

Progression of Skills Computing

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>Internet Safety</p> <p>KS1 – NC – Statement -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.</p> <p>KS2 – NC statement - use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p>	See separate progression document	<ul style="list-style-type: none"> Log in safely and the importance of logging out. Learn how to save learning to a folder and understand who can see it. Recall what private information is. Know how to report something usual or worrying online. <p>Unit 1.1 online safety Part of safety week in September Use Smart Crew online age appropriate videos.</p>	<ul style="list-style-type: none"> Know how to refine searches using the search tool. Open and send simple online communications via email. Develop understanding of how information is shared globally on the internet. Understand that information put online leaves a digital footprint or trail. Use digital technology to share work on purple mash to connect with others locally. Identify the steps taken to keep personal data and hardware secure. <p>Unit 2.2 Online safety Part of safety week in September Use Smart Crew online age appropriate videos.</p>	<ul style="list-style-type: none"> Know what makes a safe password and methods to keep passwords private. Understand how a blog can be used to communicate with a wider audience. Understand how the Internet can be used to communicate. Know the meaning of age restrictions symbols on digital media and devices. Consider the truth of the content of websites <p>Unit 3.2 Online Safety Part of safety week in September Use Smart Crew online age appropriate videos.</p>	<ul style="list-style-type: none"> Understand how to protect themselves from online identity theft recognising that that information put online leaves a digital footprint or trail. Know the risks and benefits of installing software and apps. Understand the term 'plagiarism' and consider the consequences. Use appropriate behaviour when participating or contributing to collaborative online projects. Identify the positives and negatives of technology on health and the environment. Understand the importance of balancing game and screen time with other parts of their lives. <p>Unit 4.2 Online Safety Part of safety week in September Use Smart Crew online age appropriate videos.</p>	<ul style="list-style-type: none"> Know how to maintain secure passwords. Understand the advantages, disadvantages, permissions and purposes of altering images. Review sources of support available. Develop own responsibility to one another in their online behaviour. Know the impact that sharing digital content online including; inappropriate text, photographs and videos. Search with a consideration for the reliability and validity understanding the impact of incorrect information. Learn how to reference sources in their work <p>Unit 5.2 Online Safety Part of safety week in September Use Smart Crew online age appropriate videos.</p>	<ul style="list-style-type: none"> Identify benefits and risks of mobile devices broadcasting the location of the user/device. Know the benefits and risks of giving personal information and review meaning of digital footprint. Have a clear idea of appropriate online behaviour. Know the positives and negatives of technology on health and environment. Understand the importance of balancing game/screen time with other parts of their lives. Identify secure sites by looking for privacy seals of approval. Begin to understand how information online can persist. <p>Unit 6.2 Online Safety Part of safety week in September Use Smart Crew online age appropriate videos.</p>
<p>The Internet, Communication and collaboration.</p> <p>KS1 – NC statement - recognise common uses of information technology beyond school.</p> <p>KS2 – NC statement - understand computer networks including the</p>	<ul style="list-style-type: none"> I can tell you about technology that is used at home and in school. I can operate simple equipment. 	<ul style="list-style-type: none"> Walk around the local community and find examples of where technology is used. Record examples of technology outside school. 	<ul style="list-style-type: none"> Understand the terminology associated with searching to gain a better understanding of searching on the Internet. 	<ul style="list-style-type: none"> Identify different methods of communication. Open and respond to an email using an address book. 	<ul style="list-style-type: none"> Locate information on the search results page. Use 'search' effectively to find out information. Assess whether an information source is true and reliable. 		<ul style="list-style-type: none"> Learn what the internet consists of. Find out what LAN and WAN are and how the internet is accessed. Research the development of the

