Computing

Intent Statement

At St Peter's Primary school, we believe that using Purple Mash for computing empowers students to become confident and capable digital citizens, equipping them with the knowledge and skills necessary for their future in a technology-driven world. Purple Mash provides students with a comprehensive and engaging platform to develop their computational thinking skills, coding abilities, and digital creativity. Purple Mash offers a range of interactive tools, resources, and activities that enable students to explore key computing concepts, solve problems through coding, and express their ideas through digital media. Through the use of Purple Mash, students will acquire a solid foundation in computing, develop critical thinking skills, foster creativity, and gain awareness of responsible online behaviour.

Key Features

1. Coding and Programming: Purple Mash provides coding tools and resources that enable students to learn and practice coding skills using visual programming languages. Students can create algorithms, write code, and develop programs, fostering computational thinking and problem-solving abilities.
2. Computing Concepts: Purple Mash introduces students to fundamental computing concepts such as algorithms, variables, loops, and conditionals. Students gain an understanding of how computers work and develop the skills to analyse problems and design solutions.
3. Digital Creativity: Purple Mash offers creative tools that allow students to express their ideas through digital art, multimedia projects, animations, and more. Students can unleash their creativity, develop their design skills, and showcase their understanding of computing concepts in visually appealing ways.
4. Online Safety and Digital Citizenship: Purple Mash emphasises the importance of online safety and responsible internet use. Students learn about protecting personal information, identifying online risks, and practising good digital citizenship. They develop awareness of the potential dangers and responsibilities associated with online activities.
5. Collaboration and Communication: Purple Mash facilitates collaboration and communication among students. They can work on computing projects together, share their work, and provide feedback to their peers. Collaborative activities promote teamwork, effective communication, and the exchange of ideas.
6. Problem-Solving and Critical Thinking: Purple Mash offers challenging activities and coding challenges that require students to think critically, analyse problems, and devise solutions. They develop problem-solving strategies, logical reasoning, and the ability to approach complex tasks with creativity and perseverance.

SPPS COMPUTING CURRICULUM

Subject Curriculum Overview

	Autumn			Spring			Summer		
EYFS	Mouse and Trackpad	Keyboard Skills		Drawing skills	Robots		Sounds	Photography	
Year 1	Unit 1.1 Online Safety & Exploring Purple Mash Weeks – 4 Programs – Various	Unit 1.2 Grouping & Sorting Weeks – 2 Programs – 2DIY	Unit 1.3 Pictograms Weeks – 3 Programs – 2Count	Unit 1.4 Lego Builders Weeks – 3 Programs – 2DIY	Unit 1.5 Maze Explorers Weeks – 3 Programs – 2Go	Unit 1.6 Animated Story Books Weeks – 5 Programs – 2Create A Story	Unit 1.7 Coding Weeks – 6 Programs – 2Code	Unit 1.8 Spreadsheets Weeks – 3 Programs – 2Calculate	Unit 1.9 Technology outside school Weeks – 2 Programs – Various

SPPS COMPUTING CURRICULUM

Year 2	Unit 2.1 Coding Weeks – 5 Programs – 2Code	Unit 2.2 Online Safety Weeks – 3 Programs – Various	Unit 2.3 Spreadsheets Weeks – 4 Programs – 2Calculate	Unit 2.4 Questioning Weeks – 5 Programs – 2Question, 2Investigate	Unit 2.5 Effective Searching Weeks – 3 Programs – Browser	Unit 2.6 Creating Pictures Weeks – 5 Programs – 2PaintAPicture	Unit 2.7 Making Music Weeks – 3 Programs – 2Sequence	Unit 2.8 Presenting Ideas Weeks – 4 Programs – Various
Year 3	Unit 3.1 Coding Weeks – 6 Programs – 2Code	Unit 3.2 Online safety Weeks – 3 Programs – Various	Unit 3.3 Spreadsheets Weeks – 3 Programs – 2Calculate	Unit 3.4 Touch Typing Weeks – 4 Programs – 2Type	Unit 3.5 Email (including email safety) Weeks – 6 Programs – 2Email, 2Connect, 2DIY	Unit 3.6 Branching Databases Weeks – 4 Programs – 2Question	Unit 3.7 Simulations Weeks – 3 Programs – 2Simulate, 2Publish	Unit 3.8 Graphing and presenting Weeks – 3 Programs – 2Graph

