The Federation of the Church Schools of Shalfleet and Yarmouth

COMPUTING	EYFS Link	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
COMPUTER SYSTEMS AND NETWORKS	- Knows what a keyboard is - Knows how to log in and out - Knows how to control a mouse including clicking - Have explored different hardware - Can take photos using a camera app	- Identify technology - Identify a computer and its main parts - Use a mouse in different ways - Use a keyboard to type on a computer - Use the keyboard to edit text - Create rules for using technology responsibly	- Recognise the uses and features of information technology - Identify the uses of information technology in the school - Identify information technology beyond school - Explain how information technology helps us - Explain how to use information technology safely - Recognise that choices are made when using information technology	- Explain how digital devices function - Identify input and output devices - Recognise how digital devices can change the way we work - Explain how a computer network can be used to share information - Explore how digital devices can be connected - Recognise the physical components of a network	- Describe how networks physically connect to other networks - Recognise how networked devices make up the internet - Outline how websites can be shared via the World Wide Web (WWW) - Describe how content can be added and accessed on the World Wide Web (WWW) - Recognise how the content of the WWW is created by people - Evaluate the consequences of unreliable content	- Explain that computers can be connected together to form systems - Recognise the role of computer systems in our lives - Identify how to use a search engine - Describe how search engines select results - Explain how search results are ranked - Recognise why the order of results is important, and to whom	- Explain the importance of internet addresses - Recognise how data is transferred across the internet - Explain how sharing information online can help people to work together - Evaluate different ways of working together online - Recognise how we communicate using technology - Evaluate different methods of online communication
CREATING MEDIA		- Describe what different freehand tools do - Use the shape tool and the line tools - Make careful choices when painting a digital picture - Explain why I chose the tools I used - Use a computer on my own to paint a picture - Compare painting a picture on a computer and on paper - Use a computer to write - Add and remove text on a computer - Identify that the look of text can be changed on a computer - Make careful choices when changing text - Explain why I used the tools that I chose - Compare typing on a computer to writing on paper	- Use a digital device to take a photograph - Make choices when taking a photograph - Describe what makes a good photograph - Decide how photographs can be improved - Use tools to change an image - Recognise that photos can be changed - Say how music can make us feel - Identify that there are patterns in music - Show how music is made from a series of notes - Show how music is made from a series of notes - Create music for a purpose - Review and refine our computer work	- Explain that animation is a sequence of drawings or photographs - Relate animated movement with a sequence of images - Plan an animation - Identify the need to work consistently and carefully - Review and improve an animation - Evaluate the impact of adding other media to an animation - Recognise how text and images convey information - Recognise that text and layout can be edited - Choose appropriate page settings - Add content to a desktop publishing publication - Consider how different layouts can suit different purposes	- Identify that sound can be digitally recorded - Use a digital device to record sound - Explain that a digital recording is stored as a file - Explain that audio can be changed through editing - Show that different types of audio can be combined and played together - Evaluate editing choices made - Explain that digital images can be changed - Change the composition of an image - Describe how images can be changed for different uses - Make good choices when selecting different tools - Recognise that not all images are real	- Explain what makes a video effective - Identify digital devices that can record video - Capture video using a range of techniques - Create a storyboard - Identify that video can be improved through reshooting and editing - Consider the impact of the choices made when making and sharing a video - Identify that drawing tools can be used to produce different outcomes - Create a vector drawing by combining shapes - Use tools to achieve a desired effect - Recognise that vector drawings consist of layers - Group objects to make them easier to work with - Evaluate my vector drawing	- Review an existing website and consider its structure - Plan the features of a web page - Consider the ownership and use of images (copyright) - Recognise the need to preview pages - Outline the need for a navigation path - Recognise the implications of linking to content owned by other people - Use a computer to create and manipulate three-dimensional (3D) digital objects - Compare working digitally with 2D and 3D graphics - Construct a digital 3D model of a physical object - Identify that physical objects can be broken down into a collection of 3D shapes - Design a digital model by combining 3D objects - Develop and improve a digital 3D model