<p>internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration. Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.</p>	<ul style="list-style-type: none"> • I can use a safe part of the Internet to play and learn. 	<p>Unit 1.9 Technology outside school.</p> <ul style="list-style-type: none"> • Complete a search under the supervision of adults • Talk about websites they have been on. • Explore a website by clicking on the arrows, menus and hyperlinks. 	<ul style="list-style-type: none"> • Recall information to help someone search for information on the Internet. <p>Unit 2.5 Effective searching Program – Internet browser</p>	<ul style="list-style-type: none"> • Learn how to communicate safely using email. • Add an attachment to an email. • Explore a simulated email scenario. <p>Unit 3.5 emailing -2Email, 2Connect, 2DIY.</p>	<ul style="list-style-type: none"> • Add website to a favourites list. <p>Unit 4.7 Effective searching. Program – Internet browser</p> <ul style="list-style-type: none"> • Understand and recall the different parts that make up a computer. <p>Unit 4..8 Hardware investigators</p>		<p>internet and think about the future.</p> <p>Unit 6.6 Networks - Program – 2connect.</p> <ul style="list-style-type: none"> • Identify purpose and features of a Blog. • Plan the theme and content to write a blog; considering the audience. • Contribute to a blog and understand the importance of commenting and regularly updating the content. • Understand how and why blog posts are approved by the teacher <p>Unit 6.4 Blogging – Program 2blog.</p>
<p>Data - spreadsheets</p> <p>KS1 – NC Statement - use technology purposefully to create, organise, store, manipulate and retrieve digital content.</p> <p>KS2 NC Statement - 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.</p>	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> • Know what a spreadsheet program looks like • Enter data into spreadsheet cells. • Use image tools to add clipart to cells • Use control tools: lock, move cell, speak and count. <p>Unit 1.8 spreadsheets Programs 2Calculate</p>	<ul style="list-style-type: none"> • To use image, lock, move cell, speak and count tools to make a counting machine. • Copy and paste data. • Use the totalling and equal tools to check calculations. • Use a spreadsheet for money calculations. • Collect data and produce a graph. <p>Unit 2.3 spreadsheets Programs 2Calculate</p>	<ul style="list-style-type: none"> • Use symbols more than, less than and equal to, to compare values. • Collect data and produce a variety of graphs. • Use advanced mode to learn about cell references. <p>Unit 3.3 spreadsheets Programs 2Calculate</p>	<ul style="list-style-type: none"> • Format cells as currency, percentage, decimal to different decimal places or fraction • Use the formula wizard to calculate averages. • Add a formula to a cell to automatically make a calculation in that cell. • Model a real life situation e.g. combining tools to make a times tables test. <p>Unit 4.3 spreadsheets Programs 2Calculate</p>	<ul style="list-style-type: none"> • Use the formula wizard to add a formula to a cell to automatically make a calculation in that cell. • Copy and paste within a spreadsheet. • Use tools to test a hypothesis. • Use a spreadsheet to model a real-life situation and answer questions. <p>Unit 5.3 spreadsheets Programs 2Calculate/Excel?</p>	<ul style="list-style-type: none"> • Use a spreadsheet to create computational models and answer questions. • Use a spreadsheet to investigate the probability • Use the formula wizard to add a formula to a cell to automatically make a calculation in that cell. • Create graphs showing the data collected. • Type in a formula for a cell to automatically make a calculation in that cell. <p>Unit 6.3 spreadsheets Programs 2Calculate/Excel?</p>

<p>Data – Handling, collecting, sorting and presenting.</p> <p>KS1 – NC Statement - use technology purposefully to create, organise, store, manipulate and retrieve digital content.</p> <p>KS2 NC Statement - 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</p>	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> • Sort items using a range of criteria. • Identify common features to sort items. <p>Unit 1.2 Grouping and Sorting Programs 2DIY</p> <ul style="list-style-type: none"> • Understand that data can be represented in picture format. • Contribute to a class pictogram. • Use a pictogram to record the results of an experiment. <p>Unit 1.3 Pictograms Programs 2Count 2Connect</p>	<ul style="list-style-type: none"> • Learn further data handling tools that can give more information than pictograms. • Construct a binary tree to identify items. • Use yes/no questions to separate information. • Use a binary tree to answer questions. • Use a database to answer more complex search questions. • Use the search tool to find information. <p>Unit 2.4 Questioning Programs 2Question, 2Investigate</p>	<ul style="list-style-type: none"> • Sort objects using just 'yes' or 'no' questions. • Complete a branching database. • Create own branching database. <p>Unit 3.6 Questioning Programs 2Question</p> <ul style="list-style-type: none"> • Enter data into a graph and answer questions. • Solve an investigation and present the results in graphic form. <p>Unit 3.8 Graphing Program 2graph</p>		<ul style="list-style-type: none"> • Search for information in a database. • Contribute to a class database. • Create a database around a chosen topic. <p>Unit 5.4 Databases Programs- 2Question, 2Investigate</p>	<ul style="list-style-type: none"> • Create a concept map to explore an idea for a quiz. • Sort questions that are best suited to the different question types. • Consider the audience's ability level and interests when setting the quiz. • Make a quiz that requires the player to search a database. <p>Unit 6.7 Quizzing Programs- 2Quiz, 2DIY, Text Toolkit, 2Investigate</p> <ul style="list-style-type: none"> • Know the terms binary and denary mean and how they relate to the number system, the digital system and the terms base-10 and base-2 • Relate binary to the on and off states of electrical switches. • Convert numbers from decimal to binary and visa versa. • Represent states of object in their own program using binary <p>Unit 6.8 Binary (optional)</p>
