Our Lady of Perpetual Succour Catholic Primary School

Computing Overview and Progression Map

Topic	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Computing systems and networks	I can identify a computer I can identify how technology is used in my own home. I can identify that technology has changed since my adults were young. I can identify how to be safe online I can identify that a password is secret	I can identify technology I can identify a computer and its main parts I can use a mouse in different ways I can use a keyboard to type on a computer I can use the keyboard to edit text I can create rules for using technology responsibly	I can recognise the uses and features of information technology I can identify the uses of information technology in the school I can identify information technology beyond school I can explain how information technology helps us I can explain how to use information technology safely I can recognise that choices are made when using information technology	I can explain how digital devices function I can identify input and output devices I can recognise how digital devices can change the way we work I can explain how a computer network can be used to share information I can explore how digital devices can be connected I can recognise the physical components of a network	I can describe how networks physically connect to other networks I can recognise how networked devices make up the internet I can outline how websites can be shared via the World Wide Web (WWW) I can describe how content can be added and accessed on the World Wide Web (WWW) I can recognise how the content of the WWW is created by people I can evaluate the consequences of unreliable content	I can explain that computers can be connected together to form systems I can recognise the role of computer systems in our lives I can recognise how information is transferred over the internet I can explain how sharing information online lets people in different places work together I can contribute to a shared project online I can evaluate different ways of working together online	I can identify how to use a search engine I can describe how search engines select results I can explain how search results are ranked I can recognise why the order of results is important, and to whom I can recognise how we communicate using technology I can evaluate different methods of online communication
Data and information	I can complete a familiar task independently and with support will try new things. e.g. use a computer programme /Beebots.	I can label objects I can identify that objects can be counted I can describe objects in different ways I can count objects with the same properties	I can recognise that we can count and compare objects using tally charts I can recognise that objects can be represented as pictures	I can create questions with yes/no answers I can identify the object attributes needed to collect relevant data I can create a branching database	I can explain that data gathered over time can be used to answer questions I can use a digital device to collect data automatically	I can identify questions which can be answered using data I can explain that objects can be described using data I can explain that formulas can be	I can use a form to record information I can compare paper and computer-based databases I can outline how grouping and then sorting data

	I can select tools and resources that I need to complete a task of my own choosing	I can compare groups of objects I can answer questions about groups of objects	I can create a pictogram I can select objects by attribute and make comparisons I can recognise that people can be described by attributes I can explain that we can present information using a computer	I can explain why it is helpful for a database to be well structured I can identify objects using a branching database I can compare the information shown in a pictogram with a branching database	I can explain that a data logger collects 'data points' from sensors over time I can use data collected over a long duration to find information I can identify the data needed to answer questions I can use collected data to answer questions	used to produce calculated data I can apply formulas to data, including duplicating I can create a spreadsheet to plan an event I can choose suitable ways to present data	allows us to answer questions I can explain that tools can be used to select specific data I can explain that computer programs can be used to compare data visually I can apply my knowledge of a database to ask and answer real-world questions
Creating media	I can use an iPad or tablet appropriately I can use a mouse I can use a keyboard to type on a computer I can use my fingers on a touch screen I can control a mouse/touchpad on a computer I know how to use a camera i.e.: on an iPad. I can wait a short amount of time for something I want e.g.: a	I can describe what different freehand tools do I can use the shape tool and the line tools I can make careful choices when painting a digital picture I can explain why I chose the tools I used I can use a computer on my own to paint a picture I can compare painting a picture on a computer and on paper I can use a computer to write	I can use a digital device to take a photograph I can make choices when taking a photograph I can describe what makes a good photograph I can decide how photographs can be improved I can use tools to change an image I can recognise that photos can be changed I can say how music can make us feel	I can explain that animation is a sequence of drawings or photographs I can relate animated movement with a sequence of images I can plan an animation I can identify the need to work consistently and carefully I can review and improve an animation I can evaluate the impact of adding other media to an animation	I can identify that sound can be digitally recorded I can use a digital device to record sound I can explain that a digital recording is stored as a file I can explain that audio can be changed through editing I can show that different types of audio can be combined and played together I can evaluate editing choices made	I can explain what makes a video effective I can identify digital devices that can record video I can capture video using a range of techniques I can create a storyboard I can identify that video can be improved through reshooting and editing I can consider the impact of the choices made when making and sharing a video	I can review an existing website and consider its structure I can plan the features of a web page I can consider the ownership and use of images (copyright) I can recognise the need to preview pages I can outline the need for a navigation path I can recognise the implications of linking to content owned by other people

