John Mayne Church of England Primary School- Subject Curriculum Plan

Computing Progression Map

Area of learning/Year group	YR	Y1	Y2	Y3	Y4	Y5	Y6
1. Digital Literacy	ABC searching – Finding pictures on kidzsearch through typing letters / simple words. Experimenting with computer devices such as: audio recording and cameras. Identifying digital devices inside and outside of school and their purposes. Roleplaying with imaginary technologies. Listening to stories / music / animations through digital devices.	Exploring different communication methods online. Develop keyboard and mouse skills: -Launching and closing programs - Clicking and double clicking to select -Click and Drag -Right Click menus -Typing words Logging in and out of private accounts.	Launching applications, opening files and saving work. Developing typing skills – getting to know the keyboard by typing sentences. BBC Dance Mat. Creating and developing sensible, secure passwords. Searching for information safely.	Using search technologies effectively and safely. Exploring why people use passwords, their benefits and strategies to create strong, secure passwords. Using the internet to search for information safely. Creating presentations, word documents and posters – including extracting pictures and information from the internet.	Using search technologies effectively using filters and learning how results are selected and ranked. Typing skills – using 2 hands to type, shift key for capitals / symbols. Using keywords to increase the accuracy of internet searches. Use music software to select, record, edit and organise sounds. Creating jingles and pod casts.	Plagiarism – identifying when it's OK to use the work of others and when it's stealing. Presenting information through internet-researched facts in a range of forms (posters, PowerPoints, leaflets etc.) 3D Modelling – Creating nets to create 3D models. Designing 3D buildings using computer software – pushing and pulling 2D shapes to create 3D structures.	Presenting information through internet-researched facts in a range of forms (posters, PowerPoints, leaflets etc.) Designing Web pages to provide information. Creating links and presenting information clearly. Creating stop motion animations to create stories / illustrate information using software
Vocabulary	Computer, Mouse, Keyboard	Password, Log in, Log out	Secure password, save file, open file, search	Safe searching, copy and paste, internet	Record, input, output, search filter	Net, 3D, 'push' and 'pull'	Hyperlink, web page, stop-motion, animate,

NC Links	Roleplaying	Topic / Literacy project opportunities	Topic / Literacy project opportunities	Topic / Literacy project opportunities	Topic / Literacy / Music project opportunities.	Topic / Literacy / DT project opportunities	Topic / Literacy project opportunities
2. E-Safety	Identify behaviour that can cause danger online. Identify what simple personal information is.	Identify behaviour that can cause danger online. Identify what personal information is. Know how to respond to finding inappropriate materials online – informing key adults.	Identify different forms of personal information. Understanding the importance of protecting personal information online. Understanding how personal information can be shared by people.	Understanding how to create safe, secure passwords and the risks of sharing them. Respond to various scenarios where children should 'zip it' (keep information safe) 'block it' (e.g.block unpleasant messages) or 'flag it' (Report to a key adult) to stay safe online. Understand how online communication differs to face to face communication. Safe online searching.	Understand how online communication differs to face to face communication in a range of different formats / applications. Developing respectful online communication skills. Understand that internet posting is forever. Stranger danger online.	Identify acceptable and unacceptable behaviour online. Reinforcing that internet posting is forever through digital footprints. Defining what a person's digital footprint is. Developing behaviours and strategies to ensure 'digital footprints' won't damage your reputation. Stranger danger online.	Understanding that revealing personal information online to strangers can be dangerous. Identifying differences between online and face to face conversations. Using technology safely. Knowing different ways to report concerns about content and contact online.
Vocabulary	Online, safe	Personal information, inappropriate	Shared	Secure passwords, reporting, online communication	Stranger danger	Digital footprint, reputation	Report concerns,
NC Links	Reinforced throughout all	Reinforced throughout all	Reinforced throughout all	Reinforced throughout all	Reinforced throughout all	Reinforced throughout all	Reinforced throughout all

