



Friars Primary School and Nursery

Computing - National Curriculum Coverage by Year Group

Year 1	Autumn Term	Spring Term	Summer Term
	Networks and systems Logging in and Typing skills - Identify technology - Identify a computer and its main parts - Use a mouse in different ways - Use a keyboard to type on a computer - Use the keyboard to edit text - Create rules for using technology responsibly Typing Games Practice logging in Resources to teach username and password log ins	Creating Media Digital Painting using Paintz Digital Writing using Microsoft Word - Describe what different freehand tools do - Use the shape tool and the line tools - Make careful choices when painting a digital picture - Explain why I chose the tools I used - Use a computer on my own to paint a picture - Compare painting a picture on a computer and on paper - Use a computer to write - Add and remove text on a computer - Identify that the look of text can be changed on a computer - Make careful choices when changing text - Explain why I used the tools that I chose - Compare typing on a computer to writing on paper Alternate weeks between both Word and Paintz	Programming A using Code and Go Mouse Programming B using Scratch Jr. on the iPads. -Explain what a given command will do -Act out a given word -Combine forwards and backwards commands to make a sequence -Combine four direction commands to make sequences -Plan a simple program -Find more than one solution to a problem -Choose a command for a given purpose -Show that a series of commands can be joined together -Identify the effect of changing a value -Explain that each sprite has its own instructions -Design the parts of a project -Use my algorithm to create a program



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Year 2	Autumn Term Creating Media- Digital Photography using iPads Creating Media- Making music	Spring Term Data and Information- Pictograms Programming A- An introduction to quizzes	Summer Term Programming B- Lego Spike
	- Use a digital device to take a photograph - Make choices when taking a photograph - Describe what makes a good photograph - Decide how photographs can be improved - Use tools to change an image - Recognise that photos can be changed - Say how music can make us feel. - Identify that there are patterns in music - Show how music is made from a series of notes - Show how music is made from a series of notes - Create music for a purpose - Review and refine our computer work	- Recognise that we can count and compare objects using tally charts. - Recognise that objects can be represented as pictures - Create a pictogram - Select objects by attribute and make comparisons - Recognise that people can be described by attributes - Explain that we can present information using a computer - Describe a series of instructions as a sequence - Explain what happens when we change the order of instructions - Use logical reasoning to predict the outcome of a program (series of commands) - Explain that programming projects can have code and artwork - Design an algorithm - Create and debug a program that I have written	- Explain that a sequence of commands has a start - Explain that a sequence of commands has an outcome - Create a program using a given design - Change a given design - Create a program using my own design - Decide how my project can be improved Lego Spike Great Adventures x7 lessons



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	Autumn Creating Media- Desktop Publishing	Spring Programming A- Sequence in music Creating Media- Animation	Summer Programming B- Events and Actions
	-Create a project from a task description - Recognise how text and images convey information - Recognise that text and layout can be edited - Choose appropriate page settings - Add content to a desktop publishing publication - Consider how different layouts can suit different purposes - Consider the benefits of desktop publishing	-Explore a new programming environment - Identify those commands have an outcome - Explain that a program has a start - Recognise that a sequence of commands can have an order - Change the appearance of my project -Explain that animation is a sequence of drawings or photographs - Relate animated movement with a sequence of images - Plan an animation Identify the need to work consistently and carefully - Review and improve an animation - Evaluate the impact of adding other media to an animation	-Explain how a sprite moves in an existing project - Create a program to move a sprite in four directions - Adapt a program to a new context - Develop my program by adding features - Identify and fix bugs in a program - Design and create a maze-based challenge

Year 3



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Year 4	Autumn Creating Media- Audio Editing Creating Media- Photo Editing	Spring Programming- FMS Logo	Summer Programming- Lego Spike
	-Identify that sound can be digitally recorded - Use a digital device to record sound - Explain that a digital recording is stored as a file - Explain that audio can be changed through editing - Show that different types of audio can be combined and played together - Evaluate editing choices made -Explain that digital images can be changed - Change the composition of an image - Describe how images can be changed for different uses - Make good choices when selecting different tools - Recognise that not all images are real - Evaluate how changes can improve an image	-Identify that accuracy in programming is important - Create a program in a text-based language - Explain what 'repeat' means - Modify a count-controlled loop to produce a given outcome - Decompose a task into small steps - Create a program that uses countcontrolled loops to produce a given outcome	-Develop the use of count-controlled loops in a different programming environment - Explain that in programming there are infinite loops and count controlled loops - Develop a design that includes two or more loops which run at the same time - Modify an infinite loop in a given program Design a project that includes repetition - Create a project that includes repetition Lego Spike Happy Traveller x7 lessons



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Year 5	Autumn Creating Media- Vector Drawings Data and Information	Spring Programming- Crumble controllers	Summer Programming- Lego Spike Creating media- Video production
	-Identify that drawing tools can be used to produce different outcomes - Create a vector drawing by combining shapes - Use tools to achieve a desired effect - Recognise that vector drawings consist of layers - Group objects to make them easier to work with - Evaluate my vector drawing -Use a form to record information - Compare paper and computer-based databases - Outline how grouping and then sorting data allows us to answer questions - Explain that tools can be used to select specific data - Explain that computer programs can be used to compare data visually - Apply my knowledge of a database to ask and answer real-world questions	-Control a simple circuit connected to a computer - Write a program that includes count-controlled loops - Explain that a loop can stop when a condition is met - Explain that a loop can be used to repeatedly check whether a condition has been met - Design a physical project that includes selection - Create a program that controls a physical computing project	Lego Spike Quirky Creations x8 lessons -Explain how selection is used in computer programs -Relate that a conditional statement connects a condition to an outcome -Explain how selection directs the flow of a program -Design a program which uses selection - Create a program which uses selection Evaluate my program -Explain what makes a video effective - Identify digital devices that can record video - Capture video using a range of techniques - Create a storyboard - Identify that video can be improved through reshooting and editing - Consider the impact of the choices made when making and sharing a video



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Year 6	Autumn Creating Media- Newsletters/Websites Programming- Crumble Controllers	Spring Creating Media- Tinkercad Data and Information	Summer Programming- Lego
	-Review an existing website and consider its structure - Plan the features of a web page - Consider the ownership and use of images (copyright) - Recognise the need to preview pages - Outline the need for a navigation path -Define a 'variable' as something that is changeable - Explain why a variable is used in a program - Choose how to improve a game by using variables - Design a project that builds on a given example - Use my design to create a project - Evaluate my project	-Use a computer to create and manipulate 3D digital objects - Compare working digitally with 2D and 3D graphics - Construct a digital 3D model of a physical object - Identify that physical object can be broken down into a collection of 3D shapes - Design a digital model by combining 3D objects - Develop and improve a digital 3D model -Identify questions which can be answered using data - Explain that objects can be described using data - Explain that formulas can be used to produce calculated data - Apply formulas to data, including duplicating - Create a spreadsheet to plan an event - Choose suitable ways to present data	Lego Spike Crazy Carnival Games x7 lessons -Create a program to run on a controllable device - Explain that selection can control the flow of a program - Update a variable with a user input -Use an conditional statement to compare a variable to a value -Design a project that uses inputs and outputs on a controllable device -Develop a program to use inputs and outputs on a controllable device.