Ottery St Mary Primary School

Computing Curriculum Overview 2019-2020

Pupils at Ottery St Mary Primary School will:	
• Use technology creatively, • Be curious about how technology can be applied in the wider world to help solve problems, • Be confident digital citizens and know how to stay safe online, • Understand the principles of coding and debugging and use these to create computer programs, • Understand how information technology can support them in their everyday lives and wider curriculum, • Reflect on their learning within computing.	
Computing Curriculum	
Intent	Through the teaching of computing, our pupils will learn how to use technology creatively and to solve problems. They will have a robust understanding of how to stay safe in a digital environment.
Implementation	Children have access to purplemash at home and at school. Work from the purplemash scheme of work, which is in line with the national curriculum for computing, is delivered weekly. Additionally, pupils use technology at school across the curriculum. The digital citizenship PSHE curriculum is delivered half termly and is supplemented by the annual celebration of Safer Internet Week.

Computing						
	Y1	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**
Intent	Pupils will be able to use technology to create simple programs. They will begin to be confident in using technology creatively.	Pupils will be able to create simple programmes using technology and increase in confidence in using technology creatively.	Pupils will use technology to explore their own creative ideas. They will begin to think about how technology can be used to share ideas online.		Pupils will continue to use technology to develop their creative ideas. They will apply logic to solving problems in their coding and apply the principles of reflectED in their computing work.	
Implementation	**Weekly access to Purplemash activities:** The wrong sandwich, Colouring in a bird, Bubbles in 2Code, 2Go challenges	**Weekly access to Purplemash activities:** Debug challenges - Chimp	**Weekly access to Purplemash activities:** Debug challenges - 2code 2email	**Weekly access to Purplemash activities:** 2code. Additional coding opportunities through scratch.	**Weekly access to Purplemash activities:** 2code, 2blog, 2email. Additional coding opportunities through scratch.	**Weekly access to Purplemash activities:** 2code. Additional coding opportunities through scratch.
Key knowledge	Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. Create and debug simple programs. Use logical reasoning to predict the behaviour of simple programs.		Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. Use sequence, selection and repetition in programs; work with variables and various forms of input and output. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. Understand computer networks, including the internet; how they can provide multiple services, such as the World Wide Web, and the opportunities they offer for communication and collaboration.			
Key skills	To read code one line at a time.	Create a simple algorithm Identify and correct some errors in a program.	Create a simple algorithm. Identify and fix some errors. Experiment with timers, repetition and 'if then' statements. Think in logical steps to create a program. 'Read' code and predict the outcomes. Open, respond to and send attachments using 2Email. 2Email.	Using selection and repetition in code. Timers are integrated into their designs. 'If then'; statements are used in combination with other coding structures. Variables are used to store information and change value. User inputs and outputs are made use of. Code is traced through line by line to identify errors.	Using selection and repetition, timers and 'if then' statements with increasing ease. Variables are named used to store information and change value.Code is increasingly organised in a logical way to ensure ease of debugging. User inputs and outputs are made use of. Code is traced through line by line to identify errors.	Using selection and repetition, timers and 'if then' statements with increasing ease. Variables are named used to store information and change value.Code is increasingly organised in a logical way to ensure ease of debugging. User inputs and outputs are made use of. Code is traced through line by line to identify errors.