SPPS COMPUTING CURRICULUM

Year 4	Unit 4.1 Coding Weeks – 6 Main Programs – 2Code	Unit 4.2 Online safety Weeks – 4 Programs – Various	Unit 4.3 Spreadsheets Weeks – 6 Programs – 2Calculate	Unit 4.4 Writing for different audiences Weeks – 5 Programs – 2Email, 2Connect, 2DIY	Unit 4.5 Logo Weeks – 4 Programs – Logo	Unit 4.6 Animation Weeks – 3 Programs – 2Animate	Unit 4.7 Effective Search Weeks – 3 Programs – Browser	Unit 4.8 Hardware Investigators Weeks – 2
Year 5	Unit 5.1 Coding Weeks – 6 Main Programs – 2Code	Unit 5.2 Online safety Weeks – 3 Programs - Various	Unit 5.3 Spreadsheets Weeks – 6 Programs – 2Calculate	Unit 5.4 Databases Weeks – 4 Programs – 2Question, 2Investigate	Unit 5.5 Game Creator Weeks – 5 Programs – 2DIY 3D	Unit 5.6 3D Modelling Weeks – 4 Programs – 2Design and Make	Unit 5.7 Concept Maps Weeks – 3/4 Programs – 2Connect	Unit 5.8 Word processing (with Microsoft Word or Google Docs) Weeks – 6/7 Main program – MS Word
Year 6	Unit 6.1 Coding Weeks – 6 Main Programs – 2Code	Unit 6.2 Online safety Weeks – 2 Programs - Various	Unit 6.3 Spreadsheets Weeks – 5 Programs – 2Calculate	Unit 6.4 Blogging Weeks – 4 Programs – 2Blog	Unit 6.5 Text Adventures Weeks – 5 Programs – various	Unit 6.6 Networks Weeks – 3 Programs – various	Unit 6.7 Quizzing Weeks – 6 Programs – 2Quiz	Unit 6.8 Understanding Binary Main program – various

Knowledge and Skills Progression

Subject Progression			
	Computer Science	**Information Technology**	**Digital Literacy**
EYFS	In EYFS, children will be taught to display some form of mouse control, typing skills, keyboard shortcut awareness and an understanding of file management. They will have experienced using digital technology in and out of the classroom as part of the EYFS framework and they will be able to briefly explain how to stay safe online.		
Year 1	• Sort items on the computer using the 'Grouping' activities in Purple Mash. • To follow and create simple instructions on the computer. • To consider how the order of instructions affects the result. • Understand how to create and debug a set of instructions (algorithm). • Understand that computer programs work by following instructions called code.	• Understand that data can be represented in picture format. • To use a pictogram to record the results of an experiment. • Use the copy and paste feature • To be able to navigate around a spreadsheet and enter data.	• To log in safely and understand why that is important. • To understand the importance of logging out when they have finished. • To find and understand examples of where technology is used in the local community.
Year 2	• Create a computer program using an algorithm. • To know what debugging means	• To use copy, cut and paste within spreadsheets. • To add within a spreadsheet. • To use pictograms to provide information to answer simple questions. • To create pictures using 2Paint to recreate impressionist art. • Create music using 2Sequence to combine sounds, and record their own tune. • To present ideas in different ways such as, quiz or fact file.	• Understand how we talk to others when they are not there in front of us. • Open and send simple online communications in the form of email. • Understand that information put online leaves a digital footprint or trail. • To understand what it is to search the internet.
Year 3	• To review previous coding knowledge. • To use coding knowledge to create a range of programs.	• To know what makes a safe password, how to keep passwords safe and the consequences of giving your passwords away.	• To use spreadsheets and know how to input data using more than or less than tool. • To introduce typing terminology.

	• To understand how emails work with regards to creating and responding.	• To understand how the Internet can be used to help us to communicate effectively. • To think about why these sites might exist and how to check that the information is accurate. • To complete/ create a branching database using 2Question. • To know what makes a safe password, how to keep passwords safe and the consequences of giving your passwords away. • To create a pie chart or bar graph by adding data to a spreadsheet. • To learn to touch type. • To create a page in a presentation and make changes to it by adding pictures, animations and timings.	

Year 4	• To design,code, test and debug. • To create a playable game with code. • • To explore the capabilities of a spreadsheet • To use 2 Logo to create various logos. • To understand the different parts of a desktop computer.	• **To use data which can be input into a spreadsheet and turned into a graph.** • To understand how to change font and size of text and how it can make an impact on the text. • To make a news report. • To create an animated film and understand what make a good animated film. • Understand how a search engine is used to find out answers to questions. • understanding that pulse, rhythm, tempo, pitch and texture make up music.	• To understand how to protect yourself online. • To understand what copying other people's work means. • To understand what is a good amount of screen time.
Year 5	• Create a playable game. • Understand the different variables and how they are used differently. • To design, plan and create a game. • To upload a program to an external device.	• To use formulae within a spreadsheet. • To use a spreadsheet to model real life problems. • Be able to search for information within a database and to then make one.	• To gain a great understanding of the impact of sharing information and content. • To know how to maintain a secure password.

	● To create a program in which an external device can be accessed.	● To create a model using 2Design to explore the possibilities of 3D printing. ● Understand the uses of a concept map and to then create one. ● To have a good understanding of Word (Google Doc) to edit images and move them around. ● To add features to a Word document to enhance its possibilities.	
Year 6	● Design and make a playable game which has a timer and score. ● To be able to test and debug ● Understand how 2Code can be used. ● Create a text adventure story. ● To find out what LAN and WAN are and how we access the internet at school. ● Examine and representing types of digital data in digital systems.	● To be able to use a spreadsheet to investigate. ● To use a spreadsheet to create a formula and to plan. ● To understand the purpose of writing a blog as well as planning a writing one. ● To create a picture based and question-based quiz.	● To understand how mobile devices have risks and benefits. ● To understand what it looks like to be on a secure site ● To review what a digital footprint is.