Grafton Primary School Curriculum Progression 2025-26

Computing

Year group	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
The ARK	**DATA AND INFORMATION** <u>Grouping data</u> ● To label objects ● To identify that objects can be counted ● To describe objects in different ways ● To count objects with the same properties ● To compare groups of objects ● To answer questions about groups of objects	**(Year 1 adapted)** **COMPUTING SYSTEMS AND NETWORKS** <u>Technology around us</u> ● To identify technology ● To identify a computer and its main parts ● To use a mouse in different ways ● To use a keyboard to type ● To use the keyboard to edit text ● To create rules for using technology responsibly	**(Year 1 adapted)** **CREATING MEDIA** <u>Digital painting</u> ● To describe what different freehand tools do ● To use the shape tool and the line tools ● To make careful choices when painting a digital picture ● To explain why I chose the tools I used ● To use a computer on my own to paint a picture ● To compare painting a picture on a computer and on paper	**PROGRAMMING** <u>Moving a robot</u> ● To explain what a given command will do ● To act out a given word ● To combine forwards and backwards commands to make a sequence ● To combine four direction commands to make sequences ● To plan a simple program ● To find more than one solution to a problem	**CREATING MEDIA** <u>Digital writing</u> ● To use a computer to write ● To add and remove text on a computer ● To identify that the look of text can be changed on a computer ● To make careful choices when changing text ● To explain why I used the tools that I chose ● To compare writing on a computer with writing on paper	**PROGRAMMING** <u>Introduction to animation</u> ● To choose a command for a given purpose ● To show that a series of commands can be joined together ● To identify the effect of changing a value ● To explain that each sprite has its own instructions ● To design the parts of a project ● To use my algorithm to create a program
EYFS **online safety taught within each unit**	<u>Computing Systems & Networks</u> Explore technology in school, the home and wider world Use a shortcut to open a website or select an app Use buttons on a webpage to explore a website	<u>Programming</u> ● Use a variety of electronic toys in play situations (dance mats, remote control toys) using basic directional language. ● Respond to simple cause and effect devices (e.g. push a button to hear a sound) ● Explore toys that simulate control devices e.g. traffic	<u>Data</u> ● Begin to develop simple classification skills by carrying out simple sorting activities away from the computer. ● Continue to develop simple classification skills by carrying out simple sorting activities using ICT ● Produce simple paper-based pictograms as part of a group	<u>Creating media</u> ● Develop mouse control on different devices: ● Use mouse to draw a simple picture ● Use mouse to select a simple tool ● Use mouse to open software ● Use a paint program to make marks, using simple tools, to communicate their ideas	<u>Digital Literacy & Research</u> ● Use a shortcut to open a website or select an appropriate app ● Use buttons on a webpage to explore the website ● Know who to go to if they need help when on internet	<u>Multimeda</u> ● Listen to stories, music on digital devices ● Use camera or mobile device to collect photographs ● Use sound recorder or mobile device to record sounds

	Know who to go to if they need help with a website.	lights, scanner, microwave, cash tills ● Explore a simple adventure program or simulation / role play software ● Explore the commands needed to control a range of electronic toys ● Be aware of everyday devices that sense data e.g. bar codes, metal detectors, sound recorders, light sensors, automatic doors, thermometers, library card ● Be aware that people and computers follow instructions ● Program a simple floor robot (Bee-Bot / Roamer) to carry out a short sequence of steps	● Produce simple pictograms on the computer as part of a group	● Use different forms of electronic communication in free play ● Begin to use a keyboard to produce text on screen, and develop familiarity with letters, numbers, backspace, arrow keys and space bar ● Use keyboard to type their name ● Match upper case and lower case letters		
	Autumn 1	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
Year 1 **online safety taught within each unit**	**DATA AND INFORMATION** <u>Grouping data</u> ● To label objects ● To identify that objects can be counted ● To describe objects in different ways ● To count objects with the same properties ● To compare groups of objects ● To answer questions about groups of objects	**CREATING MEDIA** <u>Digital writing</u> ● To use a computer to write ● To add and remove text on a computer ● To identify that the look of text can be changed on a computer ● To make careful choices when changing text ● To explain why I used the tools that I chose	**COMPUTING SYSTEMS AND NETWORKS** <u>Technology around us</u> ● To identify technology ● To identify a computer and its main parts ● To use a mouse in different ways ● To use a keyboard to type ● To use the keyboard to edit text ● To create rules for using technology responsibly	**CREATING MEDIA** <u>Digital painting</u> ● To describe what different freehand tools do ● To use the shape tool and the line tools ● To make careful choices when painting a digital picture ● To explain why I chose the tools I used ● To use a computer on my own to paint a picture	**PROGRAMMING** <u>Moving a robot</u> ● To explain what a given command will do ● To act out a given word ● To combine forwards and backwards commands to make a sequence ● To combine four direction commands to make sequences ● To plan a simple program ● To find more than one solution to a problem	**PROGRAMMING** <u>Introduction to animation</u> ● To choose a command for a given purpose ● To show that a series of commands can be joined together ● To identify the effect of changing a value ● To explain that each sprite has its own instructions ● To design the parts of a project

