Wildground Federation – Computing Overview

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
N-2-3yrs	Understand cause and effect toys eg if they push button toy jumps up		Understand cause and effect toys eg if they push button toy jumps up and give a response to the effect eg. clap,laugh,smile or words		Use a wider range of toys and give responses	
N-3-4yrs	Explore a range of mechanical equipment, investigating how things work such as wind up or pulley toys		Explore how things work such as wind up or pulley toys and describe how these things are working with simple words and phrases		Explore keyboards on different devices eg – computers, Ipads Identify at least then first letter in name on a device	
Year R	Recognise and identify familiar letters and numbers on keyboards Recognise that a range of technology is used in places such as homes and schools Follow and give simple instructions		Experimenting with a programme a Beebot Develop and understanding of giving a simple command Learn how it is important for instructions to be in the right order		Explore and discuss how technology has changed over time Discuss why a set of instructions have gone wrong Follow and give more complex instructions	
Prior learning	Explore a range of mechanical equipment, investigating how things work such as wind up or pulley toys		Explore how things work such as wind up or pulley toys and describe how these things are working with simple words and phrases		Explore keyboards on different devices eg – computers, Ipads Identify at least then first letter in name on a device	
Future learning	Use a range of applications and devices in order to communicate ideas, work and messages.		Create a series of directions for a beebot to follow		Know how to record algorithms to program a beebot and know how to debug where necessary Show greater control when using a mouse to navigate	

KS1						
Year 1	***What is a computer?*** Developing word processing skills and creating digital images.	***How do computers run?*** Exploring algorithms using Beebots	***What is the internet?*** Learning how to communicate online and keep ourselves safe when accessing the internet	***How do computers run?*** *Part 2* Developing our knowledge of algorithms by creating a programme for a Beebot and de-bugging it.	***What is a computer simulation?*** Design and create our own computer Simulations using our knowledge of algorithms	***How can I present information?*** Using the Book Creator App to deepen our word processing skills through the creation of a story book.
	Prior learning: Exploring keyboards, laptops and desktop-computers within continuous provision. *(Recognize there are computers in many everyday objects- EYFS)*	***Prior learning:*** Discovering how different computers run – such as experimenting with the Beebots, different apps on the iPads and Code-a-pillar in continuous provision.	***Prior learning:*** Accessing games and videos on the internet through the use of Ipads and adult-directed activities using the computers.	***Prior learning:*** Learning what a Beebot is and how to read and input a basic Algorithms into it.	***Prior learning:*** Experience creating and debugging our own algorithms.	***Prior learning:*** Experience and understanding of how to use computers (including how to type and use a mouse) to create designs and written messages.
	Future learning: Extending Word Processing skills to create their own book in Book Creator (Year 2)	***Future learning:*** Re-exploring algorithms to learn how to write, input and de-bug our own (Spring 2)	***Future learning:*** Discovering the story of 'Chicken Clickin' in Year 2 to learn how to keep safe when exploring websites.	***Future learning:*** Creating computer simulators, applying understanding to a new context (Summer 1).	***Future learning:*** Creating our own, complex algorithms with Beebots in Year 2.	***Future learning:*** Designing and creating a multi-page story-book in Book Creator in Year 2 (Autumn 2) that includes a combination of hand-drawn and imported images.

