Cheddon Fitzpaine Church School

Our Learning in Computing

Our broad, inspiring and ambitious curriculum is designed to develop confident, happy and curious individuals who flourish through perseverance and a love of learning. This reflects our vision of 'where we all belong, believe in ourselves and others, and build for our future.'

Our computing curriculum intent:

- Children must have an acute understanding of how to stay safe online.
- A wide variety of curriculum subjects are linked and taught through computing, equipping pupils with twenty-first century skills to thrive in their future and achieve life success.
- To empower children to become fluent in the use of a variety of technology and be capable in computational thinking.

Computing Subject Overview

Class 1& 2 – Year R, 1 & 2

	Autumn	Spring	Summer
E-safety	I am kind and responsible	I am safe and secure	I am healthy
Class 1	Continuous Provision Map: Pre-school and Reception Class	Rules Poster	Symbol Rules Poster and Prompts Poster
Class 2	Yr 1 & 2 Autumn A & B	Yr 1 & 2 Spring A & B	Yr 1 & 2 Summer A & B
Cycle A	**Programming** Elim – Yr1 Programming 1 – Move my Bee-bot (C)	**Multimedia** Voice recording - News Paper Report. Elim – Yr 1 Multimedia 2 – Filming in my background (ch) Yr 2 Multimedia 3 – My News Report (ch)	**Technology in our lives** Technology over time in school. Elim – Yr1 TIOL 1 – Discovering my Technology (c). **Handling Data** Elim – Yr1 Handling Data 2 – Present my weather (ch)
Cycle B	**Multimedia** Yr2 Multimedia 1 – Present my information (c) **Technology in our lives** Focus on logging on, typing, location of keys, keyboard shortcuts Elim – Yr 2 TIOL 1 – Technology in my life (c)	**Programming** Beetbots – debugging. Elim – Yr1 Programming 4 – Debug my programme (ch)	**Handling Data** Recording and sharing data using block charts and branching databases linking to how to identify vehicles . Elim – Yr1 Handling Data 1 – Counting my information (c) Elim – Yr 2 Handling Data 1 – Sorting my birds (c)
Cycle C	**Multimedia** Elim – Yr1 Multimedia 1 – Describing my toys (c) Focus on logging on, typing, location of keys, keyboard shortcuts – Class 2 **Handling Data** Elim – Yr1 Handling Data 3 – Showing my feelings (ch)	**Programming** Elim – Yr1 Programming 2 – My moves on screen (ch)	**Technology in our lives** Blogging Elim – Yr1 TIOL 3 – Sharing my learning (ch)

Class 3 – Year 2 & 3

	Autumn	Spring	Summer
E-safety	I am kind and responsible	I am safe and secure	I am healthy
	Yr 2 & 3 Autumn A & B	Yr 2 & 3 Spring A & B	Yr 2 & 3 Summer A & B
Cycle A	**Programming** *Use Beebots (Y2)* Elim – Yr2 Programming 2 – Explore my topic with a floor robot (ch) *Scratch program (Y3)* Elim – Yr3 Programming 1 – Making my program in scratch (c)	**Multimedia** PowerPoint presentation Word processor to present learning on Romans. Elim – Yr3 Multimedia 3b – Showing my teeth (ch) **Handling Data** Elim – Yr3 Handling Data 3 – Helping my plants grow (ch)	**Technology in Our Lives** Creating QR codes. Elim – Yr3 TIOL 2 – Scan my code (ch) **Handling Data** Elim – Yr2 Handling Data 3 – My Habitat Investigation (ch)
Cycle B	**Programming** Beebots Elim – Yr2 Programming 3 – Drawing my shapes (ch) Scratch Elim – Yr3 Programming 4 – Bounce my scratch Jnr Basketball (ch)	**Multimedia** Animation (Video) Elim – Yr2 Multimedia 2 – Animate my animal (ch) **Handling Data** Elim – Yr3 Handling Data 1 – Showing my device time (c)	**Technology in our lives** Types of communications (Email, Blogs, podcast) Elim – Yr3 TIOL 1 & 3 – My Safe searching (c) and Send my email (ch)

