

Computing Topic and Skills Progression Overview

Year R

Curriculum requirements	<p>The new statutory framework for the Foundation Stage no longer includes an area for Computing. However, children will continue to be given opportunities to engage with a range of programs on the laptops and will encounter technology incidentally through their everyday activities.</p> <p>Children begin to use a range of ICT such as</p> <ul style="list-style-type: none"> -using large whiteboard – drag and drop, colouring, clicking, writing -taking photos ipad and cameras – zooming in and out -printing their own work -typing, changing font and colour -games and activities on the computer -using templates on Purple Mash
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Key Stage 1

Curriculum requirements	<p>The national curriculum for computing aims to ensure that all pupils:</p> <ul style="list-style-type: none"> Can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation Can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems Can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems Are responsible, competent, confident and creative users of information and communication technology. <p>Key stage 1</p> <ul style="list-style-type: none"> 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 use technology purposefully to create, organise, store, manipulate and retrieve digital content recognise common uses of information technology beyond school use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.
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Year 1

	Autumn A	Autumn B	Spring A	Spring B	Summer A	Summer B
Over reaching Topic theme	Fairy tales	Fairy tales	Space	Antarctica	Dinosaurs	Animals
Curriculum topic	Graphics	Graphics	Data	Programming 1-beebots	Programming 2-coding	Word processing
Skills	-Become familiar with the touchpad and using the laptops	-Begin to use Paint (desktop app) to	-Understand that ICT can create and	-Explore Beebot and revise the function	-Discuss/explore what will happen	-Develop familiarity with the keyboard –

	<p>-Open, navigate and use 2paint on Purple Mash to explore different paint effects</p>	<p>explore tools to create images</p> <ul style="list-style-type: none"> -Explore shape, line and colour to communicate a specific idea -Talk about their use of a paint package and their choice of tools -Talk about the differences between a graphics package and paper-based art activities (undo, changes quickly and easily made) -To print -To save with help 	<p>modify charts quickly and easily</p> <ul style="list-style-type: none"> -Use graph software 2graph to represent and interpret simple data -Use a graph programme to create and help answer questions 	<p>of each button</p> <ul style="list-style-type: none"> -Create a map in groups for beebot -Follow instructions to move around a course -Create a series instructions to move their peers around a course -Explore outcomes when individual buttons are pressed on the beebot -While navigating around a course on a computer predict what will happen once the next command is entered -Begin to debug their own algorithms e.g why their algorithm did not work -Begin to use the ipad app for beebot. 	<p>when instructions are given in a sequence.</p> <ul style="list-style-type: none"> -Give a sequence of instructions to complete a simple task. <p>Use 2code to introduce simple programming (Fun with fish, bubbles, air traffic control)</p>	<p>spacebar, backspace, shift, enter, to provide text on screen that is clear and error free</p> <ul style="list-style-type: none"> -Select appropriate images -Add text to photographs, graphics -Use pre-defined layouts or templates for presentations <p>2Publish</p> <ul style="list-style-type: none"> -Begin to explain reasons why choices have been made to teacher or talk partner
<p>Assessment Focus/Activity</p>		<p>Graphics</p> <ul style="list-style-type: none"> I can use 2 paint with support I can use 2 paint and Microsoft paint to create pictures with some support I can use 2 paint and Microsoft paint to create pictures independently 	<p>Data Handling</p> <ul style="list-style-type: none"> I can enter data using Education City pictogram with support I can enter data to create a graph using Education City or Purple Mash I can collect and confidently organise my own data using Education City and Purple Mash 	<p>Programming 1</p> <ul style="list-style-type: none"> I can create a simple program for beebot with support I can create, follow and debug a simple program for beebot with some support I can confidently code, debug and create my own simple algorithms 	<p>Programming 2</p> <ul style="list-style-type: none"> I can begin to code a simple algorithm using 2code with support I can begin to code and debug an algorithm using 2code with some support I can confidently code, debug and create my own simple algorithms 	<p>Word Processing</p> <ul style="list-style-type: none"> I can type a simple sentence using word with support I can type a sentence and change its appearance with some support I can use a word processing programme to type, edit and change the text independently
<p>Year 2</p>						

Over reaching Topic theme	Autumn A	Autumn B	Spring A	Spring B	Summer A	Summer B
Curriculum topic	Graphics	Word processing	Programming 1-beebots	Programming 2-coding		Animation
Skills	<ul style="list-style-type: none"> -Use ICT to source, generate and amend ideas for their art work -Develop a variety of skills using a range of tools and techniques to communicate a specific idea or artistic style /effect -Describe to others their use of a paint package paint and their reason for choice of tools 	<ul style="list-style-type: none"> -Begin to word process short narrative and non-narrative texts -Develop basic editing skills including different presentational features (font size, colour and style) -Select from different presentational features e.g. title, paragraph, label etc -Save, print, retrieve and amend their work -Use the mouse or arrow keys to insert words and sentences -Use appropriate editing tools to improve their work -Make use of graphics, video and sound to enhance their text on screen -Talk about their use of graphics and sound and how it may enhance or change the mood and atmosphere of their presentation and make changes where appropriate -Use different layouts and 	<ul style="list-style-type: none"> -Talk about how everyday devices can be controlled - Know that devices and actions on screen may be controlled by sequences of actions and instructions -Create a sequence of instructions to follow a right-angled shape on screen -Create a sequence of instructions to control a programmable robot to carry out a pre-determined route to include direction, distance and turn (on screen or floor robot) -Control a floor robot (beebot) using appropriate buttons, Make predictions and estimate distances and turns 	<ul style="list-style-type: none"> -Build on children's programming skills to complete next few challenges on 2code (snails, vehicles, turtle, ghosts) -begin to code using Scratch Continue to use ipad apps to programme 		<ul style="list-style-type: none"> -Create a sequence of still images which together form a short animated sequence 2animate -Create a simple animation to illustrate a story or idea

		templates for different purposes publish				
Assessment Focus/Activity	Graphics I can create my own artwork with support I can use a graphics programme to create my own artwork I can confidently use a range of features from a graphics programme	Word processing I can create digital content with support I can use a word processing programme to create digital content I can confidently use a range of a word processing tools to create digital content	Programming I can follow and create algorithms for beebot with support I can follow, debug and create algorithms for beebot and 2go I can confidently debug algorithms	Coding I can code using 2code with support I can code and debug algorithms for beebot and 2go I can confidently create my own algorithms in challenge mode using a greater range of tools		Animation I can create an animation with support I can create a short animation using 2animate I can confidently create animation using a greater range of tools using an animation programme