Seathorne Primary Academy
Progression of Learning for Computing

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Year 1	**Data and information – Grouping data (Information Technology)** -Identify some attributes of an object -Collect simple data -Show that collected data can be counted -Describe the properties of an object -Choose an attribute to group objects by -Group objects to answer questions -Explain that objects can be grouped by similarities (attribute) -Describe a group of objects (based on commonality)	**Computing systems and networks – Technology around us (Digital Literacy)** -Choose a piece of technology to do a job -Recognise that some technology can be used in different ways -Identify the main parts of a computer -Use a mouse in different ways -Use a keyboard to type -Use a keyboard to edit text -Show how to use technology safely	**Creating media – Digital painting (Information Technology)** -Create a picture using freehand tools -Use shape and line tools when precision is needed -Use a range of paint colours -Use the fill tool to colour an enclosed area -Use the undo button to correct a mistake -Combine a range of tools to create a piece of artwork LQ: How can we paint using computers? LQ: Can I use shapes and lines? LQ: Can I make careful choices? LQ: Why did I choose that? LQ: Can I paint all by myself? LQ: Can I compare computer art and painting?	**Creating media – Digital writing (Information Technology)** -Use letter, number, and Space keys to enter text into a computer -Use punctuation and special characters -Select text -Use the Backspace key to remove text -Position the text cursor in a chosen location -Choose options to achieve a desired effect -Change the appearance of text on a computer -Use Undo LQ: Can I write on a keyboard? LQ: Can I add and remove text on a computer? LQ: How can I change the look of my text? LQ: Can I make careful choices when changing text? LQ: Can you explain why you used those tools? LQ: Do you prefer to write on the computer or paper?	**Programming A – Moving a robot (Computer Science)** -Enact a given word -Predict the outcome of a command on a device -List which commands can be used on a given device -Run a command on a floor robot -Choose a command for a given purpose -Choose a series of words that can be enacted as a program -Choose a series of commands that can be run as a program -Build a sequence of commands in steps -Combine commands in a program -Run a program on a device LQ: Can I explain what a given command will do? LQ: Can I act out a given word? LQ: Can I compare forwards and backwards movements?? LQ: Can I combine four direction commands to make sequences? LQ: Can I explain what my program should do? LQ: Can I find more than one solution to a problem?	**Programming B – Programming animations (Computer Science)** -Choose a series of words that can be enacted as a program -Choose a series of commands that can be run as a program -Run a program on a device LQ: Can I comparing tools? LQ: Can I join blocks? LQ: Can I make a change? LQ: Can I add sprites? LQ: Can I design a project? LQ: Can I follow my design?

Year 2	**Computing systems and networks – IT around us (Digital Literacy)** -Describe some uses of computers -Identify information technology in school -Identify information technology beyond school -Show how to use information technology safely	**Programming A – Robot algorithms (Computer Science)** - Choose a series of words that can be enacted as a sequence -Choose a series of instructions that can be run as a program -Create a program -Trace a sequence to make a prediction -Run a program on a device -Debug a program that I have written	**Data and information – Pictograms (Information Technology)** -Show I can enter data onto a computer -Recognise that people, animals, and objects can be described by attributes -Use a computer to view data in different formats -Use pictograms to answer single-attribute questions -Use a computer to answer comparison questions (graphs, tables)	**Creating media – Digital music (Information Technology)** -Experiment with musical patterns on a computer -Experiment with different sounds on a computer -Use a computer to create a musical pattern -Use a computer to compose a rhythm and a melody on a given theme -Use a computer to play the same music in different ways (e.g. tempo) -Evaluate a musical composition created on a computer -Improve a musical composition created on a computer	**Programming B – Programming quizzes (Computer Science)** -Choose a series of words that can be enacted as a sequence -Explain what happens when we change the order of instructions -Choose a series of commands that can be run as a program -Trace a sequence to make a prediction -Test a prediction by running the sequence -Create and debug a program that I have written -Run a program on a device	**Creating media – Digital photography (Information Technology)** -Capture a digital image -Take photographs in both landscape and portrait formats -View photographs on a digital device -Decide which photographs to keep -Hold the camera still to take a clear photograph -Use zoom to change the composition of a photograph -Consider lighting before taking a photograph -Use filters to edit the appearance of a photograph -Improve a photograph by retaking it
Year 3	**Computing systems and networks – Connecting Computers (Digital Literacy)** -Identify input and output devices -Explain that a computer system accepts an input and processes it to	**Creating media – Stop-frame animation (Information Technology)** -Set up the work area with an awareness of what will be captured -Plan an animation using a storyboard	**Creating media – Desktop publishing (Information Technology)** -Show that page orientation can be changed -Add text to a placeholder -Organise text and image	**Data and information – Branching Databases (Information Technology)** -Retrieve information from different levels of the branching -Create questions with yes/no answers	**Programming A – Sequence sounds (Computer Science)** -Build a sequence of commands -Combine commands in a program -Order commands in a program	**Programming B – Events and actions in programs (Computer Science)** -Build a sequence of commands -Combine commands in a program -Order commands in a program