Class 4 & 5 – Year 4,5 & 6

	Autumn	Spring	Summer
E-safety	I am kind and responsible	I am safe and secure	I am healthy
Class 4	Yr 4 & 5 Autumn A & B	Yr 4 & 5 Spring A & B	Yr 4 & 5 Summer A & B
Class 5	Yr 5 & 6 Autumn A & B	Yr 5 & 6 Spring A & B	Yr 5 & 6 Summer A & B
Cycle A	**Programming** Use Scratch to create their own Egyptian themed game. Elim – Yr4 Programming 1 – My scratch games (c)	**Technology in our Lives** PowerPoint Quiz on the Greek Gods Elim – Yr4 TIOL 1 – Check My facts (c) Yr5 TIOL 1 – Improve my web detective skills (c) **Programming** Elim – Yr6 Programming 1 – Test My topic with scratch (c)	**Multimedia** Digital Design Software – Bridge Elim – Yr5 Multimedia 4 – Making My building (ch) **Data Handling** Digital Graphing Elim – Yr6 Handling Data 3 – Checking my fitness (ch)
Cycle B	**Programming** Use Scratch to tell the journey of the Cocoa Bean. Elim – Yr5 Programming 5 – My animated sprites (ch)	**Data Handling/ Programming** Micro: bits - Test and present Data Force Experiment – Windsail Elim – Yr4 Programming 4 – Getting to know my Micro:bit (ch) Yr5 Programming 1 – Scratch with my Roman Numbers (c) Elim – Yr5 Handling Data 2 – Measure Rainfall and my water usage (ch)	**Multimedia** Children use Email/ Blogging/ Podcast or Webinars to share ways to upcycle everyday items. Elim – Yr4 TIOL 3 – Share my technology (ch) Yr5 Multimedia 1 – Presenting my information (c)
Cycle C	**Multimedia** Video Editing – Real Estate Video Selling Roundhouses. Elim – Yr6 Multimedia 1 – Sell My School (c) Yr5 Multimedia 2 – My weather forecast (ch)	**Programming** Micro:Bit – Spirit Level. Elim – Yr6 Programming 4 – Rock my Micro:bit (ch) **Handling Data** Elim – Yr6 Handling Data 1 – Answer my questions? (c)	**Technology in our lives** Digital Camera Photos to create banquet recipe cards. Elim – Yr6 TIOL 1 and 2 – Moving my information (c) and Using My information (c)

Skills as a computer user

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Logging in I can write my name using a keyboard on different devices.	**Logging in** Use passcode on a tablet and log in on laptop/PC. Use home button on a tablet	**Logging in** Use personal log in for online resources	**Logging in** Navigate public drive to save and retrieve files.	**Logging in** Securely log on to tablet, laptop and PC devices	**Logging in** Use a secure personal log in for a variety of online resources	**Logging in** Securely access a variety of devices and online resources
Basic use of devices Begin to develop coordination and motor skills in operating a mouse or roller pad on a laptop or PC. Open appropriate App. Take a photo.	**Basic use of devices** Develop coordination and motor skills in operation a mouse or roller pad on a laptop or PC. Open a document or other file on a laptop or PC. Open appropriate App or Home screen link on a tablet. Take a photo and open camera roll on a tablet. Follow a hyperlinked image to a website using a laptop or PC.	**Basic use of devices** Open Apps and software Save and Open files and images. Insert images within apps and software	**Basic use of devices** Connect peripheral devices using USB lead Use images saved to camera roll within a variety of Apps. Use Save and Save As on laptops and PCs. Copy and rename files to edit on tablets	**Basic use of devices** Rename documents and other files Browse to a specified website Create hyperlink to a website Recognise appropriate online sources for clipart and images	**Basic use of devices** Combine appropriate apps through the use of the camera roll on a tablet Combine software to achieve effective outcomes. Work collaboratively on documents and presentations Create hyperlinks within and between documents	**Basic use of devices** Store documents and videos online where they can be accessed by themselves and shared with others Use knowledge of software and apps to combine technologies to support my learning Recognise file types for text, image and video files
Research Follow a hyperlinked image to a website. Use a QR code (with an image) to go to a website.	**Research** Follow links to find information	**Research** Use simple children's search	**Research** Use safe search engine	**Research** Acknowledge source of information / images	**Research** Identify three online sources to check information	**Research** Use a range of search filters e.g. +, -, or, info: advanced searching, file type.
Keyboard Use keyboard to find the letters of name or basic spellings.	**Keyboard** Use keyboard to find the letters of your name or basic spellings. (Encourage use of left and right hands.) Use shift key for a capital letter. Use space bar between words.	**Keyboard** Use keyboard to enter text (index fingers left and right hand). Know when and how to use the RETURN/ENTER key. Use SHIFT and CAPS LOCK to enter capital letters. Use DELETE and BACKSPACE buttons to correct text.	**Keyboard** Use individual fingers to input text and use SHIFT key to type characters. Amend text by highlighting and using SELECT/DELETE and COPY/PASTE. Swap between letters and symbol input on a tablet Add shapes and word art to documents and presentations	**Keyboard** Use a keyboard effectively, including the use of numbers Know how to use a spellcheck Be aware of keyboard shortcuts on laptops and PCs. Change font sizes and colour of text Use appropriate screen capture and insert in document or presentation	**Keyboard** Use keyboard to confidently input text, characters and numbers Use bullet points Add text boxes Move, resize and rotate shapes, text and pictures Use common keyboard shortcuts on laptops and PCs	**Keyboard** Effectively use right click menu within documents and presentations Save as a particular file type Select menu options within a variety of apps Create tables Use find and replace when editing documents