DATA AND INFORMATION	- Can sort and categorise objects - Can sort people into groups - Can use yes/no sorting questions - Can use a branching database physically - Can interpret basic pictograms	- Label objects - Identify that objects can be counted - Describe objects in different ways - Count objects with the same properties - Compare groups of objects - Answer questions about groups of objects	- Recognise that we can count and compare objects using tally charts - Recognise that objects can be represented as pictures - Create a pictogram - Select objects by attribute and make comparisons - Recognise that people can be described by attributes - Explain that we can present information using a computer	- Consider the benefits of desktop publishing - Create questions with yes/no answers - Identify the object attributes needed to collect relevant data - Create a branching database - Explain why it is helpful for a database to be well structured - Identify objects using a branching database - Compare the information shown in a pictogram with a branching database	- Evaluate how changes can improve an image - Explain that data gathered over time can be used to answer questions - Use a digital device to collect data automatically - Explain that a data logger collects 'data points' from sensors over time - Use data collected over a long duration to find information - Identify the data needed to answer questions - Use collected data to answer questions	- Use a form to record information - Compare paper and computer-based databases - Outline how grouping and then sorting data allows us to answer questions - Explain that tools can be used to select specific data - Explain that computer programs can be used to compare data visually - Apply my knowledge of a database to ask and answer real-world questions	- Identify questions which can be answered using data - Explain that objects can be described using data - Explain that formulas can be used to produce calculated data - Apply formulas to data, including duplicating - Create a spreadsheet to plan an event - Choose suitable ways to present data
PROGRAMMING	- Can follow instructions - Can give instructions - Can read simple instructions - Can read directional arrows - Can give a Bee-bot a simple command - Can debug instructions when they go wrong	- Explain what a given command will do - Act out a given word - Combine forwards and backwards commands to make a sequence - Combine four direction commands to make sequences - Plan a simple program - Find more than one solution to a problem - Choose a command for a given purpose - Show that a series of commands can be joined together - Identify the effect of changing a value - Explain that each sprite has its own instructions - Design the parts of a project - Use my algorithm to create a program	- Describe a series of instructions as a sequence - Explain what happens when we change the order of instructions - Use logical reasoning to predict the outcome of a program (series of commands) - Explain that programming projects can have code and artwork - Design an algorithm - Create and debug a program that I have written - Explain that a sequence of commands has a start - Explain that a sequence of commands has an outcome - Create a program using a given design - Change a given design - Create a program using my own design - Decide how my project can be improved	- Explore a new programming environment - Identify that commands have an outcome - Explain that a program has a start - Recognise that a sequence of commands can have an order - Change the appearance of my project - Create a project from a task description - Explain how a sprite moves in an existing project - Create a program to move a sprite in four directions - Adapt a program to a new context - Develop my program by adding features - Identify and fix bugs in a program - Design and create a maze-based challenge	- Identify that accuracy in programming is important - Create a program in a text-based language - Explain what 'repeat' means - Modify a count-controlled loop to produce a given outcome - Decompose a task into small steps - Create a program that uses count-controlled loops to produce a given outcome - Develop the use of count-controlled loops in a different programming environment - Explain that in programming there are infinite loops and count controlled loops - Develop a design that includes two or more loops which run at the same time - Modify an infinite loop in a given program	- Explain how selection is used in computer programs - Relate that a conditional statement connects a condition to an outcome - Explain how selection directs the flow of a program - Design a program which uses selection - Create a program which uses selection - Evaluate my program	- Define a 'procedure' as something that can be run multiple times - Explain why a procedure is used in a program - Choose how to improve a game by using procedures - Define a 'variable' as something that is changeable - Explain why a variable is used in a program - Choose how to improve a game by using variables - Design a project that builds on a given example - Use my design to create a project - Evaluate my project

				- Design a project that includes repetition - Create a project that includes repetition		

Key Vocabulary – See the link below for detailed explanations of the terms https://teachcomputing.org/primary-computing-glossary	Device, computer, mouse, click, keyboard, numbers, letters, document, type, spacebar, screen, internet, online, technology, content, text, image, video, audio, media, digital, data, information, personal, online, real life, trust, categories, action, success, failure, repeat, outcome, instructions, approach, control, patterns, input, order, sort, group, pictrogram	Algorithm, Attribute (property), Code, Code snippet, Command, Computer, Data, Debugging Information, Information Technology, Object, Program, Property (attribute), Run (execute), Technology	Algorithm, Attribute (property), Browser, Code, Code snippet, Command, Computer, Computer network, Computer system, Condition, Condition-controlled loop, Count-controlled loop, Data, Data set, Debugging, Decompose, Digital device, Domain name, Execute (run) Hardware, HTML (HyperText Markup Language), Hyperlink, Infinite loop, Information, Input, Input device, Internet, Loop, Loop(condition-controlled), Loop (count-controlled), Loop (infinite), Network, Object, Output, Output device, Procedure, Process, Program, Repetition, Router, Run (execute), Selection, Server, Software, Stored (data), Subroutine, Switch (network switch), URL (Uniform Resource Locator), Variable, Web, Web address, Web browser, Web page, Website, WiFi, WAP (Wireless Access Point) WWW (World Wide Web)

Resources – Including link to Reading	See long term plan for the resources for each year group