreadsheets (PM 6.9)</p> <p>WALT create graphs in excel (PM 6.9)</p>
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