Progression of Knowledge and Skills

	EYFS	Year 1/2	Year 3/4	Year 5/6
Creating Media	**Using Software** • Using a simple online paint tool to create digital art	**Digital Writing** • To use a computer to write • To add and remove text on a computer • To identify that the look of text can be changed on a computer • To explain why I used the tools that I chose • To compare writing on a computer to writing on paper **Making Music** • To say how music can make us feel • To identify that there are patterns in music • To show how music is made from a series of notes • To create music for a purpose • To review and refine our computer work **Digital Photography** • To use a digital device to take a photograph • To make choices when taking a photograph	**Stop Frame Animation** • To explain that animation is a sequence of drawings or photographs • To relate animated movement with a sequence of images • To plan an animation • To identify the need to work consistently and carefully • To review and improve an animation • To evaluate the impact of adding other media to an animation **Desktop Publishing** • To recognise how text and images convey information • To recognise that text and layout can be edited • To choose appropriate page settings]to add content to a desktop publishing publication • To consider how different layouts can suit different purposes • To consider the benefits of desktop publishing	**Video Editing** • To explain what makes a video effective • To identify digital devices that can record video • To capture video using a range of techniques • To create a storyboard • To identify that video can be improved through reshooting and editing • To consider the impact of choices made when making and sharing a video **Webpage Creation** • To review an existing webpage ad consider its structure • To plan the features of a webpage • To consider the ownership and use of images (copyright) • To recognise the need to preview pages • To outline the need for a navigation path • To recognise the implications of linking to content owned by other people

		• To describe what makes a good photograph • To decide how photographs can be improved • To use tools to change an image • To recognise that photographs can be changed **Digital Painting** • To describe what different freehand tools do • To use the shape tool and the line tools • To make careful choices when painting a digital picture • To explain why I chose the tools I used • To use a computer on my own to paint a picture • To compare painting a picture on a computer and on paper	**Audio Editing** • To identify that sound can be digitally recorded • To use a digital device to record sound • To explain that a digital recording is stored as a file • To explain that audio can be changed through editing • To show that different types of audio can be combined and played together • To evaluate editing choices made **Photo Editing** • To explain that digital images can be changed • To change the composition of an image • To describe how images can be changed for different uses • To make good choices when selecting different tools • To recognise that not all images are real • To evaluate how changes can improve an image	**Vector Drawing** • To identify that drawing tools can be used to produce different outcomes • To create vector drawings by combining shapes • To use tools to achieve a desired effect • To recognise that vector drawing, consist of layers • To group objects to make them easier to work with • To evaluate my vector drawing **3D Modelling** • To use a computer to create and manipulate 3D digital objects • To compare working digitally with 2D and 3D graphics • To construct a digital 3D model of a physical object • To identify that physical objects can be broken down into a collection of 3D shapes • To design a digital model by combining 3D objects • To develop and improve a digital 3D model

Programming	• To know that being able to follow and give simple instructions is important in computing. • To understand that it is important for instructions to be in the right order. • To understand why a set of instructions may have gone wrong. • To know that you can program a Bee-Bot with some simple commands. • To understand that debugging means how to fix some simple programming errors. • To understand that an algorithm is a set of clear and precise instructions	**Moving a Robot** • To explain what a given command will do • To act out a given word • To combine forward and backwards commands to make a sequence • To combine four direction commands to make a sequence • To plan a simple program • To find more than one solution to a problem **An Introduction to Quizzes** • To explain that a series of commands has a start • To explain that a sequence of commands has an outcome • To create a new program using a given design • To change a given design • To create a program using my own design	**Sequencing Sounds** • To explore a new programming environment • To identify that commands have an outcome • To explain that a program has a start • To recognise that a sequence of commands can have an order • To change the appearance of my project • To create a project from a task description **Repetition in Shapes** • To identify that accuracy in programming is important • To create a program in text based language • To explain what 'repeat' means • To modify a count-controlled loop to produce a given outcome • To decompose a task into small steps • To create a program that uses count-controlled loops to produce a given outcome **Repetition in Games** • To explain how a sprite moves in an existing project • To create a program to move a sprite in four directions	**Selection in Physical Computing** • To control a simple circuit connected to a computer • To write s program that included count-controlled loops • To explain that a loop can stop when a condition is met • To explain that a loop can be used to repeatedly check whether a condition has been met • To design a physical project that includes selection • To create a program that controls a physical computing project **Selection in Quizzes** • To explain how selection is used in computer programs • To relate that a conditional statement connects a condition to an outcome • To explain how selection directs the flow of a program • To design, create and evaluate a program which uses selection **Variable in Games** • To define a 'variable' as something that is changeable • To explain why a variable is used in a program • To choose how to improve a game by using variables