Unit Coverage						
	Y1	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**
Implementation	45 minutes computer-based learning using chromebooks and Purple Mash software.					
Autumn 1	Unit 1.1 Online Safety (4 wks) Unit 1.2 Grouping & Sorting (2 wk	Unit 2.1 Coding (5 wks)	3.1 Coding (6 wks)	Unit 4.1 Coding (6 wks)	Unit 5.1 Coding (6 wks)	Unit 6.1 Coding (6 wks)
Autumn 2	Unit 1.2 Grouping & Sorting (2 wk Unit 1.3 Pictograms (3 wks)	Unit 2.2 Online Safety (2 wks) Unit 2.3 Spreadsheets (4 wks)	3.2 Online Safety (3 wks) 3.3 Spreadsheets (3 wks)	Unit 4.2 Online Safety (4 wks)	Unit 5.2 Online Safety (3 wks) Unit 5.3 Spreadsheets (3 wks)	Unit 6.2 Online Safety (3 wks) Unit 6.3 Spreadsheets (3 wks)
Spring 1	Unit 1.4 Lego Builders (3 wks) Unit 1.5 Maze Explorers (3 wks)	Unit 2.4 Questioning (5wks)	3.4 Touch Typing (4 wks)	Unit 4.3 Spreadsheets (5 wks)	Unit 5.3 Spreadsheets Con't (3 wks) Unit 5.4 Databases (4 wks)	Unit 6.3 Spreadsheets Con't (2 wks) Unit 6.4 Blogging (4 wks)
Spring 2	Unit 1.6 Animated Story Books (5 wks)	Unit 2.5 Effective Searching (3 wks) Unit 2.6 Creating Pictures (2 wks)	3.5 Email (6 wks)	Unit 4.4 Writing for Different Audiences (5 wks)	Unit 5.5 Game Creator (5 wks)	Unit 6.5 Text Adventures (5 wks)
Summer 1	Unit 1.7 Coding (6 wks)	Unit 2.6 Creating Pictures Cont'd (3 wks) Unit 2.7 Making Music (3 wks)	3.6 Branching Databases (4 wks)	Unit 4.5 Logo (4 wks) Unit 4.6 Animation (2 wks)	Unit 5.6 3D Modelling (4 wks)	Unit 6.6 Networks (3 wks) Unit 6.7 Quizzing (3 wks)
Summer 2	Unit 1.8 Spreadsheets (3 wks) Unit 1.9 Technology Outside School (2 wks)	Unit 2.8 Presenting Ideas (4 wks)	3.7 Simulations (3 wks) 3.8 Graphing (3 wks)	Unit 4.6 Animation Con't (1 wk) Unit 4.7 Effective Searching (3 wks) Unity 4.8 Hardware Investigators (2 wks)	Unit 5.7 Concept Maps (4 wks)	Unit 6.7 Quizzing Con't (3 wks) Unit 6.8 Binary Databases (4 wks)

Digital citizenship						
	Y1	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**
Implementation	1 half an hour discussion based lesson each half term, in addition to the annual celebration of safer internet week.					
Autumn 1	Media balance is important How do we find a happy balance between our online and offline activities?	We the digital citizens How can we be good digital citizens?	Your rings of responsibility How do digital citizens take responsibility for themselves, their communities and their world?	My media choices What makes a healthy media choice?	Finding my media balance What does media balance mean for me?	Finding balance in a digital world How we balance digital media use in our lives?
Autumn 2	Pause for people How do you say goodbye to technology when you don't want to	Device free moments Why is it important that we have device free moments in our lives?	Password powerup How can a strong password help protect your privacy?	Private and personal information What information about you is OK to share online?	You won't believe this! What is clickbait and how can you avoid it?	Don't feed the phish How to protect yourself from phishing
Spring 1	Safety in my online neighbourhood How do you go to places safely online?	That's private! What kinds of information should I keep to myself when I use the internet?	This is me How does what you post online affect your identity?	Our online tracks How does our online activity affect the digital footprints of ourselves and others?	Beyond gender stereotypes How do gender stereotypes shape our experience online?	Who are you online? What are the benefits and drawback of presenting yourself in a different way online?
Spring 2	Pause and think online How can we be safe, responsible and respectful online?	Digital trails What information is OK to have in your digital footprint?	Our digital citizenship pledge What makes a strong online community?	Keeping games fun and friendly How can I be positive and have fun while playing online games and help others do the same?	Digital friendships How do you keep online friendships safe?	Chatting safely online How do you chat safely with people you meet online?
Summer 1	How technology makes you feel Why is it important to listen to your feelings when using technology?	Who is in your online community? How are we all part of an online community?	The power of words What should you do when someone uses mean or hurtful language on the internet?	Be a super digital citizen How can we be 'upstanders' when we see cyberbullying?	Is it cyberbullying? What is cyberbullying and what can you do to stop it?	Digital drama unplugged How can you de-escalate digital drama so it doesn't go too far
Summer 2	Internet traffic light How do you stay safe when visiting a website or app?	Putting a stop to online meanness What should you do if someone is mean to you online?	Is seeing believing? Why do people alter digital photos and videos?	A creators rights and responsibilities What rights and responsibilities do you have as a creator?	Reading news online What are the important parts of an online news article?	Finding credible news How do we find credible information online?