



Shardlow Primary School



Computing Curriculum Progression Map



Reception

Year A	Autumn 1	Autumn 2	Autumn 3	Autumn 4	Autumn 5	Autumn 6
Title of Unit	Internet Safety and Basic Skills			Painting	Simple Programs: toys	
N/C Objectives	Children recognise that a range of technology is used in places, such as homes and schools (ELG) They select and use technology for particular purposes (ELG).			Interacts with age-appropriate computer software (40-60).	Completes a simple program on a computer (40-60).	
Core Knowledge	- Know the names of the three main components of a computer and ipad (screen, mouse, key board.) - Understand that it is important not to give out personal information.			- Know that paint is a program that can be used to create a picture. - Know the names of three tools: pencil, paint bucket and eraser.	- Know directions forward, backwards, left and right. - Know which buttons to press on the Beebot to select the direction.	
Core Skills	- Can identify the main components of a laptop (mouse, screen, key board) - Can identify the main			- Use the mouse to click and drag. - Draw lines using a mouse. - Use the paint bucket to block	- Can give instructions verbally to a partner - Can navigate a motorised toy in different directions	



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	components of an ipad (screen, keyboard). • Use an ipad to take photographs and decide which photographs are effective.			colour areas with a mouse. • Use the eraser function to edit and improve picture. • Re-create a given picture. • Create an independent picture using paint.	• Use Beebot app to navigate toys using simple algorithms	
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Year 1 & 2

Year A	Autumn 1	Autumn 2	Autumn 3	Autumn 4	Autumn 5	Autumn 6
Title of Unit	Digital Writing		Dance Algorithm (2 lessons) Computer systems (4 lessons)	Scratch Jnr	Creating Media – making Music	
N/C Objectives	Use technology purposefully to create, organise, store, manipulate and retrieve digital content		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	Create and debug simple programs. Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. Use logical reasoning to predict the behaviour of simple programs.	Use technology purposefully to create, organise, store, manipulate and retrieve digital content.	
Core Knowledge	Understand that the internet can be used for research.		Understand what instructions are and how they relate to algorithms.	- Understand that algorithms are used on digital devices. - Understand that programs require precise instructions.	- Know that digital content can be transferred between different devices. - Understand which device is most appropriate for a specific task.	
Core Skills	Organise digital content using copy and paste function.		- Plan a journey for a programmable toy. - Create a series of	Use a range of instructions (e.g. direction, angles, turns).	- Create digital content. - Store digital content. - Retrieve digital content.	



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	- Retrieve and manipulate digital content. - Navigate the web to complete simple searches.		instructions.	- Test and amend a set of instructions. - Find errors and amend. (debug) - Write a simple program and test it. - Predict what the outcome of a simple program will be (logical reasoning).	- Use a web site. - Use a camera. - Record sound and play back.	
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Year B	Autumn 1	Autumn 2	Autumn 3	Autumn 4	Autumn 5	Autumn 6
Title of Unit	Digital Writing		Crazy character algorithm (2 lessons) Dance algorithm (2 lessons) ABC Computer systems (2 lessons)	Scratch Jnr	Creating Media – Digital Photography	
N/C Objectives	Use technology purposefully to create, organise, store, manipulate and retrieve digital content		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	Create and debug simple programs. Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. Use logical reasoning to predict the behaviour of simple programs.	Use technology purposefully to create, organise, store, manipulate and retrieve digital content.	



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Core Knowledge	Understand that the internet can be used for research.		Understand what instructions are and how they relate to algorithms.	- Understand that algorithms are used on digital devices. - Understand that programs require precise instructions.	- Know that digital content can be transferred between different devices. - Understand which device is most appropriate for a specific task.	
Core Skills	- Organise digital content using copy and paste function. - Retrieve and manipulate digital content. - Navigate the web to complete simple searches.		- Plan a journey for a programmable toy. - Create a series of instructions.	- Use a range of instructions (e.g. direction, angles, turns). - Test and amend a set of instructions. - Find errors and amend. (debug) - Write a simple program and test it. - Predict what the outcome of a simple program will be (logical reasoning).	- Create digital content. - Store digital content. - Retrieve digital content. - Use a web site. - Use a camera. - Record sound and play back.	



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Year 3 & 4

Year A	Autumn 1	Autumn 2	Autumn 3	Autumn 4	Autumn 5	Autumn 6
Title of Unit	Word processing		Scratch – sequence Yr 3 – sequence Yr 4- repetition	Creating Media – Animating Romans	Scratch – Repetition	
N/C Objectives	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		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	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 Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	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 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	



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					goals, including collecting, analysing, evaluating and presenting data and information	
Core Knowledge	Understand how use word to write a piece of prose (Key functions, font, layout etc)		- Know how to sequence instructions on scratch - Understand what scratch can be used for.	Create a story-based animation.	- Understand the similarities between two environments. - Understand the difference between count-controlled and infinite loops. - Use their knowledge to modify existing animations and games using repetition.	
Core Skills	- Use technology respectfully and responsibly. - Know different ways I can get help if I am concerned - Understand what computer networks do and how they provide multiple services. - Discern where it is best to use technology and where it adds little or no value.		- Design a sequence of instructions, including directional instructions. - Write programs that accomplish specific goals. - Work with various forms of input. - Work with various forms of output.	- Use a range of techniques to create a stop-frame animation using tablets. - Adding other types of media to animation, such as music and text.	- Explore the concept of repetition in programming using the Scratch environment. - Design and create a game which uses repetition, applying stages of programming design throughout.	