		• To decide how my program can be improved **Robot Algorithms** • To describe a series of instructions as a sequence • To explain what happens when we change the order of instructions • To use logical reasoning to predict the outcome of a program (series of commands) • To explain that programming projects can have code and artwork • To design an algorithm • To create and debug a program I have written **Introduction to Animation** • To choose a command for a given purpose • To show that a series of commands can be joined together	• To adapt a program to a new context • To develop my program by adding features • To identify and fix bugs in my program • To design and create maze-based challenge **Events and Actions in Programs** • To develop the use of count-controlled loops in a different programming environment • To explain that in programming there are infinite loops and count-controlled loops • To develop a design that included two or more loops which run at the same time • To design and create a program that includes repetition	• To design a project that builds on a given example • To use my design to create a project • To evaluate my project

		• To identify the effect of changing a value • To explain that each sprite has its own instructions • To design the parts of a project • To use my algorithm to create a program		
Computing Systems and Networks	. • Recognising that a range of technology is used for different purposes. • Learning to log in and log out. • To be able to understand what a computer keyboard is and recognising some letters and numbers. • To know that a mouse can be used to click, drag and create simple drawings. • To know that to use a computer you need to log in to it and then log out at the end of your session. • To know that different types of technology can be found at home and in school. • To know that you can take simple photographs with a camera or iPad. • To know that you must hold the camera still and ensure the subject is in the shot to take a photo.	**IT Around Us** • To recognise the uses an features of IT • To identify uses of information technology in school • To identify information technology beyond school • To explain how information technology helps us • To explain how to use information technology safely • To recognise that choices are made when using IT **Technology and the World Around Us** • To identify technology	**Connecting Computers** • To explain how digital devices function • To identify input and output devices • To recognise how digital devices can change the way we work • To explain how a computer network can be used to share information • To explore how digital devices can be connected • To recognise the physical components of a network **The Internet** • To describe how networks physically connect to other networks • To recognise how networked devices make up the internet • To outline how websites can be share via the World Wide Web (WWW)	**Sharing Information** • To explain that computers can be connected together to form systems • To recognise the role of computers in our lives • To recognise how information is transferred over the internet • To explain how sharing information online lets people in different places work together • To contribute to a shared project online • To evaluate different ways of working together online **Internet Communication** • To identify how to use a search engine • To describe how search engines select results • To explain how search results are ranked

		• To identify a computer and its main parts • To use a mouse in different ways • To use a keyboard to type on a computer • To use the keyboard to edit text • To create rules for using technology responsibly	• To describe how content can be added and accessed on the World Wide Web • To recognise how the content of the WWW is created by people • To evaluate the consequences of unreliable content	• To recognise why the order of results is important • To recognise how we communicate using technology • To evaluate different methods of online communication
Data and Information	• To know that sorting objects into various categories can help you • locate information. • To know that using • yes/no questions to find • an answer is a branching • database. • To know that a • pictogram is a way of • showing information.	**Grouping Data** • To label objects • To identify that objects can be counted • To describe object in different ways • To count objects with the same properties • To compare groups of objects • To answer questions about groups of objects **Pictograms** • To recognise that we can count and compare objects using tally charts	**Databases** • To create questions with yes/no answers • To identify the object attributes needed to collect relevant data • To create a branching database • To explain why it is helpful for a database to be well structured • To identify objects using a branching database • To compare the information shown in pictograms with a branching database **Data Logging** • To recognise how and why data is collected over time • To explain that data gathered over time can be used to answer questions	**Flat File Databases** • To use a form to record information • To compare paper and computer-based databases • To outline how grouping and then sorting data allows us to answer questions • To explain that tools can be used to select specific data • To explain that computer programs can be used compare any data visually • To apply my knowledge of a database to ask and answer real-world problems **Introduction to Spreadsheets** • To identify questions which can be answered using data • To explain that objects can be described using data

		• To recognise objects can be represented as pictures • To create a pictogram • To select objects by attribute and make comparisons • To recognise that people can be described by attributes • To explain that we can present information using a computer	• To use a digital device to collect data automatically • To explain that a data logger collects 'data points' from sensors over time • To use data collected over a long duration to find information • To collect the data needed to answer questions • To use collected data to answer questions	• To explain that formulas can be used to produce calculated data • To apply formulas to data, including duplicating • To create spreadsheet to plan an event • To choose suitable ways to present data