South Lake Primary School - Progression of learning - Computing

Long term overview

	Autumn	Spring	Summer
EYFS	Children use IT equipment during their play and continuous provision: • Explore options and make choices with toys, software and websites. • Press buttons on a floor robot and talk about the movements • Use simple software to make things happen • Understand that things they create belong to them and can be shared with others using technology • To use a range of ICT equipment for a purpose • Use a camera to collect photos • To use recording devices to capture sounds. • To use to the interactive whiteboard to make marks		
Year 1	Technology around us and Purple Mash Creating Media – Digital Writing	Moving a Robot Creating Media – Digital Art	Data and Information Introduction to animation
Year 2	Becoming familiar with Purple Mash Animated Story books	Data and Information – Pictograms Robot algorithms	Creating Media – Making Music Introduction to quizzes
Year 3	Introduction to G suite and desktop publishing Connecting computers	Sequence in Music Creating Media – Animation	Branching Databases Sequence in Games
Year 4	The Internet and Effective searching Databases	Creating Media – Photo Editing Repetition in Shapes	Creating Media – Audio Editing Repetition in Games
Year 5	Computing systems and networks – Sharing information Creating Media - Vector Drawing	Selection in physical computing Spreadsheets	Selection in quizzes Creating Media – Video editing
Year 6	Computing systems and networks – Communication Programming – Variables in games	Creating Media - Website Creation	Creating Media - 3D Modelling Programming – Sensing

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	Computer Science Strand	Information Technology Strand				
		Computer systems / Content storage	Creating Media – Digital Art	Creating Media – Animation and sounds	Creating Media – Text based	Data
EYFS	Explore options and make choices with toys, software and websites Press buttons on a floor robot and talk about the movements Use simple software to make things happen	Understand that things they create belong to them and can be shared with others using technology To use a range of ICT equipment for a purpose	Use a camera to collect photos	To use recording devices to capture sounds.	To use to the interactive whiteboard to make marks	To match, sort and compare shapes To exploring patterns simple and complex To make simple patterns
Year 1	**Technology around us** I can name the main parts of a computer **Moving a Robot** To match a command to a outcome To run a command on a device To give directions To experiment with turn and move commands to move a robot To choose the order of commands in a sequence To debug a program **Introduction to animation** To use commands to move a sprite To create an algorithm for sprite To test the programs I have created	**Technology around us** To use a mouse to click and drag, create a picture and move objects To log onto Purple Mash To save work into an online drive	**Digital Painting** To make marks with the square and line tools To use appropriate paint tools and colours to recreate the work of an artist To change the colour and brush sizes		**Digital Writing** To use a computer to write To add and remove text, change the look of text Consider the effect changing the font has	**Grouping and sorting** To sort items using a range of criteria. To sort items on the computer using the 'Grouping' activities in Purple Mash
Year 2	**Robot algorithms** To follow and give clear instructions I can give clear and unambiguous instructions To use an algorithm to program a sequence on a floor robot To predict the outcome of a sequence To design an algorithm	To log onto Purple Mash To save work into an online drive To log into TT rockstars		**Making Music** To explore, edit and combine sounds using 2Sequence. To add sounds to a tune they've already created to change it.	**Animated Story books** To use the different drawing tools to create a picture To add text to a page and change the colour, font and size of the text	**Data and information – pictograms** To enter data onto a computer To select objects by attribute and make comparisons

