Werneth Primary School Curriculum Synopsis for Computing

	Autumn	Spring	Summer
EYFS	In EYFS computing is centred around play-based, unplugged (no computer) activities that focus on building children's listening skills, curiosity, creativity and problem solving. Technology in the Early Years involves: · using wind-up, cause and effect toys exploring and old typewriter or other mechanical toys taking a photograph with a camera or a tablet · searching for information on the internet playing games on the interactive whiteboard using a BeeBot · playing video clips playing and listening to music accessing a simple app on an iPad Allowing children the opportunity to explore technology in this carefree and often child-led way, means that not only will they develop a familiarity with equipment and vocabulary to build on in Year 1.		
Year 1	**Online Safety 2BeSafe – Taught during collective worship, PSHE, themed weeks, class assembly and additional computing lessons.** ● Self-image and identity ● Online Bullying ● Privacy and Security	**Online Safety 2BeSafe – Taught during collective worship, PSHE, themed weeks, class assembly and additional computing lessons.** ● Online reputation ● Health, wellbeing and lifestyle	**Online Safety 2BeSafe – Taught during collective worship, PSHE, themed weeks, class assembly and additional computing lessons.** ● Online Relationships ● Managing Online Information ● Copyright and Ownership
	Introduction to Purple Mash (Information Technology) This unit introduces Purple Mash to children and the essential basic knowledge and skills required for the Year 1 units. Through a range of activities, children will learn about 2Dos, saving work and navigating to key areas. **Creative Computing (Information Technology)** This unit gives children the opportunity to develop their mouse, keyboard and basic computing skills using creative tools. Children will use the 2DIY tools to paint, create jigsaws and make simple drag and drop games. **Data Explorers (Information Technology)** This unit introduces children to using software tools to group and sort recognisable objects. By the end of the unit, children have the opportunity to collect simple data and present it in a pictogram.	**Creating and Following Instructions (Computer Science)** his unit forms the basis for understanding simple algorithms and algorithmic thinking. This is a foundational unit, introducing the basis of logical thinking in preparation for coding. **Animated Stories (Information Technology)** In this unit children create digital books using the 2Create a Story tool. They learn how to work with images, text and sound. Children also learn how to animate simple objects.	**Coding (Computer Science)** This unit introduces children to coding using the block coding tool, 2Code. Children will explore simple instructions and relate this to code blocks. By the end of this unit, children will be able to make a simple program. **Technology Around Us (Digital Literacy)** The focus in this unit is defining and understanding what technology is. Children will relate this to school, home, outside and to its use in the wider world. **Making Beats (Information Technology)** his unit introduces digital music. Children will use the tools 2Explore and 2Beat to make their own digital music.
Year 2	**Online Safety 2BeSafe – Taught during collective worship, PSHE, themed weeks, class assembly and additional computing lessons.** ● Self-image and Identity ● Online Bullying ● Privacy and Security	**Online Safety 2BeSafe – Taught during collective worship, PSHE, themed weeks, class assembly and additional computing lessons.** ● Online Reputation ● Health, wellbeing and lifestyle	**Online Safety 2BeSafe – Taught during collective worship, PSHE, themed weeks, class assembly and additional computing lessons.** ● Online Relationships ● Managing Online Information ● Copyright and Ownership
	Route Explorers (Computing Science) This unit allows children to code using the tool, 2Go. Children learn to build simple algorithms to move a screen turtle along routes. **The Internet (Information Technology)** This unit introduces children to the fundamentals of the internet, including its purpose, how we access it, and how to use it safely and effectively. **Creating Pictures (Information Technology)** This unit lets children explore digital art creation through the use of a digital art tool2Paint A Picture. Children learn about famous art styles and how a digital art tool can be used to reproduce art in that style.	**Spreadsheets (Information Technology)** This unit teaches children the basics of using spreadsheets with 2Calculate, focusing on how to enter, organise, and manage data in rows and columns. **Questioning (Information Technology)** In this unit, children will explore how to ask questions to collect useful information. They will learn to organise data using tally charts, pictograms, and simple branching databases to help sort and identify objects.	**Coding (Computer Science)** This unit builds on the coding skills and knowledge from Year 1. Children will explore, modify and create programs that includes the use of timers and button objects. **Presenting Ideas (Information Technology)** In this unit, children will learn how to present ideas using the concept mapping tool, 2Connect. They will organise information using the features of a concept map, and think about how to present their thoughts clearly to an audience. **Making Music (Information Technology)** This unit lets children explore digital music creation through the use of the music tool, 2sequence.
Year 3	**Online Safety 2BeSafe – Taught during collective worship, PSHE, themed weeks, class assembly and additional computing lessons.** ● Self-image and Identity ● Online Bullying ● Privacy and Security	**Online Safety 2BeSafe – Taught during collective worship, PSHE, themed weeks, class assembly and additional computing lessons.** ● Online Reputation ● Health, wellbeing and lifestyle	**Online Safety 2BeSafe – Taught during collective worship, PSHE, themed weeks, class assembly and additional computing lessons.** ● Online Relationships ● Managing Online Information ● Copyright and Ownership