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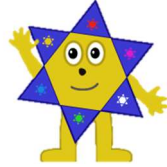
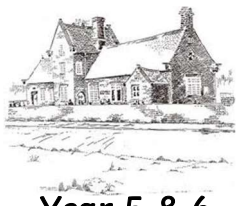
Year B	Autumn 1	Autumn 2	Autumn 3	Autumn 4	Autumn 5	Autumn 6
Title of Unit	Powerpoint		Scratch – Sequence	Drawing	Turtle – Repetition	
N/C Objectives	Understand computer networks, including the internet; how they can provide multiple services, such as the World Wide Web, and the opportunities they offer for communication and collaboration Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact		Use sequence, selection, and repetition in programs; work with variables and various forms of input and output	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	Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs	
Core Knowledge	- Understand that the internet can be used for a variety of functions (including research, multimedia platform, communication) - Know how to use apps within ipads and laptops in conjunction to produce		- Know how to sequence instructions on scratch - Understand what scratch can be used for	- Know how to organise digital content. - Retrieve and manipulate digital content. - Edit digital content using knowledge of skills learnt.	- Know how to use programming to create a game. - Understand how instructions can be sequenced to give a desired result. - Understand how to amend algorithms to	



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	a website.				produce a desired result.	
Core Skills	• Select, use and combine software on a range of digital devices. • Use a range of technology for a specific project.		• Design a sequence of instructions, including directional instructions. • Write programs that accomplish specific goals. • Work with various forms of input. • Work with various forms of output.	• Draw objects. • Insert text boxes and images. • Manipulate objects. • Create a layout of objects with no unnecessary space using colour and font effectively.	• Use technology to control an external device. • Design algorithms that use repetition & 2-way selection. • Combine sequences of instructions and procedures to turn devices on and off. • Explore 'what if' questions by planning different scenarios for controlled devices.	



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Year 5 & 6

Year A	Autumn 1	Autumn 2	Autumn 3	Autumn 4	Autumn 5	Autumn 6
Title of Unit	Crumble Vehicle	Yr 5 – Selection Yr 6 - Variables	Creating Media – 3D modelling	Computer Systems and Networks	Data and Information	
N/C Objectives	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	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 Select, use and combine a variety of software (including internet services) on a range of digital devices to design	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 Use technology safely, respectfully, and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact	Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact	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	



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		and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information				
Core Knowledge	- Understand what variables are and relate them to real-world examples of values that can be set and changed. - Understand how programming can be used to enable vehicle to move.	- Understand what variables are and relate them to real-world examples of values that can be set and changed. - Use variables to create a simulation of a scoreboard. - Understand the Use-Modify-Create model	- Understanding how to use a computer to produce 3D models. . - Understand the benefits of grouping and ungrouping 3D objects. - Plan, develop, and evaluate a 3D model of a building.	- Understand that the internet can be used for a variety of functions (including research, multimedia platform, communication) - Know how to use apps within ipads and laptops in conjunction to produce a website.	- Understand how spreadsheets can be used to represent data. - Know the key functions of spreadsheets. - Know how to input data on a spreadsheet. - Know how to represent data as a graph or chart from a spreadsheet.	
Core Skills	- Use scratch to program crumble. - Use sequence, repetition and variables	- Experiment with variables in an existing project - Modify variables, before creating a project. - Apply knowledge of variables and design to improve games in Scratch.	- Work in a 3D space, moving, resizing, and duplicating objects. - Create hollow objects using placeholders - Combine multiple objects to create a model of a desk tidy	- Select, use and combine software on a range of digital devices. - Use a range of technology for a specific project.	- Analyse information. - Evaluate information. - Input data into a spreadsheet - Manipulate data using a spreadsheet	



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Year B	Autumn 1	Autumn 2	Autumn 3	Autumn 4	Autumn 5	Autumn 6
Title of Unit	Audio editing		Creating media – video editing	Crumbles - Stone Age	Programming variables in games	
N/C Objectives	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		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.	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	
Core Knowledge	- Understand how a podcast is structured. - Know how to create flow and cohesion within podcast through use of digital devices.		- Understand how to use an ipad to take a video. - Know how to transfer videos between apps on devices. - Know how to transfer videos between devices.	- Know how to sequence instructions using crumbles - Understand what crumbles can be used for	- Know how to use programming to create a game. - Understand how instructions can be sequenced to give a desired result. - Understand how to amend algorithms to produce a desired result.	
Core Skills	- Select, use and combine software on a range of digital devices. - Use a range of technology		- Use a range of software for similar purposes. - Collect information. - Design and create content. - Present information.	- Design a sequence of instructions, including directional instructions. - Write programs that accomplish specific goals.	- Use technology to control an external device. - Design algorithms that use repetition & 2-way selection.	



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	for a specific project.		• Search for information on the web in different ways. • Manipulate and improve digital images.	• Work with various forms of input. • Work with various forms of output.	• Combine sequences of instructions and procedures to turn devices on and off. • Explore 'what if' questions by planning different scenarios for controlled devices.	
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