	subjects when computers are being used.	subjects when computers are being used.	subjects when computers are being used.	subjects when computers are being used.	subjects when computers are being used.	subjects when computers are being used.	subjects when computers are being used.
3. Algorithms and Programming	Learning to follow simple directional instructions. Setting directional instructions using 'bee bots'. Sequencing events in a story using pictures. Creating maps / trails using directions. Debugging: children sort shapes / objects in to groups – removing those that don't fit the group (bugs).	Understand how to create a sequence of simple instructions to navigate 'bee-bots' across a map. Controlling objects on a screen through various inputs (mouse and keyboard inputs). Create simple block-codes using event and movement blocks. Debugging: Correcting a simple mistake in a sequence to achieve a goal using 'bee-bots'.	Understand that objects can be controlled in a large variety of ways on a computer. Create block-coding to achieve a clearly stated goal (Purple Mash). Using input, event and movement blocks. Tinker with code in pre-made games to adapt the game slightly to become their own. Debugging: Purple Mash. Amending code blocks to achieve a clearly stated goal. De bugging: inputs, movements and events.	Using 'if', 'repeat' and other various block coding commands in Scratch. Configure starting backgrounds and sprites for animations. Configure click events such as 'start button', 'move', 'turn', 'broadcast message' etc. Debugging: Identify and correct mistakes in own and others' animations through observing animations whilst watching code blocks highlight upon activation.	Use an increasingly large range of coding blocks to change the sound, appearance, size, movement of multiple sprites in an animation. Change sprites' costumes, add sounds to actions. Code sprites to interact with each other. Using coordinates on a screen to direct sprites. Debugging: Identify and correct mistakes for the coding features above. Tinker with code to improve code / rectify problems.	Play pre-created games and tinker with the code provided to adapt the instructions for various sprites. Use a variety of commands to enable sprites to interact with the background / other sprites. Using skills to create simple games with levels. Understand how to use variables in coding to score in games. Debugging: Identifying and correcting mistakes in the coding features above.	Use variables in more complex ways such as tracking numbers of inputs setting off 'if' commands. Design, write and debug programs that accomplish specific goals. Use logical reasoning to explain how algorithms and programs work. Create a calculator game using variables. Debugging: Identify and correct mistakes across a broad range of programs and games.
Vocabulary	Forwards, backwards, right, left	Left turn, right turn,	Bug, block coding, event, movement, input, algorithm	Debugging, background, sprite, animation	'if' command, 'repeat' command,	Variables, interact,	Algorithm, variable,

					‘forever’ command, tinker		
NC Links	Maths - Direction	Maths - Direction	Maths - Direction	Maths - Direction	Maths – Direction, coordinates	Maths – Direction, multiplication, coordinates	Maths – Direction, multiplication, coordinates
4. Data	Counting up pictures in a pictogram.	Know that images give information. Understand and say what a pictogram is showing.	Create pictograms. Navigate to the correct folder to save work / open files.	Choose information to put in a data table. Collect and enter data in spreadsheets to create a small database. Use data loggers to record physical data (sound, light, temperature).	Create small databases with separate fields to be searched. Use the ‘find’ action to sort data into different groups. Plot simple bar graphs using computer software. Use data loggers to capture continuous / intermittent data readings. Interpret results.	Create databases with increasingly large numbers of separate fields. Sorting data into different groups. Using formulas to solve mathematical equations. Plot scatter graphs and create pie charts from data inputs. Interpret results.	Creating more complex databases and searching through using ‘find’ functions. Collecting and presenting data in a variety of forms – conducting their own experiments. Understand how to check data and identify trends or where anomalies may have occurred.
Vocabulary	Count, picture	Pictogram	Pictogram	Spreadsheet, data, database, data logger	Field, cell	Formula, sorting	Trends, anomalies,
NC Links	Maths - Statistics	Maths - Statistics	Maths - Statistics	Maths – Statistics Science experiments; gathering data	Maths – Statistics Science experiments; gathering data	Maths – Statistics Science experiments; gathering data	Maths – Statistics Science experiments; gathering data

5. Networks and Communication	Naming different parts of a computer: mouse, keyboard, screen.	How we use computers at school. Understanding computers as an input and output device.	Understanding that our school has a network.	Understand that the internet is a large network of computers and that information can be shared between computers. Understand that computer networks enable the sharing of data and information.	Understand what servers are and how they provide services to a network. Working collaboratively on local networks with peers.	Begin to use internet services to share and transfer data to a third party. Working collaboratively on worldwide networks (scratch online).	Understand how computer networks enable computers to communicate and collaborate. Begin to use internet services within their own creations to share and transfer data to a third party. Inside a computer: dismantling and naming key parts of a computer – stating basic functions.
Vocabulary	Mouse, keyboard, screen	Input, output	network	Network, information, sharing	Server, network	Network, server, data	CPU, power supply, fan, motherboard
NC Links							

These plans should be read in conjunction with each classes' curriculum map