Pear Tree Primary School

KS2 Computing
Long-term curriculum plan 2022-3
'Being Our Best Selves'
(For further detail on the content please see Medium Term planning)

	Autumn	Spring	Summer
Year 1	Bee-Bots 1,2,3	Bee-Bots Basic	ScratchJr Tinkering
Year 2	Scratch Tinkering – Exploring Scratch	World Map Logic	Pizza Pickle - Scratch
Year 3	Shapes and Crystal Flowers	Selecting Search Activity	Scratch Tinkering – Exploring Scratch
Year 4	Dinosaur Fossil Animation	Network Hunt Activity	Classroom Thermometer - RP

Year 5	Planets Databases: Searching, Storing and Retrieval	Software Selection: Creating a Floorplan or Photo Collage in PowerPoint	Maths Quiz Maths Quiz: Advanced
Year 6	PHSE: Online Safety	Micro:bit: Rock Paper Scissors: Variables and Physical Input/Output	Make a Game MakeCode Arcade: Rockstar

	Autumn	Spring	Summer
Year 1	Children:		
	- Can turn on and off a Bee-Bot. - Can interact with the Bee-Bot to give it individual Instructions. - Can program the Bee-Bot with multiple instructions - Understand that a Bee-Bot can be programmed to move forward and turn left or right. - Know that more than one instruction together is called a sequence.	- Are able to make more complex sequences of instructions. - Can fix mistakes in their program. - Understand that fixing problems with a program is called debugging.	- Are able to unlock an iPad. - Are able to find and open ScratchJr on an iPad. - Are able to create a new project in ScratchJr. - Understand that a block represents an instruction or command. - Can drag blocks onto the program - Can connect a series of blocks. together to make a program.

Year 2	- Can open a web browser on a laptop. - Are able to open a link. - Can create a new project in Scratch / Scratch Online. - Understand that Scratch is a more powerful version of ScratchJr but is functionally the same. - Can modify an existing project to add additional features.	- Understand what the term logic means. - Explain that instructions on a computer are always followed exactly as programmed and in the order they are given. - Understand what an "if" condition means. - Open up an existing project in Scratch - Correctly predict what different combinations of instructions will result in.	- Are able to debug somebody else's broken project (Pizza Pickle). - Correctly predict what will happen when the project is run. - Can explain why the project doesn't work.

	Autumn	Spring	Summer
Year 3	Children:		
	- Are able to open an existing project in Scratch / Scratch Online and view the code. - Understand that the term loop refers to an instruction/many instructions being carried out more than once. - Understand that repeat and loop mean the same thing. - Are able to create a program with repeats in it, and explain what they do. - Know that changing the number in a repeat, will change the number of times the instructions execute.	- Are able to login to a school laptop with their unique username and password. - Can open a web browser and go to google search. - Understand that searching the internet will return results based on what they search for. - Know that a keyword refers to a term that is being searched, e.g. Population or Weather. - Understand that search results are sorted by relevance.	- Are able to go to Scratch Online by searching for it. - Are able to create a new Scratch Online project. - Can create simple programs by themselves - Can connect together sequences of instructions together into more complex algorithms. - Understand that a program is one more algorithms. - Are confident to explore the different blocks in Scratch by themselves.
Year 4	- Are able to access Scratch Online and find an existing project using the search feature. - Can view and edit the existing code inside the project. - Can re-order the instructions and add additional ones to fix the program to make sense. - Can explain why the order of commands is important.	- Can name different types of computing devices, such as computer, server, mouse, keyboard etc.. - Can explain the purpose of those devices. - Understand that a network is collection of devices that can all communicate with each other.	- Understand that some computers are simple circuit boards. - Can write a program to control and read information from an external device (micro:bit thermometer). - Can send the program to the device to that it runs. - Can demonstrate how the program is able execute on the device.
	Autumn	Spring	Summer
Y e	Children:		

	- Can open Microsoft PowerPoint and create a new blank presentation. - Can save their work using keyboard shortcuts. - Can find images on the internet and include them in their presentation / floorplan. - Can add text to the presentation to label elements. - Can copy and paste using keyboard shortcuts.	- Can open an existing database in Microsoft Access. - Understand that a database is a collection of data that is organised into records. - Can search for data using different criteria. - Can edit existing data. - Can create new data. - Can filter data based on criteria.	- Can open Scratch Online and create a simple quiz. - Can use logical conditions and loops together to make programs that branch based on choices. - Can add sounds effects to my program. - Can play different effects based on logical conditions.
Year 6	- Understand the importance of being kind online. - Understand that sharing content on the internet can be permanent. - Understand why different websites and apps have age restrictions. - Understand why online friends aren't the same as real life friends - Understand that people online aren't always who they claim to be. - Know to talk to an adult if they find something online upsetting or disturbing.	- Can connect a Micro:Bit to a laptop and transfer a program to it. - Can write programs that respond to various forms of input (e.g. shake and touch) - Can suggest ideas to make improvements to program (e.g. make it use radio to communicate with another Micro:Bit) - Can explain how the logical conditions work in a program.	- Are able to open and login to Microsoft MakeCode using a laptop. - Can follow the step by step instructions to build up a complete maze game. - Are able to explain how user input works. - Are able to add new festures to the game. - Can explain why sections of the program do and don't work correctly.