Key Concept	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Our progressive objectives show what pupils should know and be able to do in each aspect of computing by the end of each year group. The key concepts of computing are developed withing each unit of work. These are used to support planning and the ongoing assessment of pupils' work.						
Computing Systems and Networks: (*systems, networks and how they are used, the internet, hardware and software*)	To be able to identify items in school that use technology.	Identify technology. Identify a computer and its main part. To use a mouse in different ways. To use a keyboard to type. To use a keyboard to edit text. To create rules for using technology responsibly.	Can identify examples of computers and their uses both at home and at school. Can recognise common types of technology. Understands how devices work together. Can talk about different rules for using IT and say how the rules can keep them safe. To know some of the choices that you make when using IT.	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	To describe how networks physically connect to other networks. To recognise how networked devices make up the internet. To outline how websites can be shared via the World Wide Web. (WWW) To describe how content can be added and accessed by the WWW. To recognise how the content of the WWW is created by people. To evaluate the consequences of unreliable content.	To explain that computers can be connected together to form systems. To recognise the role of computer systems 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 on line. To evaluate different ways of working together online.	To identify how to use a search engine. To describe how search engines select their results. To explain how search results are ranked. To recognise why the order of results is important, and to whom. To recognise how we communicate using technology. To evaluate different methods of online communication.
Programming: (**Interpreting, creating and evaluating algorithms, programming to accomplish specific goals, detecting and correcting errors.**)	To be able to follow a simple algorithm orally. To program a Beebot to move 2 steps forwards. To program a Beebot to move forward and then backwards. To explore block-based coding using 'Daisy the Dinosaur'.	To explain what a given command will do. To act out a given word. To combine forwards and backwards commands to make a sequence. To combine 4 direction commands to make sequences. To plan a simple program. To find more than one solution to a problem. To choose a command for a given purpose.	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 explore a new programming environment. I can identify that each sprite is controlled by the commands I choose. 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.	To identify that accuracy in programming is important. To explain what 'repeat' means. To modify a count-controlled loop to produce a given outcome. To decompose a program into parts. To create a program that uses count controlled loops to produce a given outcome. To develop the use of count-controlled loops	To control a simple circuit connected to a computer. To write a program that includes count-controlled loops. To explain that a loop can stop when a condition is met, eg. Number of times. To conclude that a loop can be used to repeatedly check whether a condition has been met. To design a physical project that includes selection.	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 using variables. To design a project that builds on a given example. To use my design to create a project. To evaluate my project. To create a program to run a controllable device.

		To show that a series of commands can be joined together. To identify the effects 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.	To create and debug a program that I have written. To explain that a sequence of commands has an outcome. To create a program using a given design. To change a given design. To create a program using my own design. To decide how my project can be improved.	To explain how a sprite moves in an existing project. To create a program to move a sprite in four directions. To adapt a program by adding features. To identify and fix bugs in a program. To design and create a maze-based challenge.	in a different programming environment. To explain that in programming there are infinite loops and count controlled loops. To develop a design which included two or more loops which run at the same time. To modify an infinite loop in a given program. To design a project that includes repetition. To create a project that includes repetition.	To create a controllable system that includes selection. 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 a program which uses selection. To create a program which uses selection. To evaluate my program.	To explain that selection can control the flow of a program. To update a variable with a user input. To use a conditional statement to compare a variable to a value. To design a project that uses inputs and outputs on a controllable device. To develop a program to use inputs and outputs on a controllable device.
Data and Information (collecting, analysing, evaluating, presenting data and information)	To make simple block graphs as a class and interpret the results.	To label objects. To identify that objects can be counted. To describe objects in different ways. To count objects with the same properties. To compare groups of objects. To answer questions about groups of objects.	To recognise that we can count and compare objects using tally charts. To recognise that 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 represent information using a computer.	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 to a database to be well structured. To compare the information shown in a pictogram with a branching database.	To explain that data gathered over time can be used to answer questions. To use a digital device to collect data automatically. To explain that a data logger collects 'data points' from sensors over tie. To use data collected over a long duration to find information. To identify the data needed to answer questions. To use collected data to answer questions.	To use a form to record information. To compare paper and computer-based databases. To outline how grouping and then scoring 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 to compare data visually. To apply my knowledge of a database to ask and answer real-world questions.	To identify questions that can be answered using data. To explain that objects can be described using data. To explain that formula can be used to produce calculated data. To apply formulas to data, including duplicating. To create a spreadsheet to plan an event. To choose a suitable what to present data.
Creating Media (design and development, communicating and	To use iPads to create art work exploring the different function.	To describe what different freehand tools do.	To know what devices can be used to take photographs.	To explain that animation is a sequence of drawing or photographs.	To identify that sound can be digitally recorded.	To recognise video as moving pictures, which can include audio.	To review an existing website and consider its structure.

collaborating online, evaluating online content, respectful and responsible communication, presenting, creating content)	To use 'Paint' to explore how to make an image. To use QR codes to easily access age appropriate websites using an iPad. To take photos and make sound recordings using an iPad. To explore educational Apps.	To use the shape tool and the line tool. To make careful choices when painting using 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. 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 make careful choices when changing text. To explain why I used the tools that I chose. To compare writing on a computer with writing on paper.	To use a digital device to take a photograph. To describe what makes a good photograph. To decide how photographs can be improved. To sue tools to change an image. To recognise that images can be changed. To say how music can make us feel. To identify that there are patterns in music. To describe how music can be used in different ways. To show how music is made from a series of notes. To create music for a purpose. To review and refine our computer work.	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. To recognise how text and images convey information. To recognise that text and layout can be edited. The choose appropriate page settings. To add content to a desk top publishing publication. To consider how different layouts can suit different purposes. To consider the benefits of desktop publishing.	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. To explain that digital can be changed. To change the composition of an image. To describe how images can be changed for different used. To make good choices when selecting different tools. To recognise that not all images are real. To evaluate how changes can improve an image.	To identify digital devices that can record video. To capture video using a digital device. To recognise the features of an effective video. To identify that video can be improve through reshooting and editing. To consider the impact of the choices made when making and sharing a video. To identify that drawing tools can be used to produce different outcomes. To create a vector drawing by combining shapes. To sue tools to achieve a desired effect. To recognise that vector drawings consist of layers. To groups object to make them easier to work with. To evaluate my vector drawing.	To plan the features of a webpage. To consider the ownership of use of images (copyright) To recognise the need to preview pages. To outline the need of a navigation path. To recognise the implication of linking to content owned by other people. To use a computer to create and manipulate three- dimensional (3D) digital objects. To compare working digitally with 2D and 3D graphics . To construct a digital 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.