		● To compare writing on a computer with writing on paper		● To compare painting a picture on a computer and on paper ●		● To use my algorithm to create a program
	Autumn 1	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
Year 2 **online safety taught within each unit**	**DATA AND INFORMATION** <u>Pictograms</u> ● To recognise that we can count and compare objects using tally charts ● To recognise that objects can be represented as pictures ● To create a pictogram ● To select objects by attribute and make comparisons ● To recognise that people can be described by attributes ● To explain that we can present information using a computer	**CREATING MEDIA** <u>Making music</u> ● To say how music can make us feel ● To identify that there are patterns in music ● To describe how music can be used in different ways ● To show how music is made from a series of notes ● To create music for a purpose ● To review and refine our computer work	**COMPUTING SYSTEMS AND NETWORKS** <u>Information technology around us</u> ● Information technology around us ● To recognise the uses and features of information technology ● To identify information technology in the home ● To identify information technology beyond school ● To explain how information technology benefits us ● To show how to use information technology safely ● To recognise that choices are made when using information technology	**CREATING MEDIA** <u>Digital photography</u> ● To know what devices can be used to take photographs ● To use a digital device to take a photograph ● To describe what makes a good photograph ● To decide how photographs can be improved ● To use tools to change an image ● To recognise that images can be changed	**PROGRAMMING** <u>Robot algorithms</u> ● To describe a series of instructions as a sequence ● To explain what happens when we change the order of instructions ● To use logical reasoning to predict the outcome of a program (series of commands) ● To explain that programming projects can have code and artwork ● To design an algorithm ● To create and debug a program that I have written	**PROGRAMMING** <u>Introduction to quizzes</u> ● To explain that a sequence of commands has a start ● To explain that a sequence of commands has an outcome ● To create a program using a given design ● To change a given design ● To create a program using my own design ● To decide how my project can be improved
	Autumn 1	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
Year 3 **online safety taught within each unit**	**COMPUTING SYSTEMS AND NETWORKS** <u>Connecting computers</u> ● To explain how digital devices function ● To identify input and output devices	**CREATING MEDIA** <u>Stop-frame animation</u> ● To explain that animation is a sequence of drawings or photographs ● To relate animated movement with a sequence of images ● To plan an animation	**DATA AND INFORMATION** <u>Desktop publishing</u> ● To recognise how text and images convey information ● To recognise that text and layout can be edited ● To choose appropriate page settings	**DATA AND INFORMATION** <u>Branching database</u> ● To create questions with yes/no answers ● To identify the object attributes needed to collect relevant data ● To create a branching database	**PROGRAMMING** <u>Sequence in music</u> ● To explore a new programming environment ● I can identify that each sprite is controlled by the commands I choose ● To explain that a program has a start	**PROGRAMMING** <u>Events and actions</u> ● To explain how a sprite moves in an existing project ● To create a program to move a sprite in four directions

	• To recognise how digital devices can change the way we work • To explain how a computer network can be used to share information • To explore how digital devices can be connected • To recognise the physical components of a network	• To identify the need to work consistently and carefully • To review and improve an animation • To evaluate the impact of adding other media to an animation	• To add content to a desktop publishing publication • To consider how different layouts can suit different purposes • To consider the benefits of desktop publishing	• To identify objects using a branching database • To explain why it is helpful for a database to be well structured • To compare the information shown in a pictogram with a branching database	• To recognise that a sequence of commands can have an order • To change the appearance of my project • To create a project from a task description	• To adapt a program to a new context • To develop my program by adding features • To identify and fix bugs in a program • To design and create a maze-based challenge
	Autumn 1	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
Year 4 **online safety taught within each unit**	**COMPUTING SYSTEMS AND NETWORKS** <u>The internet</u> • To describe how networks physically connect to other networks • To recognise how networked devices make up the internet • To outline how websites can be shared via the World Wide Web • To describe how content can be added and accessed on the World Wide Web • To recognise how the content of the WWW is created by people • To evaluate the consequences of unreliable context	**CREATING MEDIA** <u>Audio editing</u> • To identify that sound can be digitally recorded • To use a digital device to record sound • To explain that a digital recording is stored as a file • To explain that audio can be changed through editing • To show that different types of audio can be combined and played together • To evaluate editing choices made	**PROGRAMMING** <u>Repetition in shapes</u> • To identify that accuracy in programming is important • To create a program in a text-based language • To explain what 'repeat' means • To modify a count-controlled loop to produce a given outcome • To decompose a program into parts • To create a program that uses count-controlled loops to produce a given outcome	**DATA AND INFORMATION** <u>Data logging</u> • To explain that data gathered over time can be used to answer questions • To use a digital device to collect data automatically • To explain that a data logger collects 'data points' from sensors over time • To use data collected over a long duration to find information • To identify the data needed to answer questions • To use collected data to answer questions	**CREATING MEDIA** <u>Photo editing</u> • To explain that digital images can be changed • To change the composition of an image • To describe how images can be changed for different uses • To make good choices when selecting different tools • To recognise that not all images are real • To evaluate how changes can improve an image	**PROGRAMMING** <u>Repetition in games</u> • To develop the use of count-controlled loops in a different programming environment • To explain that in programming there are infinite loops and count controlled loops • To develop a design which includes two or more loops which run at the same time • To modify an infinite loop in a given program • To design a project that includes repetition • To create a project that includes repetition
	Autumn 1	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**