Year 2	***What is an algorithm?*** Deepening our knowledge of algorithms by independently programming Beebots.	***What programs can I use to create my own designs?*** Extending our word processing skills and knowledge of creating digital images by creating our own digital story-book using Book Creator. Having the opportunity to apply our knowledge to a new program and interface.	***How can I make sure I'm being safe when exploring online?*** Exploring the concepts of online safety further by reflecting on the story of "Clickin Chicken"	***What possibilities does computing offer?*** Discovering the world of computing beyond our school!	***How can I store large amounts of information using a computer?*** Exploring how to create our own data-bases to store and organise information efficiently and effectively.	
	Prior learning: Extensive experience designing, creating and debugging our own algorithms for Beebots.	***Prior learning:*** Experience and understanding of how to use computers (including how to type and use a mouse) to create designs and written messages through Word.	***Prior learning:*** Knowing what 'private' vs. 'personal' information is when learning about communicating online. Understanding how to keep yourself safe online.	***Prior learning:*** Confident knowledge of how to use Word and Book Creator to create their own designs.	***Prior learning:*** Creating a basic database on Mini-beasts using branching keys.	
	Future learning: Learning greater strategies for identifying 'faults' in an algorithm and developing debugging skills through the exploration of more complex 'Beebot' scenarios (Summer2).	***Future learning:*** Understanding how to use Word Processing programmes to create more complex designs such as posters with imported images and Word Art in Year 3 (Spring 1)	***Future learning:*** Learning about Cyberbullying in Year 3 (Autumn 2) and understanding strategies that can be used to help stop this.	***Future learning:*** Discovering the wider possibilities of online communication through email, blogs and social media in Year 3 (Summer 1)	***Future learning:*** Deepening our understanding of what makes an effective database through the creation of one on a Roman Fighters in Year 3 (Spring 2)	***Future learning:*** Exploring how to use algorithms in Scratch to create a maze in Year 3 (Autumn 1)
KS2						
Year 3	**Word processing** **We look at the keyboard and learn how to touch type**	**Internet Safety** What is cyber-bullying? Using what we already know about keeping ourselves safe online, we explore the concept of online harassment and learn strategies to handle any abuse	**Control** We start by re-exploring our knowledge of creating our own algorithms with Beebots before discovering the greater possibilities of coding by using Scratch to program our own maze.	**Databases** Deepening our knowledge of creating data bases further and including features that can make them more user-friendly and		**Control** Now that we understand coding using Scratch, we extend our coding and programme skills to Music Machine to design, create and

		we experience when exploring the internet.		efficient, we create one all about Roman fighters!		de-bug our own original score.
	Prior learning: Previously using Word, PowerPoint and Book Creator to design and display information from KS1	***Prior learning:*** Knowledge of what is private vs. personal information is and an understanding of how to keep our data safe From KS1	***Prior learning:*** Extensive experience independently programming Beebots through the creation and de-bugging of our own algorithms in KS1	***Prior learning:*** Understanding of what a database is through the creation of basic databases displaying data that include branching keys in KS1		***Prior learning:*** Creating basic mazes in Scratch in the Autumn term.
	Future learning: Using 'Explain Everything' to create our own information videos that incorporate a combination of text, imported images, sounds and film.	***Future learning:*** Exploring the possible data protections and safety issues that we can face when communicating over email (phishing) and instant messenger (catfishing/scams) in Year 4.	***Future learning:*** Extending our coding and programming skills to Music Machine to design, create and de-bug our own original score (Summer 2)	***Future learning:*** Creating a more complex, effective and user-friendly database to display our achievements over the year in Year 4 (Summer 2).		***Future learning:*** Learning about the programme LOGO to create more complex and effective algorithms that utilize repeated commands and procedures.
Year 4		**Word Processing** We have a secure understanding of creating our own designs and have experiences using different programs – Let's explore a new one called 'Explain Everything' to create our own Video that showcases all that we have learnt about Volcanos. We learn how to direct, film and even edit our own productions using this app.	**Communication** Re-exploring what we know about communicating over email, we deepen our understanding of keeping safe online to explore more complex issues that can arise when accessing the internet in various forms.	**Control** We've explored Scratch before to design and create our own programmes by developing our own codes – But can we do more with this programme? What other possibilities does it hold? IF commands and	**Control** We go back and re-cap how we can design and create an algorithm to be as efficient and controlled as possible before transferring our programming skills to a new program that will allow us to learn more about repeated	

				repeating procedures.	commands and procedures – LOGO!	
		Prior learning: Creating our own E-Safety posters in Year 3 on Word, including importing, resizing and formatting images alongside written text.	***Prior learning:*** Exploring what cyber-bullying is and how to handle online harassment in Year 3. Learning what email is in Year 3 as well as and how to create our own blogs (through the school social media page).	***Prior learning:*** Creating our own music on Music Machine through the creation of complex, multi-step programmes in Year 3 (Summer 2)	***Prior learning:*** Experience using beebots to learn about using repeated commands within an algorithm to make it more efficient.	
		Future learning: Learning the difference between WWW and the internet in Year 5.	***Future learning:*** Deepening our understanding of how to keep ourselves safe online by exploring how to identify what is reliable and what is unreliable information online in Year 4 (Autumn1).	***Future learning:*** incorporate repeated commands from LOGO into algorithms Summer 2 programme.	***Future learning*** Exploring coding and writing procedures in Year 5	
Year 5	**Control and Internet Safety** We apply our developed coding skills to a new program – Pivot! Whilst we are completing research online for our topic this term, we discuss how we can ensure everything we find online is appropriate for us but also is a		**Internet Safety Communication and Word Processing** We learn the difference between WWW and the internet to help us deepen our current knowledge of what it means to go 'online' and communicate with others Going back to our school Social Media page, we design, create and upload our own presentation on a chosen world icon or city using a	**Control** We revisit Coding procedures from year 4 and then write procedures. We then identify variables in codes and investigate changing variables in shapes and a game.	**Communication** We also use Revelation Natural Art and Ipads to create pieces of artwork linked to our topic on space.	**Databases** Through the creation of a complex database, we showcase all our learning on the animals of the rainforest. We also discover how to use Google apps such as Google Maps to discover