	To debug a program written by themselves **Introduction to quizzes** To explain that a sequence of commands has a start and an outcome To create and change a program using a given design To create a program using my own design			To upload a sound from a bank of sounds into the Sounds section. To record their own sound and upload it into the Sounds section. To create their own tune using the sounds which they have	Add an animation to an object Add a sound and background to the page	I can tally objects using a common attribute To create a pictogram to arrange objects by an attribute To answer 'more than'/'less than' and 'most/least' questions about an attribute
Year 3	**Sequence in Music** To recognise commands in Scratch To start a program in different ways To create a sequence of connected commands To combine sound commands To build a sequence of commands To create a project from a task description **Sequence in Games** To create a program to move a sprite in four directions 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	**Connecting Computers** To know what parts make up a digital device To know how computers are connected To know what a school network is **Introduction to G suite** To log in to my G suite account I can save and revive documents created in Google docs.		**Animation** To plan an animation To create a storyboard I can identify the need to work consistently and carefully To use onion skinning to help me make small changes between frames To improve animation based on feedback To add add other media to my animation	**Desktop publishing** To use page settings and placeholders To add content to a desktop publishing publication – text, import photos To choose a suitable layout for a given purpose	**Branching Databases** To create yes/no questions using given attributes To identify objects using a branching database To create a branching database Compare two branching database structures
Year 4	**Repetition in Shapes** To program a computer by typing commands To create a code snippet for a given purpose To program in a text-based language To write a algorithm to produce a given outcome To use a procedure in a program **Repetition in Games** To develop the use of count-controlled loops in scratch To modify loops to produce a given outcome	**Computing systems and Effective searching** To describe how content can be added and accessed on the World Wide Web (WWW To recognise how the content of the WWW is created by people To locate information on the search results page.	**Photo Editing** To change the composition of an image and consider how it changes the effect of the image To choose appropriate tools to retouch an image	**Audio Editing** To identify that sound can be recorded To explain that audio recordings can be edited To recognise the different parts of creating a podcast project To combine audio to enhance my podcast project		**Databases** To compare paper and computer-based databases To answer questions by grouping and then sorting data, use tools to sort data. To use a real-world database to answer questions

	To develop a design which includes two or more loops which run at the same time repeated sequences used in my program To modify an infinite loop in a given program To design and create a project that includes repetition	To use search effectively to find out information. Save and retrieve files from Google drive and school network		To evaluate the effective use of audio		
Year 5	**Selection in physical computing** To control a simple circuit connected to a computer To write a program that includes count-controlled loops To explain a condition being met can start an action To identify a condition and an action in my project To design a physical project which includes selection To test and debug my project **Selection in quizzes** To identify conditions in a program, then modify them To use selection in an infinite loop to check a condition To create a program with different outcomes using selection To design and create a program which uses selection To test my program	**Computing systems and networks – Sharing information** To explain that computers can be connected together to form systems To recognise the role of computer systems in our lives To explain how search results are ranked To recognise why the order of results is important, and to whom Save and retrieve files from Google drive and school network	**Vector Drawing** To create a vector drawing by combining shapes To use tools to achieve a desired effect To group objects to make them easier to work with		**Video editing** To plan a video project using a storyboard To capture video using a digital device To record a video that demonstrates some of the features of an effective video To store, retrieve, and export my recording to a computer To make edits to my video and improve the final outcome	**Data and Information Spreadsheets** To construct a formula in a spreadsheet To apply formulas to data, including duplicating To create a spreadsheet to plan an event To apply a formula to calculate the data I need to answer questions
Year 6	**Variables in games** To define a 'variable' as something that is changeable To improve a game by changing variables To design a project that builds on a given example To test the code that I have written **Sensing** To create a program to run on a controllable device To use an conditional statement to compare a variable to a value	**Computing systems and networks – Communication** To explain the importance of internet addresses To recognise how data is transferred across the internet and how this can help people to work together	**3D Modelling** To use a computer to create and manipulate three-dimensional (3D) digital objects I can identify how graphical objects can be modified To modify a 3D object, resize, change colour		**Website Creation** To recognise the common features of a web page I can suggest media to include on my page To draw a web page layout that suits a purpose To find copyright-free images	

	To design a project that uses inputs and outputs on a controllable device	To recognise how we communicate using technology Save and retrieve files from Google drive and school network	To construct a digital 3D model of a physical object To design a digital model by combining 3D objects		To add content to my own web page To make multiple web pages and link them using hyperlinks	