Programming	I can make a floor robot move. I can use simple software. To make something happen. I can make choices about the buttons and icons I press, touch or click on.	I can give instructions to my friend and follow their instructions to move around. I can describe what happens when I press buttons on a robot. I can press the buttons in the correct order to make my robot do what I want. I can describe what actions I will need to do to make something happen and begin to use the word algorithm. I can begin to predict what will happen for a short sequence of instructions. I can begin to use software/apps to create movement and patterns on a screen. I can use the word debug when I correct mistakes when I program.	I can give instructions (using forward, backward and turn) and physically follow their instructions. I can tell you the order I need to do things to make something happen and talk about this as an algorithm. I can program a robot or software to do a particular task. I can look at my friend's program and tell you what will happen. I can use programming software to make objects move. I can watch a program execute and spot where it goes wrong so that I can debug it.	I can break an open-ended problem into smaller parts. I can put programming commands into a sequence to achieve a specific outcome. I keep testing my program and can recognise when I need to debug it. I can use repeat commands. I can describe the algorithm I will need for a simple task. I can detect a problem in an algorithm which could result in unsuccessful programming.	I can use logical thinking to solve an open-ended problem by breaking it up into smaller parts. I can use an efficient procedure to simplify a program. I can use a sensor to detect a change which can select an action within my program. I know that I need to keep testing my program while I am putting it together. I can use a variety of tools to create a program. I can recognise an error in a program and debug it. I recognise that an algorithm will help me to sequence more complex programs. I recognise that using algorithms will also help solve problems in other learning such as Maths, Science and Design and Technology.	I can decompose a problem into smaller parts to design an algorithm for a specific outcome and use this to write a program. I can refine a procedure using repeat commands to improve a program. I can use a variable to increase programming possibilities. I can change an input to a program to achieve a different output. I can use 'if' and 'then' commands to select an action. I can talk about how a computer model can provide information about a physical system. I can use logical reasoning to detect and debug mistakes in a program. I use logical thinking, imagination and creativity to extend a program.	I can deconstruct a problem into smaller steps, recognising similarities to solutions used before. I can explain and program each of the steps in my algorithm. I can evaluate the effectiveness and efficiency of my algorithm while I continually test the programming of that algorithm. I can recognise when I need to use a variable to achieve a required output. I can use a variable and operators to stop a program. I can use different inputs (including sensors) to control a device or onscreen action and predict what will happen. I can use logical reasoning to detect and correct errors in a algorithms and programs.
Key Vocabulary	App Control Information Instruction Internet Program Swipe Tap	Action Algorithm Background Bug Data Debug Error Search Selection Sequence	Computer networks Event Execute Input Loop Output Repeat Software World Wide Web	Block Blocks Palette Command Control Block Repetition Simulation Sprite Stage	Logical reasoning Script Scripts area	Variables Object Pixel	Sensors
Handling data	I can tell you about different kinds of information such as pictures, video, text and sound.	I can talk about the ways in which information can be shown. I can use technology to collect information, including photos, video and sound.	I can talk about the different ways I use technology to collect information, including a camera, microscope or sound recorder.	I can talk about the different ways data can be organised. I can search a ready-made database to answer questions.	I can organise data in different ways. I can collect data and identify where it could be inaccurate.	I can use a spreadsheet and database to collect and record data. I can choose an appropriate tool to help me collect data.	I can plan the process needed to investigate the world around me. I can select the most effective tool to collect data for my investigation.

