Overview of Computing Learning Objectives

Computing Systems and networks					
Infants		Lower Juniors		Upper Juniors	
Technology Around Us	**Information Technology around us**	**Connecting Computers**	**The Internet**	**Sharing Information**	**Communication**
➢ To identify technology ➢ To identify a computer and its main parts ➢ To use a mouse in different ways ➢ To use a keyboard to type ➢ To use the keyboard to edit text ➢ To create rules for using technology responsibly	➢ To recognise the uses and features of information technology (IT) ➢ To identify IT in the home ➢ To identify IT beyond school ➢ To explain how IT benefits us ➢ To know how to use IT safely ➢ To recognise that choices are made 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 ➢ 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 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 online ➢ To evaluate different ways of working together online	➢ To identify how to use a search engine ➢ To describe how search engines select 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

Data and Information					
Infants		Lower Juniors		Upper Juniors	
Grouping Data	**Pictogram**	**Branching Databases**	**Data Logging**	**Flat-file databases**	**Spreadsheets**
➢ 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 pictograms ➢ 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 create questions with yes/no answers ➢ 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 identify the object attributes needed to collect relevant data ➢ 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 time ➢ 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 apply my knowledge of a database to ask and answer real-world questions ➢ To explain that tools can be used to select data to answer questions ➢ To apply my knowledge of a database to ask and answer real-world questions ➢ To apply my knowledge of a database to ask and answer real-world questions	➢ To identify questions which 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 duplication ➢ To create a spreadsheet to plan an event ➢ To choose suitable ways to present data

Creating Media A					
Infants		Lower Juniors		Upper Juniors	
Digital Painting	**Digital Writing**	**Animation**	**Desktop Publishing**	**Vector Drawing**	**Video Editing**
➢ To describe what different freehand tools do (not a computing related progression step) ➢ 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	➢ 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 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	➢ 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	➢ To identify that drawing tools can be used to produce different outcomes ➢ To create a vector drawing by combining shapes ➢ To use tools to achieve a desired effect ➢ To recognise that vector drawings consist of layers ➢ To group objects to make them easier to work with ➢ To evaluate my vector drawing	➢ To recognise video as moving pictures, which can include audio ➢ To identify digital devices that can record video ➢ To capture video using a digital device ➢ To recognise the features of an effective video ➢ To recognise the features of an effective video ➢ To consider the impact of the choices made when making and sharing a video

Creating Media B					
Infants		Lower Juniors		Upper Juniors	
Digital Photography	**Making Music**	**Audio Editing**	**Photo Editing**	**3D Modelling**	**Web Page Creation**
➢ To know what devices can be used to take photographs ➢ To use a digital device to take a photograph ➢ To describe what makes a good photograph ➢ To decide how photographs can be improved ➢ use tools to change an image ➢ To recognise that images can be changed	➢ To say how music can make us feel (not a computing related progression step) ➢ 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 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	➢ 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	➢ 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 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 review an existing website and consider it structure ➢ To consider the ownership and use of images (copyright) ➢ To plan features of a web page ➢ 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