Cledford Primary School – Computing Curriculum Yearly Overview

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
EYFS	How technology helps us in our lives – looking at what is in our classroom and how to use it. Logo and Beebot – programming to make something move in a particular direction. How to use APPS on an IPAD – Phonics Bloom, digital camera, weather app.					
Year 1	<u>Logging on/logging off/using the computer suite effectively</u> (2/3 lessons) <u>Unit 1.1</u> <u>Online Safety & Exploring Purple Mash (DL) (IT)</u> Children will learn how to stay safe online and how to use Purple Mash. (4 lessons)	Unit 1.3 <u>Pictograms (IT)</u> Data can be represented in picture format. Contribute to a class pictogram. To use a pictogram to record the results of an experiment. (3 lessons)	Unit 1.5 Unit 1.9 <u>Maze Explorers (CS)</u> To understand the functionality of The direction keys. Create and debug a set of instructions (algorithm). To use the additional direction keys as part of an algorithm. To understand how to change and extend the algorithm list. Technology outside school (4 lessons)	Unit 1.4 <u>Lego Builders (CS)</u> Compare the effects of adhering strictly to instructions to completing tasks without complete instructions. Follow and create simple instructions on the computer. To consider how the order of instructions affects the result. (3 lessons) <u>Unit 1.9</u> <u>Technology outside school (DL)</u> Technology is used both in and outside of school. When you are sorting items, you need to use a range of criteria. (2 lessons)	Unit 1.6 <u>Animated Story Books (DL)</u> To introduce e-books and the 2Create a Story tool. Add animation to a story. Add sound to a story, including voice recording and music the children have composed. (5 lessons)	Unit 1.7 <u>Coding (CS)</u> To understand what instructions are and predict what might happen when they are followed. To use code to make a computer program. To understand what object and actions are. To understand what an event is and to use an event to control an object. To begin to understand how code executes when a program is run. (6 lessons)
Year 2	Unit 2.2 <u>Online Safety (DL)</u> Cildren will learn how and why it is important to keep their personal information private. (3 lessons) <u>Unit 2.5</u> <u>Effective Searching (DL)</u> Children will learn the importance of following instructions and how to search safely online. (3 lessons)	Unit 2.7 <u>Making Music (IT)</u> To make music digitally using 2Sequence. Explore, edit and combine sounds using 2Sequence. Edit and refine composed music. To think about how music can be used to express feelings and create tunes which depict feelings. (3 lessons)	Unit 2.4 <u>Questioning (IT)</u> To learn about data handling tools that can give more information than pictograms. Use yes/no questions to separate information. Construct a binary tree to identify items. Use 2Question (a binary tree database) to answer questions. (5 lessons)	Unit 2.3 <u>Spreadsheets (IT) – Crash course</u> To use 2Calculate image, lock, move cell, speak and count tools to make a counting machine. Learn how to copy and paste in2Calculate. Use the totalling tools. Use a spreadsheet for money calculations. Use the 2Calculate equals tool to check calculations. To use 2Calculate to collect data and produce a graph. (5 lessons)	Unit 2.6 <u>Creating Pictures (IT)</u> Pointillism is a painting technique using small, painted dots. Impressionism is a style of painting that focuses on the effects of light. Surrealistic art is made up of dream like images. (5 lessons)	Unit 2.1 <u>Coding (CS)</u> To know what an algorithm is. Create a computer program using an algorithm. Create a program using a given design. To understand the collision detection event. Know that algorithms follow a sequence. Design an algorithm that follows a timed sequence. Different objects have different properties. (6 lessons)

