	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1 & 2 Year A	**Digital Painting** Creating Media Effective use of Tools	**Pictograms** Data & Information Effective use of Tools	**Digital Writing** Effective use of Tools	**Programming animation** Design & Development Programing	**Technology around us** Computing Systems Safety & Security	**Robot algorithms** Algorithm Design and Development Programing
Year 1 & 2 Year B	**Grouping Data** Data & Information	**Digital Photography** Creating Media Effective use of Tools	**Making Music** Design & Development Effective use of Tools	**Moving a robot** Algorithm Design and Development Programing	**Information technology around us** Computing Systems Safety & Security	**Programming Quizzes** Algorithm Design and Development Programing
Year 3& 4 Year A	**Connecting Computers** Computing Systems Safety & Security Networks	**Desktop publishing** Creating Media Effective use of Tools Design & Development	**Sequencing Sounds** Algorithms Design & Development Programing	**Stop frame animation** Creating Media Effective use of Tools Design & Development	**Branching Databased** Data & Information	**Events and actions in programming** Algorithm Design and Development
Year 3 & 4 Year B	**Repetition in shapes** Algorithms Design & Development Programing	**The internet** Networks Safety & Security	**Data logging** Computing Systems Data & Information	**Repetition in games** Algorithms Design & Development Programing	**Photo editing** Creating Media Effective use of Tools	**Audio production** Creating Media Effective use of Tools
Year 5 & 6 Year A	**Sharing information** Networks Safety & Security	**Flat File Databases** Data & Information	**Website creating** Creating Media Effective use of Tools	**Selection in physical computing** Computing Systems Programing	**Vector drawing** Creating Media Effective use of Tools	**Selection in quizzes** Algorithms Design & Development Programing
Year 5 & 6 Year B	**Introduction in spreadsheets** Data & Information	**Internet communication** Networks Safety & Security	**Video production** Creating Media Design & Development Effective use of Tools	**Variables in games** Algorithms Design & Development Programing	**3D modelling** Effective use of Tools Design & Development	**Sensing** Algorithms Computing Systems Design & Development Programing

Concept	Key stage 1	Lower Key stage 2	Upper Key stage 2
Computer systems and **Networks** *Understand what a computer is, and how its constituent parts function together as a whole* *Understand how networks can be used to retrieve and share information, and how they come with associated risks*	Recognising technology in school and using it responsibly. Identifying IT and how its responsible use improves our world in school and beyond.	Identifying that digital devices have inputs, processes, and outputs, and how devices can be connected to make networks Recognising the internet as a network of networks including the WWW, and why we should evaluate online content.	Recognising IT systems in the world and how some can enable searching on the internet. Exploring how data is transferred by working collaboratively online.
Creating Media ***Select and create a range of media including text, images, sounds, and video***	Choosing appropriate tools in a program to create art, and making comparisons with working non-digitally. Capturing and changing digital photographs for different purposes Using a computer to create and format text, before comparing to writing non-digitally. Using a computer as a tool to explore rhythms and melodies, before creating a musical composition.	Capturing and editing digital still images to produce a stop-frame animation that tells a story. Capturing and editing audio to produce a podcast, ensuring that copyright is considered. Creating documents by modifying text, images, and page layouts for a specified purpose Manipulating digital images, and reflecting on the impact of changes and whether the required purpose is fulfilled	Planning, capturing, and editing video to produce a short film. Webpage creation Designing and creating webpages, giving consideration to copyright, aesthetics, and navigation. Creating images in a drawing program by using layers and groups of objects. Planning, developing, and evaluating 3D computer models of physical objects.

Algorithms and **programming** *Be able to comprehend, design, create, and evaluate algorithms* *Create software to allow computers to solve problems*	Writing short algorithms and programs for floor robots, and predicting program outcomes Designing and programming the movement of a character on screen to tell stories. Creating and debugging programs, and using logical reasoning to make predictions. Designing algorithms and programs that use events to trigger sequences of code to make an interactive quiz.	Creating sequences in a block-based programming language to make music Using a text-based programming language to explore count-controlled loops when drawing shapes Writing algorithms and programs that use a range of events to trigger sequences of actions. Using a block-based programming language to explore count-controlled and infinite loops when creating a game.	Exploring conditions and selection using a programmable microcontroller. Exploring variables when designing and coding a game. Exploring selection in programming to design and code an interactive quiz Designing and coding a project that captures inputs from a physical device.
Data and information *Understand how data is stored, organised, and used to represent real-world artefacts and scenarios*	Exploring object labels, then using them to sort and group objects by properties. Collecting data in tally charts and using attributes to organise and present data on a computer.	Building and using branching databases to group objects using yes/no questions. Recognising how and why data is collected over time, before using data loggers to carry out an investigation.	Using a database to order data and create charts to answer questions. Answering questions by using spreadsheets to organise and calculate data.
Use of tools	Use software tools to support computing work		
Safety and Security	Understand risks when using technology, and how to protect individuals and systems		
Design and development	Understand the activities involved in planning, creating, and evaluating computing artefacts		