	Email (Digital Literacy) his unit allows children to explore electronic communication using 2Email. Children learn how to respond to, compose and add attachments to emails as well as consider the safety aspects of email communication. **Route Planner (Computer Science)** Children will plan algorithms and write code that includes angles of turn to create routes for screen turtles, testing them using 2Go.	**Branching Databases (Information Technology)** This unit allows children to explore and create branching databases. They learn how binary questioning is used to sort data records and about the importance of testing and debugging databases that they create. **Coding (Computer Science)** Children will explore timers, the repeat command and the importance of nesting code. They will build up to using design documentation to code a program. **Touch Typing (Information Technology)** This unit introduces children to touch typing. Children learn correct posture, finger positioning and typing techniques to develop speed and accuracy, while understanding how these skills support safe and effective computer use.	**Presentations (Information Technology)** This unit introduces children to using industry standard software to create presentations. Children will explore features of the presentation software then create and present their own slideshow presentations. **Spreadsheets (Information Technology)** This unit introduces children to using 2Calculate in Advanced Mode, helping them move beyond basic data entry to explore how spreadsheets can calculate and solve problems.

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Year 4	**Online Safety 2BeSafe – Taught during collective worship, PSHE, themed weeks, class assembly and additional computing lessons.** ● Self-image and identity ● Online Bullying ● Privacy and Security	**Online Safety 2BeSafe – Taught during collective worship, PSHE, themed weeks, class assembly and additional computing lessons.** ● Online Reputation ● Health, wellbeing and lifestyle	**Online Safety 2BeSafe – Taught during collective worship, PSHE, themed weeks, class assembly and additional computing lessons.** ● Online Relationships ● Managing Online Information ● Copyright and Ownership
	Unpacking Hardware and Software (Information Technology) This unit allows children to further their understanding of technology and computer systems in relation to their hardware and software. **Animation (Information Technology)** This unit introduces children to animation and the common techniques used by animators. Children will use traditional animation methods and compare these methods with using animation software (2Animate). **Logo (Computer Science)** This unit introduces children to Logo programming, focusing on developing their understanding of basic commands and programming concepts. Children will learn to create shapes and letters using instructions.	**Sound Stories (Information Technology)** This unit introduces children to 2Cast, an audio recording tool in Purple Mash. Children will explore the features of effective audio books and work as a team to script, record and edit their own. **Effective Searching (Digital Literacy)** This unit teaches children to use search technologies effectively by selecting clear keywords, refining searches for accuracy, and evaluating online content to judge whether it is reliable and trustworthy.	**Coding (Computer Science)** This unit builds on learning from previous coding units. Children will learn to use selection, co-ordinates, looping and variables. They will use these coding skills to create their own game. **Composing Beats (Information Technology)** This unit teaches children to explore the different elements of music, experiment with beats, and compose engaging music using the Purple Mash tool, Busy Beats. **Introduction to AI (Information Technology)** This unit introduces pupils to Artificial Intelligence, exploring what it is, what it can do, and how it is used in today's digital world.