Year 5 **online safety taught within each unit**	**COMPUTER SYSTEMS & NETWORKS** <u>Sharing information</u> ● To explain that computers can be connected together to form systems ● To recognise the role of computer systems in our lives ● To recognise how information is transferred over the internet ● To explain how sharing information online lets people in different places work together ● To contribute to a shared project online ● To evaluate different ways of working together online	**CREATING MEDIA** <u>Vector drawing</u> ● To identify that drawing tools can be used to produce different outcomes ● To create a vector drawing by combining shapes ● To use tools to achieve a desired effect ● To recognise that vector drawings consist of layers ● To group objects to make them easier to work with ● To evaluate my vector drawing	**DATA & INFORMATION** <u>Flat-file databases</u> ● To use a form to record information ● To compare paper and computer-based databases ● To outline how grouping and then sorting data allows us to answer questions ● To explain that tools can be used to select specific data ● To explain that computer programs can be used to compare data visually ● To apply my knowledge of a database to ask and answer real-world questions	**CREATING MEDIA** <u>Video editing</u> ● To recognise video as moving pictures, which can include audio ● To identify digital devices that can record video ● To capture video using a digital device ● To recognise the features of an effective video ● To identify that video can be improved through reshooting and editing ● To consider the impact of the choices made when making and sharing a video	**PROGRAMMING** <u>Selection in physical computing</u> ● To control a simple circuit connected to a computer ● To write a program that includes count-controlled loops ● To explain that a loop can stop when a condition is met, eg number of times ● To conclude that a loop can be used to repeatedly check whether a condition has been met ● To design a physical project that includes selection To create a controllable system that includes selection	**PROGRAMMING** <u>Selection in games</u> ● To explain how selection is used in computer programs ● To relate that a conditional statement connects a condition to an outcome ● To explain how selection directs the flow of a program ● To design a program which uses selection ● To create a program which uses selection ● To evaluate my program
	Autumn 1	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
Year 6 **online safety taught within each unit**	**COMPUTER SYSTEMS & NETWORKS** <u>Communication</u> ● To identify how to use a search engine ● To describe how search engines select results ● To describe how search engines select results ● To explain how search results are ranked ● To recognise why the order of results is important, and to whom	**CREATING MEDIA** <u>3D modelling</u> ● To use a computer to create and manipulate three-dimensional (3D) digital objects ● To compare working digitally with 2D and 3D graphics ● To construct a digital 3D model of a physical object ● To identify that physical objects can be broken	**CREATING MEDIA** <u>Web page creation</u> ● To review an existing website and consider its structure ● To plan the features of a web page ● To consider the ownership and use of images (copyright) ● To recognise the need to preview pages	**DATA & INFORMATION** <u>Spreadsheets</u> ● To identify questions which can be answered using data ● To explain that objects can be described using data ● To explain that formula can be used to produce calculated data ● To apply formulas to data, including duplicating ● To create a spreadsheet to plan an event	**PROGRAMMING** <u>Variables in games</u> ● To define a 'variable' as something that is changeable ● To explain why a variable is used in a program ● To choose how to improve a game by using variables ● To design a project that builds on a given example ● To use my design to create a project ● To evaluate my project	**PROGRAMMING** <u>Sensing Movement</u> ● To create a program to run on a controllable device ● To explain that selection can control the flow of a program ● To update a variable with a user input ● To use an conditional statement to compare a variable to a value

	• To recognise how we communicate using technology • To evaluate different methods of online communication	down into a collection of 3D shapes • To design a digital model by combining 3D objects • To develop and improve a digital 3D model	• To outline the need for a navigation path • To recognise the implications of linking to content owned by other people	• To choose suitable ways to present data		• To design a project that uses inputs and outputs on a controllable device • To develop a program to use inputs and outputs on a controllable device <u>Transition Project</u> • To understand how variables and inputs can be used on the micro:bit to create a sports counter • To create an algorithm for a sport counter, and code, run and evaluate the use of the micro:bit to count activities • To create a countdown timer on the micro:bit using variables • To evaluate the effectiveness of the LED display on the micro:bit when used as a timer • To modify a program using true and false statements and an if…else command • To create an activity completion using a micro:bit counter and a micro:bit timer.