



Computing

Chaddlewood Primary School's Computing Progression Grid

	Year 3	Year 3	Year 3	Year 4	Year 4	Year 4
Coverage	UK Coasts	Stone Age, Bronze Age and Iron Age	Roman Britain and Rivers	Invaders and Settlers	Antarctica	The Amazon
Substantive themes	<ul style="list-style-type: none"> Learn to protect their online reputation Develop typing skills, using a typing program Create a non fiction information piece of writing about Coasts Use search engines to find info about coastal features/ animals 	<ul style="list-style-type: none"> Work out whether information online is true and reliable Write and debug code in Scratch Jr Explore Scratch for the first time. 	<ul style="list-style-type: none"> Identify how screen activities and habits can affect people in different ways. Learn how screen use can affect the way we feel, and that it's different for each person. Write a program that uses a repeat command Explain what the repeats are in my program Use Google MyMaps to learn about their local area, topic and accomplish given goals, such as measure distances. 	<ul style="list-style-type: none"> Learn to make strong passwords to secure information online Write a program with a sequence of instructions. Create and collaborate on a presentation about Vikings using Google Slides 	<ul style="list-style-type: none"> Learn ways to be kind online Name devices on a computer network. Explain the purpose of certain devices on a computer network Use logical reasoning to debug a program Explain how a program was debugged Create and collaborate on a topic based report using Google Docs 	<ul style="list-style-type: none"> How different activities/habits can affect the way people feel - and sometimes leave us with conflicting feelings. How to start forming healthy digital habits. Describe what a variable is Describe how a score variable is used Decompose a problem by: <ul style="list-style-type: none"> - designing - writing (including debugging) - and presenting a program Decompose a poem Decompose an animation Create and collaborate on

						Google MyMaps to discover where the Amazon Rainforest is, the countries that surround it, add photos and find some of the capital cities of surrounding countries.
Cross curricular connections	Geography - coastal features	English - The Stone Age Boy	History - Romans in Britain-My Maps Science - The structure of a flowering plant-Shapes and Crystal Flowers	History - Viking raids	Science - The Water Cycle Geography - Penguins	Geography - The Amazon
Overlap of learning: which other areas in other year groups or topics does this relate to?	<ul style="list-style-type: none"> • Logging into chromebooks • Google Docs from KS1 • Typing skills • Internet safety activities 	<ul style="list-style-type: none"> • Understanding of algorithms • Writing code • Debugging • Logging into chromebooks • Google Docs • Typing skills • Logical reasoning form KS1 • Internet safety activities 	<ul style="list-style-type: none"> • Understanding of algorithms • Debugging • Logging into chromebooks • Typing skills • Internet safety activities 	<ul style="list-style-type: none"> • Understanding of algorithms • Writing code • Debugging • Logging into chromebooks • Typing skills • Search technologies use from Y3 • Internet safety activities 	<ul style="list-style-type: none"> • Understanding of algorithms • Writing code • Debugging • Logging into chromebooks • Google Docs from KS1 and Y3 • Typing skills • Search technologies use from Y3 • Internet safety activities 	<ul style="list-style-type: none"> • Understanding of algorithms • Writing code • Debugging • Logging into chromebooks • Google MyMaps from Y3 • Typing skills • Search technologies use from Y3 • Internet safety activities
Programming design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts		<ul style="list-style-type: none"> • Children create a simple animation program of a knock knock joke. They use a storyboard to create their design, write the code in ScratchJr, debug and evaluate. • Children tinker with Scratch to find out 	<ul style="list-style-type: none"> • Children design algorithms to draw patterns made of simple shapes • Children write a Scratch program to draw shapes. In doing so, they learn about repetition 	<ul style="list-style-type: none"> • Children program an animation of a Viking raid in Scratch.They learn that programming is the process of implementing algorithms as code. • Children learn the importance of 	<ul style="list-style-type: none"> • Children are challenged to detect and correct the error in a number of water cycle programs (debugging). 	<ul style="list-style-type: none"> • Children create an animation of a poem using Scratch. The focus of this lesson is on pupils learning about decomposition and how it is used to break something down into smaller parts to help solve a problem or

		what it does and how to create programs in it		sequencing commands		undertake a task <ul style="list-style-type: none"> Children learn about variables by keeping score for a game. In doing so pupils learn why variables are needed, how they are created, how they store data, and how this data may be used by a computer program as it runs
Sequence, selection, and repetition use sequence, selection, and repetition in programs; work with variables and various forms of input and output						
Logical Reasoning use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs		<ul style="list-style-type: none"> As above 			<ul style="list-style-type: none"> Children use logical reasoning to do this, comparing what the program should do with what it does do, and systematically homing in on the error (bug) by 'thinking through' the code in the program 	
Computer Networks 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					<ul style="list-style-type: none"> Children go on a hunt around their school to discover, and map the location of, devices connected to their school's network. Children then learn about the role of each device by either conducting web-based research or using the matching activity included. 	