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<p>Multimedia</p> <p>KS1 – NC Statement - use technology purposefully to create, organise, store, manipulate and retrieve digital content.</p> <p>KS2 NC Statement - 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</p>	<ul style="list-style-type: none"> • I can move objects on a screen. • I can create shapes and text on a screen. • I can use technology to show my learning • Completes a simple program on a computer. • Interacts with age-appropriate computer software. 	<ul style="list-style-type: none"> • With support - Open, save or share a file. • Plan out a story. • Add animation and sounds • Change the background • Select a font. • Copy and paste into story. <p>Unit 1.6 animated story books Program 2create a story.</p>	<ul style="list-style-type: none"> • Open, save and share. • Choose a background. • Undo and redo. • Zoom in and zoom out. • Use a range of tools including; outline, fill, pen thickness, eraser and colour palatte. • Choose style of design. <p>Link to artists; Monet, Degas, Renoir, William Morris and Seurat. Unit 2.6 creating pictures. Program 2paint. iPad App?</p>	<ul style="list-style-type: none"> • Introduce typing terminology, • Understand the correct way to sit at the keyboard. • Use the home, top and bottom row keys. • Practice typing with the left and right hand. • Amend text using SELECT/DELETE and COPY/PASTE. <p>Unit 3.4 touch typing Program 2type</p>	<ul style="list-style-type: none"> • Explore how font size and style can affect the impact of a text. • Use text formatting to make a piece of writing fit for its audience and purpose. • Use the spellchecker • Use find, search and replace. • Use page set up to set portrait or landscape. • Insert a simple table. <p>Unit 4.4 writing for different audiences. Programs - 2Email, 2Connect, 2DIY Microsoft word? Links to news reports and community campaigns</p>	<ul style="list-style-type: none"> • Use nodes to create a concept map using text and images. • Upload photos and images. • Edit ideas to suit the intended audience. • Use collaboration on/ off tool. • Change settings to resize nodes and connections. <p>Unit 5.7 Concept maps Program 2Connect Story Mode</p>	<ul style="list-style-type: none"> • Create a concept map of ideas in 2connect. • Add play and connect buttons. • Add backgrounds, sound and text. • Edit and amend using undo/redo and delete. • Use coding concepts of functions, two-way selection (if/else statements) and repetition in conjunction with one another to code their game. • Make logical attempts to debug their code when it does not work correctly. <p>Unit 6.5 text adventures Programs- 2Code, 2Connect</p>
			<ul style="list-style-type: none"> • Upload a sound from sound bank. • Explore and edit music (e.g. changing number of beats/quavers/ volume or tempo). • Combine sounds (e.g. add own sound, change digital instrument to use or add sound effects) • Refine music editing to depict feelings. • Use loop or unloop tool. • Play and delete. <p>Unit 2.7 making music. Program 2sequence</p>	<ul style="list-style-type: none"> • Consider what simulations are. • Explore a simulation. • Analyse and evaluate a simulation. <p>Unit 3.7 simulations Program 2simulate, 2Publish.</p>	<ul style="list-style-type: none"> • Open, save and share animation. • Add or delete a frame from the animation. • Play the animation. • Switch onion skinning on or off. • Add a background picture. • Insert a photograph from a webcam into the animation. • Insert a sound file. • To be introduced to 'stop motion' animation. <p>Unit 4.6 animation Program 2animate</p>	<ul style="list-style-type: none"> • Use tools to create 2d image and nets to be able to create 3d model. • Explore effect of moving points when designing. • Create 3d image. • Use clear, undo and redo tools. • Use fill and magnify options. • Explore possibilities of 3d printing. <p>Unit 5.6 3D modelling Program 2design and make Links to DT, buildings and 2d shape.</p>	

			<ul style="list-style-type: none"> Use mind map tool to connect ideas. Use node -to represent a concept or idea using text and/or images. Upload photos and images. Edit ideas to suit the intended audience. Sharing using collaboration tool. <p>Unit 2.8 presenting ideas Programs 2quiz, 2connect</p> <ul style="list-style-type: none"> Use the RETURN/ENTER key. Use SHIFT and CAPS LOCK to enter capital letters. Use DELETE and BACKSPACE buttons to correct text. 	<ul style="list-style-type: none"> Open and save files to school server. Copy and paste images from the internet. Select certain areas of an image and resize, rotate and invert the image. Add text to slides. Decide upon and use effective transitions. <p>Program – Microsoft Power point.</p>	<ul style="list-style-type: none"> Use the spellchecker Use find, search and replace. Use page set up to set portrait or landscape. Insert a simple table. <p>Microsoft word??</p>	<ul style="list-style-type: none"> Move images and text around page using formatting tool. 	<ul style="list-style-type: none"> Confidently use Microsoft word to create a range of documents for different purposes with the audience in mind.
