



		Autumn 2022		Spring 2023		Summer 2023	
Reception	Imaginative Learning Project	Let's Explore Children learn about technology used in the home and at school.	Marvellous Machines Children input instructions into technological toys.	Long Ago Children explore how to use different computing hardware.	Ready, Steady, Grow Children use age-appropriate software to create images and record sounds.	Animal Safari Children navigate to find digital content. They describe what they would do if they saw something sad online.	On the Beach Children learn that digital work can be shared and saved.
		Technology Around Us (networks)* Children will become more familiar with the different components of a computer by developing their keyboard and mouse skills, and also start to consider how to use technology responsibly.	Pictograms (data)** The children use a pictogram to record data from an investigation. 2Graph is also introduced to compare amounts in a bar chart.	Digital Citizenships ** Children learn to respond respectfully in an email (see Y2 lesson 2). They also use the book 'Troll Stinks' to learn about considering peoples feelings online.	Animations (programming) * This unit introduces learners to on-screen programming through ScratchJr. They investigate sprites and backgrounds. They will use programming blocks to use, modify, and create programs.	Creating Pictures ** Learners explore the world of digital art and its exciting range of creative tools. Making Music ** Learners explore, edit and combine sounds using 2Sequence	Quizzes (programming) * Learners begin to understand that sequences of commands have an outcome and make predictions based on their learning. They use and modify designs to create their own quiz questions in ScratchJr.
Year 1 & Year 2		Sequencing Sounds (programming)* Children explore the concept of sequencing in programming through Scratch. It begins with an introduction to the programming environment, which will be new to most learners. They will be introduced to a selection of motion, sound, and event blocks which they will use to create their own programs, featuring sequences. The final project is to make a representation of a piano.	Stop Frame Animation (digital audience)* Children use a range of techniques to create a stop-frame animation using tablets. Next, they will apply those skills to create a story-based animation. This unit will conclude with learners adding music and text to their animation.	Be Internet Secure, Kind & Brave (digital citizenship)*** Passwords and behaviour – <i>protecting yourself and others</i> Making good decisions online – <i>when to act and what to do.</i> Be Brave online – <i>when in doubt, discuss</i>	Connecting Computers (networks)* Children develop their understanding of digital devices, with an initial focus on inputs, processes, and outputs. introducing them to computer networks that include network infrastructure devices like routers and switches.	Branching Databases (data)** Children learn explore and create their own branching databases to classify groups of objects. e.g., to find out the name of an insect, a fruit or vegetable	Repetition in games (programming) * Learners look at the difference between count-controlled and infinite loops, and use their knowledge to modify existing animations and games using repetition. Their final project is to design and create a game which uses repetition.
		Year 3 & Year 4	Year 3 & Year 4	Year 3 & Year 4	Year 3 & Year 4	Year 3 & Year 4	Year 3 & Year 4
Year 5 & Year 6		Be Internet Secure, Kind and Brave (digital citizenship) Sharing, settings and passwords – <i>How to protect yourself and stay safe online</i> Relationships and Being Kind – <i>How to communicate with, and support others</i> Refusing and reporting – <i>Deciding how and when to do something</i>	Selection in Quizzes (programming)* Children learn how conditions can be used in programs and then learning how the If... Then... Else structure can be used to select different outcomes They apply this by constructing programs using the Scratch programming environment.	Systems & Searching (networks)* Learners will consider small-scale systems as well as large-scale systems. They will explain the input, output, and process aspects of a variety of different real-world systems.	Databases ** Children learn to search for information in a database. They create their own database around the 'Frozen Kingdoms' project.	Variables in Games* (programming) learners find out what variables are and relate them to real-world examples of values that can be set and changed. Then they use variables to create a simulation of a scoreboard in a Scratch game.	Video Production (digital audience)* Children learn how to create short videos in groups. As they progress through this unit, they will be exposed to topic-based language and develop the skills of capturing, editing, and manipulating video.
		Year 5 & Year 6	Year 5 & Year 6	Year 5 & Year 6	Year 5 & Year 6	Year 5 & Year 6	Year 5 & Year 6

*linked to: <https://teachcomputing.org/curriculum/key-stage-2>

**linked to: www.purplemash.co.uk/applegarth

***linked to: https://beinternetawesome.withgoogle.com/en_uk



Long Term Plan: Computing

Cycle B: 2023 - 2024

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Year 1 & Year 2	Technology Around Us (networks) * Children become more familiar with the different components of a computer by developing their keyboard and mouse skills, and also start to consider how to use technology responsibly.	Moving a Robot (programming) * Children will identify what each floor robot command does and use that knowledge to start predicting the outcome of programs. They are to the early stages of program design through the introduction of algorithms.	E-Safety ** Children use Digiduck's BIG DECISION to learn about sharing online, as well as 'Chicken Clicking' to know about stranger dangers. #Goldilocks also promotes discussion about what to share online.	Animated Stories & Presenting Ideas (digital audience)** Pupils learn to add text to a page before creating backgrounds, voice recordings and animations. They present their work to an audience.	Spreadsheets (data)** Children navigate a spreadsheet and enter data, including images. They use a spreadsheet to add amounts and add and edit data in a table layout.	Robot Algorithms (programming)* This unit develops learners' understanding of instructions in sequences and the use of logical reasoning to predict outcomes.
Year 3 & Year 4	Be Internet Sharp, Alert and Brave (e-safety)*** Online reputation – <i>what to share and what to say</i> Opinions and differences – <i>everybody feels things differently</i> Speak up and report it – <i>how to make things stop.</i> Touch Typing (Purple Mash Y3)* Children learn the basics of quick and efficient typing.	Spreadsheets (Data)** Children learn to create tables of data, charts and graphs, and describing cell locations in a spreadsheet. The Y4 unit involves learning to add formula to a cell to automatically make a calculation in that cell, as well as creating line graphs for a science project.	Events and Actions (programming)* This unit explores the links between events and actions, whilst consolidating prior learning relating to sequencing. Learners will be introduced to programming extensions, through the use of pen blocks.	Y3: Email Y4: Writing for Different Audiences (digital audience)** Children learn to use emails safely, send attachments and explore simulated email scenarios. They move onto publishing tools to produce news reports and community campaigns.	Repetition in Shapes (programming)* Children look at repetition and loops within programming. Pupils will create programs by planning, modifying, and testing commands to create shapes and patterns. They will use Logo.	The Internet (Y4) (networks)* Pupils learn that the World Wide Web is part of the internet. They explore the WWW for themselves in order to learn about who owns content and what they can access, add, and create. They evaluate online content to decide how reliable it is.
Year 5 & Year 6	Be Internet Sharp, Alert and Brave (e-safety)*** Positive digital footprints – <i>how to build and maintain yours</i> Spotting fake information online – <i>how to decide if something is unreliable or untrue</i> Handling and reporting mean behaviour – <i>What to do if your see something upsetting.</i>	Selection in Physical Computing (programming)* Children explore the concept of selection in through the use of the Crumble programming environment. They learn how to connect and program components (including output devices- LEDs and motors).	Writing: Powerpoint and blogging (digital audience)** Children use MS Word and MS Powerpoint to use templates for presenting information (see PM Y5). They then plan and create a blog, learning to post and comment respectfully.	Spreadsheets** Children use formulae within a spreadsheet to convert measurements of length and distance, area and perimeter of shapes.	Communication & Collaboration (networks)* Children explore how data is transferred over the internet. They also look at how the internet facilitates online communication and collaboration.	Sensing Movement (programming)* The unit begins with a simple program for pupils to build in and test within the new programming environment, before transferring it to their micro:bit.

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