<p>Search technologies use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</p>	<ul style="list-style-type: none"> • Children use Google Chrome to find info about coastal features/ animals. They understand how the results are selected and ranked and evaluate the quality of the given results. 	<ul style="list-style-type: none"> • Children look at whether information online is true and reliable as part to their Internet Safety sessions 	<ul style="list-style-type: none"> • Anytime search technologies are used - there must be an overlap of learning to recap this objective and what children were taught in year 3. 			
<p>Technology use select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information</p> <p>*Chaddlewood also puts particular importance on giving children the opportunity to collaborate with their work.</p>	<ul style="list-style-type: none"> • Children master touch typing using an educational program. The program will assist them with learning and improving their typing speed. • Children write a non fiction information piece of writing, insert photos, <u>hyperlinking and adding tables and charts.</u> 		<ul style="list-style-type: none"> • Children use Google MyMaps to add markers for cities on their map of important places • Children add photos, change colour of marker and use tools to calculate distances between given points 	<ul style="list-style-type: none"> • Children collaborate in groups of 3, whilst on different devices, to produce a Google Slide presentation about various aspects of Viking life. 	<ul style="list-style-type: none"> • Children produce reports (using all of the features they have learnt up until that point) about Penguins and collaborate with a partner using the comment and suggestion functions. 	<ul style="list-style-type: none"> • Children collaborar on MyMaps to discover the Amazon Rainforest, and surrounding countries.
<p>Internet Safety use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p>	<ul style="list-style-type: none"> • Children invent an imaginary character and come up with made-up 'personal' information to start thinking about zones of privacy 	<ul style="list-style-type: none"> • Children look at various emails and texts and try to decide which are for real and which are phishing scams 	<ul style="list-style-type: none"> • Children become more aware of how our screen use can affect the way they feel -both positively and negatively. • Children will have the opportunity to reflect on how various activities and our habits play a role in this. 	<ul style="list-style-type: none"> • Children learn how to create a strong password and make sure that it stays private. 	<ul style="list-style-type: none"> • Children identify what a bystander should do if they witness bullying towards someone they know 	<ul style="list-style-type: none"> • Children will learn more about the mental and physical impact certain screen habits can have on us all. • They will also explore the different tools we can use to help create our own healthy digital habits.

Be Internet Legends (BIL) and Digital Wellbeing (DW)	BIL Lesson 1: Think Before You Share - activities: Baseline, 1, 4 and 5	BIL Lesson 1: Check it's For Real - activities: 1 and 3	DW Ages 7-9: Lesson 1:	BIL Lesson 2: Protect Your Stuff - activities: Baseline - 1, 2, 3 and 4	BIL Lesson 2: Respect Each Other - activities: 1, 4 and 5	DW Ages 7-9: Lesson 2
Internet Safety Vocabulary	Public, private, digital footprint, personal information, settings	genuine, phishing, honest, fraud, suspicious, scam trustworthy	Screen, gaming, seeking help	privacy, security, hacker, scammer,	Bystander, upstander, bullying, block	healthy and unhealthy screen habits
Other Vocabulary	World Wide Web, network, search engine, internet, ranked, selected, evaluate, share, hyperlink, typing, table and charts	evaluation, debug, animation, algorithm, commands, software programs, tinkering, and code	evaluation, debug, algorithm, repetition, repeat command, nested loops, debugging, logical reasoning, MyMaps and markers	algorithm, code, debugging, input, program, sequencing, command, tinkering, design, decompose, collaboration, backgrounds, transitions and animations	algorithm, code, debugging, input, program, sequencing, command, tinkering, design, decompose, logical reasoning, computer network, computer systems, devices, share and collaborate	algorithm, code, debugging, input, program, sequencing, command, tinkering, design, decompose, creating, variables, MyMaps, collaboration and markers