<p>Programming</p> <p>KS1 – NC statement - 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.</p> <p>KS2 NC statement - 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</p>	<ul style="list-style-type: none"> I can make a floor robot move. I can use simple software to make something happen. I can make choices about the buttons and icons I press, touch or click on. 	<ul style="list-style-type: none"> Understand what coding means. Use design mode to set up a scene. Add characters Use code blocks to make the character perform actions. Use collision detection. Save and share work. Know the save, print, open and new icon. <p>Unit 1.7 coding Programs 2code</p>	<ul style="list-style-type: none"> Understand what an algorithm is. Design algorithms and then code them Use repeat command. Use timer command. Know what debugging is and debug programs. <p>Unit 2.1 Coding Programs 2code</p>	<ul style="list-style-type: none"> Design algorithms using flowcharts. Design and sequence an algorithm that represents a physical system and code this representation. Use 'if' command. Use repeat commands. Understand and use variables. <p>Unit 3.1 Coding Program 2code</p>	<ul style="list-style-type: none"> Understand and use variables. To use flowcharts to sequence algorithms including selection. Use repeat until command. Use if/else command. Learn about and use computational thinking terms decomposition and abstraction. <p>Unit 4.1 Coding Program 2code or Scratch ?</p>	<ul style="list-style-type: none"> Explain what a variable is. Design and write a program that simulates a physical system. Set/change the variable values appropriately. Know some ways that text variables can be used in coding. Use variables to control the objects in the game. Create loops using the timer and If/else commands. Include buttons and objects that launch windows to websites and programs <p>Unit 5.1 Coding Programs 2code or kodu ?</p>	<ul style="list-style-type: none"> Plan a program before coding to anticipate the variables that will be required to achieve the desired effect. Debug when things do not run as expected. Organise the code into tabs. Organise code into functions and Call functions to eliminate surplus code. Code programs that take text input from the user and use this in the program. Follow flowcharts to create and debug code. Explain how some algorithms work and adapt a program to make it unique. Understand abstraction and decomposition.

							Unit 6.1 Coding Programs 2code or kudu ?
	•	<ul style="list-style-type: none"> To follow and create simple instructions on the computer. To consider how the order of instructions affects the result. Understand the term debugging. <p>Unit 1.4 Lego Builders Programs 2DIY 2Quiz 2Paint Projects Writing Templates</p> <ul style="list-style-type: none"> Understand the functionality of the directional keys. Create and debug a set of instructions (algorithm). Change and extend the algorithm list. Create a longer algorithm for an activity. <p>Unit 1.5 maze Explorers Program 2go</p>			<ul style="list-style-type: none"> Input simple instructions to create shapes. Learn the structure of coding language. Use the repeat function. Understand the pu and pd commands. Follow code to predict the outcome. Use the repeat function. Use the Procedure feature. <p>Unit 4.5 Logo Program Logo</p>	<ul style="list-style-type: none"> Review and analyse a computer game, use knowledge to create own game. Design a setting and create a theme. Upload images or use the drawing tools to create the walls, floor and roof. Use tools to design characters. Change, the animations and sounds that the characters make. Evaluate and improve game. <p>Unit 5.5 Game creator Program 2DIY 3D</p>	•