Year 3	Unit 3.2 __Online safety (DL)__ Children will learn how to stay safe online and the importance of keeping their personal information private. (3 lessons) Unit 3.7 __Simulations (CS)__ To find out what a simulation is and understand the purpose of simulations. To explore a simulation, making choices and discussing their effects. (3 lessons)	Unit 3.10 __Microbits (CS)__ To understand that the micro:bit is a tiny computer which needs code to make it work. To use Free code micro:bit to make code that the micro:bit can understand and then transfer it to the micro:bit. To code a micro:bit to show animations on its LEDs. To recognise the key inputs and outputs such as accelerometer and LED display. To create code that generates sound outputs based on different movement gestures. (4 lessons)	Unit 3.4 __Touch Typing (IT)__ Children will learn the functions of a keyboard. (4 lessons)	Unit 3.5 __Email (inc. email safety) (DL)__ Email is a method of sending electronic communication. If you receive a message that makes you feel upset or scared then should you tell an adult immediately. Files such as photographs, videos, music and other resources can be attached to the email and sent to the receiver. (6 lessons)	Unit 3.9 __Presenting Data (IT)__ Children will learn how to use Microsoft PowerPoint and create their own presentation. (5/6 lessons)	Unit 3.1 __Coding (CS)__ Designing an interactive scene. To understand that there are different types of timers. To be able to select the right type of timer for a purpose. To use coding knowledge to create a range of programs. To understand the importance of nesting. (6 lessons)
Year 4	Unit 4.2 __Online Safety (DL)__ To understand how children can protect themselves from online identity theft. To understand that information put online leaves a digital footprint or trail and that this can aid identity theft. To understand that copying the work of others and presenting it as their own is called 'plagiarism'. (4 lessons) Unit 4.7 __Effective Searching (IT)__ (3 lessons)	Unit 4.5 __Logo (CS)__ To learn the structure of the language of 2Logo. To input simple instructions in 2Logo. To use the Repeat command in 2Logo to create shapes. (4 lessons)	Unit 4.10 __Artificial Intelligence (IT)__ To learn what is meant by the term artificial intelligence. To be clear about ways artificial intelligence is used in our everyday lives. To consider the future of artificial intelligence. To look at how artificial intelligence is used in music and the arts to create things. (4 lessons)	Unit 4.3 __Spreadsheets – Crash Course (IT)__ To explore how the number entered into cells can be set to either currency or decimal. To explore the use of the display of decimal places. To find out how to add formulae to a cell. To explore how tools can be combined to use 2Calculate to make number games. To explore the use of the timer, random number and spin button tools. (5/6 lessons)	Unit 4.8 __Hardware Investigators (CS)__ To understand the different parts that make up a desktop computer. To recall the different parts that make up a computer. (2 lessons) Unit 4.10 __Microbits (CS)__ To understand how sensor inputs from the accelerometer can be used to detect movement, such as when a step is taken. To understand how variables can be used to keep track of things in a program. To understand how inputs, outputs and computer code work together to make control systems. To understand what logic is and how it can be used to make different outputs happen according to different inputs. To be able to make a control system and game. (4 lessons)	Unit 4.1 __Coding (CS)__ To begin to understand selection in computer programming. To understand how an IF statement works. To understand how to use co-ordinates in computer programming. To understand how an IF statement works. (6 lessons)
Year 5	Unit 5.2 __Online Safety (DL)__ Sharing digital content can have both a positive and a negative impact. There are sources of support to help you stay safe online and it is your responsibility to be respectful. There are sources of support to help you stay safe online and it is your responsibility to be respectful.	Unit 5.8 __Word Processing (IT)__ To know what a word processing tool is for. To add and edit images to a word document. To know how to use word wrap with images and text. To add features to a document to enhance its look and usability. (8 lessons in total)	Unit 5.9 __External Devices (CS)__ To understand how a device can be programmed to be used as a game controller. To explore the text functions available and appraise their uses. To create a simple quiz program that can be answered using an external device. (6 lessons)	Unit 5.5 __Game Creator (CS)__ To design the game environment. To design the game quest to make it a playable game. To finish and share the game. (5 lessons)	Unit 5.6 __3D Modelling (CS)__ To explore the effect of moving points when designing. To design a 3D model to fit certain criteria. (4 lessons)	Unit 5.7 __Concept Maps__ Unit 5.7 __Coding (CS)__ Children will learn how to simplify code and will learn what a simulation is. They will also study different variables. (6 lessons)

	(4 lessons) Begin <u>Unit 5.8 Word Processing (IT</u>) (2 lessons)					
Year 6	<u>Unit 6.2</u> <u>Online Safety (DL)</u> To identify benefits and risks of mobile devices broadcasting the location of the user/device, e.g., apps accessing location. To identify secure sites by looking for privacy seals of approval, e.g., https, padlock icon. To identify the benefits and risks of giving personal information and device access to different software. (3 lessons)	<u>Unit 6.3</u> <u>Spreadsheets – Crash Course (CS)</u> To use a spreadsheet to calculate the discount and final prices in a sale. Create a formula to help work out the prices of items in the sale. To use a spreadsheet to plan how to spend pocket money and the effect of saving money. (6 lessons)	<u>Unit 6.5</u> <u>Text Adventures (DL)</u> To find out what a text-based adventure game is and to explore an example made in 2Create a Story. To use 2Connect to plan a 'Choose your own Adventure' type story. To use 2Connect plans for a story adventure to make the adventure using 2Create a Story. (4 lessons)	<u>Unit 6.6</u> <u>Networks (CS)</u> To find out what a LAN and WAN are. To find out how we access the internet in school. (3 lessons)	<u>Unit 6.7</u> <u>Quizzing (IT)</u> To learn how to use the question types within 2Quiz. To make a quiz that requires the player to search a database. (6 lessons)	<u>Unit 6.1</u> <u>Coding (CS)</u> To design a playable game with a timer and a score. To plan and use selection and variables. To understand how the launch command works. To understand the different options of generating user input in 2Code. To understand how user input can be used in a program. (6 lessons)
Whole School			Safer Internet Day			