		I can sort different kinds of information and present it to others. I can add information to a pictograph and talk to you about what I have found out.	I can make and save a chart or graph using the data I collect. I can talk about the data that is shown in my chart or graph. I am starting to understand a branching database. I can tell you what kind of information I could use to help me investigate a question.	I can collect data help me answer a question. I can add to a database. I can make a branching database. I can use a data logger to monitor changes and can talk about the information collected.	I can plan, create and search a database to answer questions. I can choose the best way to present data to my friends. I can use a data logger to record and share my readings with my friends.	I can present data in an appropriate way. I can search a database using different operators to refine my search. I can talk about mistakes in data and suggest how it could be checked.	I can check the data I collect for accuracy and plausibility. I can interpret the data I collect. I can present the data I collect in an appropriate way. I use the skills I have developed to interrogate a database.
Key Vocabulary	Program Image	Open Present Display format pictograph technology File	Save Data Database Graph chart	PageRank Variables Data logger	Query	Spreadsheet Field Entry cell Row column	Results Conclusions
Multimedia	I can move objects on a screen. I can create shapes and text on a screen. I can use technology to show my learning.	I can be creative with different technology tools. I can use technology to create and present my ideas. I can use the keyboard or a word bank on my device to enter text. I can save information in a special place and retrieve it again.	I can use technology to organise and present my ideas in different ways. I can use the keyboard on my device to add, delete and space text for others to read. I can tell you about an online tool that will help me to share my ideas with other people. I can save and open files on the device I use.	I can create different effects with different technology tools. I can combine a mixture of text, graphics and sound to share my ideas and learning. I can use appropriate keyboard commands to amend text on my device, including making use of a spellchecker. I can evaluate my work and improve its effectiveness. I can use an appropriate tool to share my work online.	I can use photos, videos and sound to create an atmosphere when presenting to different audiences. I am confident to explore new media to extend what I can achieve. I can change the appearance of text to increase its effectiveness. I can create, modify and present documents for a particular purpose. I can use a keyboard confidently and make use of a spellchecker to write and review my work. I can use an appropriate tool to share my work and collaborate online. I can give constructive feedback to my friends to	I can use text, photo and video editing tools to refine my work. I can use the skills I have already developed to create content using unfamiliar technology. I can select, use and combine the appropriate technology tools to create effects that will have an impact on others. I can select an appropriate online or offline tool to create and share ideas. I can review and improve my own work and support others to improve their work.	I can talk about atmosphere and structure when planning a particular outcome. I can confidently identify the potential of unfamiliar technology to increase my creativity. I can combine a range of media, recognising the contribution of each to achieve a particular outcome. I can tell you how to select a particular online tool for a specific purpose. I can be digitally discerning when evaluating the effectiveness of my own work and the work of others.

					help them improve their work and refine my own work.		
Key Vocabulary	e-safety Program Device Screen Technology Insert	Information Selection Sequence Tools Keyboard Save File Digital Open	Algorithm Debug Computer networks Input Output Software World Wide Web Delete Font Word art	Hyperlink Media Spellchecker Graphics Shortcuts Evaluate Audience Online/offline download Website URL	Social media Photos Videos Document Collaborate Constructive feedback	Editing Evaluate	Credible sourcing Reliability
Technology in our lives	I can tell you about technology that is used at home and in school. I can operate simple equipment. I can use a safe part of the Internet to play and learn.	I can recognise the ways we use technology in our classroom. I can recognise ways that technology is used in my home and community. I can use links to websites to find information. I can begin to identify some of the benefits of using technology.	I can tell you why I use technology in the classroom. I can tell you why I use technology in my home and community. I am starting to understand that other people have created the information I use. I can identify benefits of using technology including finding information, creating and communicating. I can talk about the differences between the Internet and things in the physical world.	I can save and retrieve work on the Internet, the school network or my own device. I can talk about the parts of a computer. I can tell you ways to communicate with others online. I can describe the World Wide Web as the part of the Internet that contains websites. I can use search tools to find and use an appropriate website. I think about whether I can use images that I find online in my own work.	I can tell you whether a resource I am using is on the Internet, the school network or my own device. I can identify key words to use when searching safely on the World Wide Web. I think about the reliability of information I read on the World Wide Web. I can tell you how to check who owns photos, text and clipart. I can create a hyperlink to a resource on the World Wide Web. I can recognise that websites use different methods to advertise products	I can describe different parts of the Internet. I can use different online communication tools for different purposes. I can use a search engine to find appropriate information and check its reliability. I can recognise and evaluate different types of information I find on the World Wide Web. I can describe the different parts of a webpage. I can find out who the information on a webpage belongs to I know which resources on the Internet I can download and use. I can describe the ways in which websites advertise their products to me.	I can tell you the internet services I need to use for different purposes. I can describe how information is transported on the Internet. I can select an appropriate tool to communicate and collaborate online. I can talk about the way search results are selected and ranked. I can check the reliability of a website. I can tell you about copyright and acknowledge the sources of information that I find online. I know that websites can use my data to make money and target their advertising.
Key Vocabulary	Operate Internet Equipment Apps Privacy	Sources Hyperlink Search engine Digital content Messaging	Email Forward Replay Send Carbon copy	Upload Download Copy Paste Share	Copyright Pop ups Cookies Creditable Reliability	Advertise Webpage Search engine	Encrypt Re-post Tagging Plagiarism Referencing

	Settings Online offline Log in Password Personal- information	index	Attachments Recipient notification Text Content contact	Skype Facetime Video chat Blog Pop-cast	Bias		Cyber attack

Knowledge Curriculum Overview (BWMAT EYFS progression document & National Curriculum)		
EYFS	KS1	KS2
I can write my name using a keyboard on different devices. I can follow the school's safer internet rules and tell my adult if I am worried. I can independently listen to my body and manage my screen time.	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.	Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. Use sequence, selection, and repetition in programs, work with variables and various forms of input and output. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration. Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information. Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.