	computer loading / an App to work	I can add and remove text on a computer I can identify that the look of text can be changed on a computer I can make careful choices when changing text I can explain why I used the tools that I chose I can compare typing on a computer to writing on paper	I can identify that there are patterns in music I can show how music is made from a series of notes I can show how music is made from a series of notes I can create music for a purpose I can review and refine our computer work	I can recognise how text and images convey information I can recognise that text and layout can be edited I can choose appropriate page settings I can add content to a desktop publishing publication I can consider how different layouts can suit different purposes I can consider the benefits of desktop publishing	I can explain that digital images can be changed I can change the composition of an image I can describe how images can be changed for different uses I can make good choices when selecting different tools I can recognise that not all images are real I can evaluate how changes can improve an image		
Programming	I can use a simple programable toy. I can select and use technology for particular purposes eg to listen to a song, watch a video, take a picture or play a game on the IWB	I can explain what a given command will do I can act out a given word I can combine forwards and backwards commands to make a sequence I can combine four direction commands to make sequences I can plan a simple program I can find more than one solution to a problem	I can describe a series of instructions as a sequence I can explain what happens when we change the order of instructions I can use logical reasoning to predict the outcome of a program (series of commands) I can explain that programming projects can have code and artwork	I can explore a new programming environment I can identify that commands have an outcome I can explain that a program has a start I can recognise that a sequence of commands can have an order I can change the appearance of my project I can create a project from a task description	I can identify that accuracy in programming is important I can create a program in a text-based language I can explain what 'repeat' means I can modify a count-controlled loop to produce a given outcome I can decompose a task into small steps I can create a program that uses count-controlled	I can control a simple circuit connected to a computer I can write a program that includes count-controlled loops I can explain that a loop can stop when a condition is met I can explain that a loop can be used to repeatedly check whether a condition has been met	I can define a 'variable' as something that is changeable I can explain why a variable is used in a program I can choose how to improve a game by using variables I can design a project that builds on a given example I can use my design to create a project

		I can choose a command for a given purpose I can show that a series of commands can be joined together I can identify the effect of changing a value I can explain that each sprite has its own instructions I can design the parts of a project I can use my algorithm to create a program	I can design an algorithm I can create and debug a program that I have written I can explain that a sequence of commands has a start I can explain that a sequence of commands has an outcome I can create a program using a given design I can change a given design I can create a program using my own design I can decide how my project can be improved	I can explain how a sprite moves in an existing project I can create a program to move a sprite in four directions I can adapt a program to a new context I can develop my program by adding features I can identify and fix bugs in a program I can design and create a maze-based challenge	loops to produce a given outcome I can develop the use of count-controlled loops in a different programming environment I can explain that in programming there are infinite loops and count controlled loops I can develop a design that includes two or more loops which run at the same time I can modify an infinite loop in a given program I can design a project that includes repetition I can create a project that includes repetition	I can design a physical project that includes selection I can create a program that controls a physical computing project I can explain how selection is used in computer programs I can relate that a conditional statement connects a condition to an outcome I can explain how selection directs the flow of a program I can design a program which uses selection I can create a program which uses selection I can evaluate my program	I can evaluate my project I can create a program to run on a controllable device I can explain that selection can control the flow of a program I can update a variable with a user input I can use a conditional statement to compare a variable to a value I can design a project that uses inputs and outputs on a controllable device I can develop a program to use inputs and outputs on a controllable device