Computing Key Concepts Progression Map

Key Concept	EYFS	KS1		KS2			
	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Computing Systems and Networks	-Children will begin to use technology in school and understand how to use it responsibly.	-Children will recognise technology in school and understand how to use it responsibly.	-Children will identify IT and how its responsible use improves our world in school and beyond.	-Children will identify that digital devices have inputs, processes, and outputs, and how devices can be connected to make networks.	-Children will recognise the internet as a network of networks including the WWW, and why we should evaluate online content.	-Children will identify and explore how information is shared between digital systems.	-Children will recognise how the WWW can be used to communicate and be searched to find information.
Creating Media	-Children will use an ICT program (on IWB/ipad/standalone computer) to reinforce learning (e.g. 2simple to explore a farm, create a rangoli pattern, repeated pattern etc).	-Children will choose appropriate tools in a program to create art, and make comparisons with working non-digitally. -Children will use a computer to create and format text, before comparing to writing non-digitally.	-Children will capture and change digital photographs for different purposes. -Children will use a computer as a tool to explore rhythms and melodies, before creating a musical composition.	-Children will capture and edit digital still images to produce a stop-frame animation that tells a story. -Children will create documents by modifying text, images, and page layouts for a specified purpose.	-Children will capture and edit audio to produce a podcast, ensuring that copyright is considered. -Children will manipulate digital images, and reflect on the impact of changes and whether the required purpose is fulfilled.	-Children will plan, capture and edit video to produce a short film. -Children will create images in a drawing program	-Children will design and create webpages, considering copyright, aesthetics, and navigation. -Children will plan, develop and evaluate 3D computer models of physical objects.
Programming	-Children will create a short simple algorithm to programme a movable toy from one point to another eg - BeeBot	Children will write short algorithms and programs for floor robots, and predicting program outcomes. - Children will design and programme the movement of a character on screen to tell stories.	-Children will create and debug programs, and use logical reasoning to make predictions. -Children will design algorithms and programs that use events to trigger sequences of code to make an interactive quiz.	-Children will create sequences in a block-based programming language to make music. -Children will write algorithms and programs that use a range of events to trigger sequences of actions.	-Children will use a text-based programming language to explore count-controlled loops when drawing shapes. -Children will use a block-based programming language to explore count-controlled and infinite loops when creating a game.	-Children will explore conditions and selection using a programmable microcontroller. -Children will explore selections in programming to design and code an interactive quiz.	-Children will explore variables when designing and coding a game. -Children will design and code a project that captures inputs from a physical device.
Data and Information	-Children will use technology to record their own work eg photographs, video.	Children will explore object labels, then use them to sort and group objects by properties.	Children will collect data in tally charts and use attributes to organise and present data on a computer.	Children will build and use branching databases to group objects using yes/no questions.	Children will recognise how and why data is collected over time, before using data loggers to carry out an investigation.	Children will use a database to order data and create charts to answer questions.	Children will answer questions by using spreadsheets to organise and calculate data.