	reliable piece of information.		program of our choosing – PowerPoint, publisher – It's our choice!			more facts for our database.
	Prior learning: Using both Scratch and LOGO in Year 4 to create complex algorithms that utilizes repeated commands to ensure they are effective and efficient programmes for users to explore.		***Prior learning:*** Experience showcasing learning over the year on our school website and social media page in Year 4. Opportunities to create videos/presentations in various programmes in Year 4 (Explain Everything, Word).	***Prior learning:*** Extensive experience using Scratch and LOGO in Year 4. Using Pivot Man in the Autumn 1 term.	***Prior learning:*** Knowledge of how to safely search for information online and how to identify reliable sources through a search engine from the Autumn term. Exploring using various programmes throughout Year 4 and 5 to present information and designs (Word, Explain Everything).	***Prior learning:*** Creating databases in Year 4 that allow users to uncover facts about different topics we have explored over the year through the use of various functions and controls.
	Future learning: Later in Year 5, we explore the endless possibilities of QR codes and create our own for others to discover We also discover a new program called 'Crumble' that allows us		***Future learning:*** Uncovering what an 'Online Reputation' in in Year 6 and how our action when communicating with others online affects this.	***Future learning:*** Discovering new programme features in Scratch in Year 6 including set routines and actions autonomously using variables in code	***Future learning:*** Exploring what an 'Online reputation' is in Year 6. Re-discovering the creative possibilities of Pivot in Year 6 to create our own complex animations that include text,	***Future learning:*** Creating Databases when exploring Stop-Start animations in Year 6 that display information we need to consider for them.

	to control a moving vehicle.				backgrounds and imported images.	
Year 6	Control We go back to Scratch to not only design, write and debug our own detailed programs that accomplish specific goals, but also explore how we can debug and redefine our programmes to do set routines and actions autonomously using IF commands and repeating procedures.	Internet Safety We take a deep dive into what we really mean by 'e-safety'. Demonstrating a positive attitude to online safety, we look at bias and truth in online material as well as learn about the concept of having an 'Online Reputation' and what this really means for us as we begin to venture deeper into the world of social media.		Control *Part 2* We explore how we can manipulate and alter sounds to create music using sequence, selection, and repetition in programs in AUDACITY.	Communication We undertake the colossal challenge of designing, creating and presenting our own stop-start animation using green screen technology and video editing software.	
	Prior learning: Using 'Crumble' to control vehicles to traverse a range of tracks in Year 5.	***Prior learning:*** Learning how to identify what is reliable vs. unreliable information online in Year 5 and exploring concepts such as cyberbullying in Year 4. Discovering what scams and 'phishing' is in Year 4 when exploring communication online.		***Prior learning:*** Experience using Music Machine to create basic tracks/songs in Year 3. Knowledge of how to effectively use repeat commands from using Scratch, LOGO, Crumble and Pivot in Year 4 and 5.	***Prior learning:*** Previous Opportunities to use video editing software in Year 4 (Explain Everything). Experience using PIVOT in Year 4 to create a basic stop-start animation through coding.	

	Future learning: Discovering how to set routines and actions autonomously using IF commands and repeating procedures in SCRATCH in Spring 1.	***Future learning:*** KS3 – 'To understand a range of ways to use technology safely, respectfully, responsibly and securely, including protecting their online identify and privacy.'		***Future learning:*** Creating a stop-start animation in the Summer 2 term to celebrate and showcase our outstanding coding skills.	***Future learning:*** KS3 – 'To create, re-use, revise and re-purpose artefacts for a given audience, with attention to trustworthiness, design and usability'	