Year 5	**Online Safety 2BeSafe – Taught during collective worship, PSHE, themed weeks, class assembly and additional computing lessons.** ● Self-image and Identity ● Online Bullying ● Privacy and Security	**Online Safety 2BeSafe – Taught during collective worship, PSHE, themed weeks, class assembly and additional computing lessons.** ● Online Reputation ● Health, wellbeing and lifestyle	**Online Safety 2BeSafe – Taught during collective worship, PSHE, themed weeks, class assembly and additional computing lessons.** ● Online Relationships ● Managing Online Information ● Copyright and Ownership
	Quizzing (Information Technology) This unit introduces children to the process of designing and creating interactive quizzes using Purple Mash's 2Quiz tool. **Databases (Information Technology)** This unit introduces children to databases beyond branching databases. Children will create their own databases as well as query existing databases to find information that they are being asked for. **Game Creator (Computer Science)** his unit allows children to learn more about the world of gaming. Children will design and make their own 3D maze adventure game using the 2DIY3D tool, assessing the effectiveness of their own and other's creations.	**Spreadsheets (Information Technology)** Through measurement conversions, graphing, weather analysis, budgeting, and planning a holiday, children learn how spreadsheets support real-world decision-making. **Concept Maps (Information Technology)** In this unit, children explore how concept maps can be used to organise, develop and present ideas using 2Connect. They will learn to create their own structured concept maps based on non-fiction topics and present their work clearly to an audience.	**Coding (Computer Science)** Children will learn about the importance of simplifying code, as well as how tags, functions and different variable types can be used within a program. **Word Processing (Information Technology)** This unit introduces children to word processing by using industry standard software. Children will explore how to edit, format and create their own documents.
Year 6	**Online Safety 2BeSafe – Taught during collective worship, PSHE, themed weeks, class assembly and additional computing lessons.** ● Self-image and Identity ● Online Bullying ● Privacy and Security	**Online Safety 2BeSafe – Taught during collective worship, PSHE, themed weeks, class assembly and additional computing lessons.** ● Online Reputation ● Health, wellbeing and lifestyle	**Online Safety 2BeSafe – Taught during collective worship, PSHE, themed weeks, class assembly and additional computing lessons.** ● Online Relationships ● Managing Online Information ● Copyright and Ownership

	Graphing (Information Technology) This unit explores the benefits of creating common graph types, digitally. Children will create a range of familiar graph types using the 2Graph and 2Calculate tools. **Blogging (Information Technology)** This unit allows children to explore blogs and their features, including how they can be used to engage an audience effectively. **Data Detectives (Information Technology)** This unit introduces children to Data Detectives, an interactive set of databases challenges that children work through. Children will be expected to interpret information being requested and query databases to find the information.	**Networks (Computer Science)** This unit allows children to learn more about what networks are, what they do and how they connect devices. Children also consider the safety aspects of networks. **Coding (Computer Science)** Children will learn how to use cloning and hotspots within their programs. They will use more complex flowcharts to help them test and debug existing simulations, building up to developing a text-based adventure game. **Introduction to Python (Computer Science)** Introducing text-based Python coding using the Python in Pieces plat form. Python in Pieces translates between block-code and Python.	**Spreadsheets (Information Technology)** This unit introduces children to spreadsheets using industry standard software. Children will explore how to create spreadsheets and use their functionality to support real-world decision-making and problem-solving. **3D Modelling (Information Technology)** This unit explores 3D Modelling design using the CAD software, 2Design and Make, on Purple Mash. It guides children to create, refine and evaluate models with creativity and purpose.

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