	produce an output -Explain how a computer network can be used to share information -Explain the role of a switch server, and wireless access point in a network -Identify network devices around me -Explain how networks can be connected to other networks	-Capture an image -Use the onion skinning tool to review subject position -Move a subject between captures -Review a captured sequence of frames as an animation -Remove frames to improve an animation -Add media to enhance an animation -Review a completed project	placeholders in a page layout -Add and remove images to and from placeholders -Edit text in a placeholder -Move resize and rotate images -Choose fonts and apply effects to text -Review a document		-Create a sequence of commands to produce a given outcome	-Create a sequence of commands to produce a given outcome
Year 4	**Computing systems and networks – The Internet (Computer Science)** -Explain that the global interconnection of networks in the internet -Explain how the content of the World Wide Web is created, owned, and shared by people -Explain that the internet enables us to view the World Wide Web - Explain that the World Wide Web comprises of websites and web pages - Explain the benefits of the World Wide Web	**Creating media – Audio production (Information Technology)** -Record sound using a computer -Play recorded audio -Import audio into a project -Delete a section of audio -Change the volume of tracks in a project	**Creating media – Photo editing (Information Technology)** -Use a computer to (further)manipulate images -Open/retrieve an image -Change the composition of an image (arrange, rotate, flip, crop, cut out a part) -Apply a change globally (adjust colours, apply filters, add effects) -Use the most appropriate tool for a particular purpose -Apply changes locally (retouch, reuse) -Make additions (draw, add text, add an element (e.g. a border)	**Data and information – Data logging (Information Technology)** -Use a digital device to collect data automatically -Choose how often to automatically collect data samples -Use a set of logged data to find information -Use a computer program to sort data by one attribute -Export information in different formats	**Programming A – Repetition in shapes (Computer Science)** - List an everyday task as a set of instructions including repetition -Use an indefinite loop to produce a given outcome -Use a count-controlled loop to produce a given outcome -Plan a program that includes appropriate loops to produce a given outcome -Recognise tools that enable more than one process to be run at the same time (concurrency) -Create two or more sequences that run at the same time	**Programming B – Repetition in games (Computer Science)** -List an everyday task as a set of instructions including repetition -Use an indefinite loop to produce a given outcome -Use a count-controlled loop to produce a given outcome -Plan a program that includes appropriate loops to produce a given outcome -Recognise tools that enable more than one process to be run at the same time (concurrency) -Create two or more sequences that run at the same time
Year 5	**Computer Systems and Networks – Systems and searching (Computer Science)** -Describe the input and output of a search engine -Demonstrate that different search engines produce different results -Evaluate the results of search terms	**Creating Media – Introduction to vector drawing (Information Technology)** -Add an object to a vector drawing -Select one object or multiple objects -Delete objects -Move objects between the layers of a drawing	**Programming A – Selection in physical computing (Computer Science)** -Create a condition-controlled loop -Use a condition in an "if…then.." statement to start an action -Use selection to switch the program flow in one of two	**Data and information - Flat file databases (Information Technology)** -Choose different ways to view data -Choose which attribute and value to search by to answer a given question (operands) -Ask questions that need more than one attribute to answer	**Programming B – Selection in quizzes (Computer Science)** -Chose a condition to use in a program -Create a condition-controlled loop -Use a condition in an "if…then.." statement to start an action	**Creating Media – Video production (Information Technology)** -Use different camera angles -Use pan, tilt and zoom -Identify features of a video recording device or application -Combine filming techniques for a given purpose -Determine what scenes will

		-Group and ungroup selected objects -Duplicate objects using copy and paste -Modify objects -Reposition objects -Combine options to achieve a desired effect -Create a vector drawing for a given purpose	things -Use a condition in an "if…then..else…" statement to produce given outcomes	-Choose which attribute to sort data by to answer a given question -Choose multiple criteria to search data to answer a given question (AND and OR) -Select an appropriate graph to visually compare data -Choose suitable ways to present information to other people	-Use selection to switch the program flow -Use if…then…else… to switch program flow in one of two ways	convey your idea -Choose to reshoot a scene or improve later through editing -Decide what changes I will make when editing -Use split, trim and crop to edit a video
Year 6	**Computer Systems and Networks – Communication and collaboration (Computer Science)** -Outline methods of communicating and collaborating using the internet -Choose methods of internet communication and collaboration for given purposes -Evaluate different methods of online communication and collaboration -Decide what you should and should not share online	**Creating media – 3D modelling (Information technology)** -Create 3D graphical objects on a computer screen -Alter the view of the 3D space -Place a 3D object in a 3D space -Select an object -Delete an object -Duplicate an object -Reposition objects in three dimensions -Rotate objects in three dimensions -Resize an object in three dimensions -Recolour an object -Use an object as a placeholder -Recognise that blank objects must be used as placeholders to create holes -Select multiple objects -Recognise the role of scale in design -Group objects -Modify multiple objects	**Data and information – Introduction to Spreadsheets (Information technology)** -Calculate data using a formula for each operation -Use functions to create new data -Use existing cells within a formula -Choose suitable ways to present spreadsheet data	**Programming A – Variables in games (Computer Science)** -Identify a variable in an existing program -Experiment with the value of an existing variable -Choose a name that identifies the role of a variable to make it easier for humans to understand it -Decide where in a program to set a variable -Update a variable with a user input -Use an event in a program to update a variable -Use a variable in a condition statement to control the flow of a program -Use the same variable in more than one location in a program	**Creating media – Web page creation (Computer Science)** -Review an existing website (navigation bars, header) -Create a new blank web page -Add text to a web page -Set the style of text on a web page -Change the appearance of text -Embed media in a web page -Add web pages to a website -Preview a web page (different screen sizes) -Insert hyperlinks between pages -Insert hyperlinks to another site	**Programming B – Sensing movement (Computer Science)** -Identify a variable in an existing program -Experiment with the value of an existing variable -Choose a name that identifies the role of a variable to make it more usable (to humans) -Decide where in a program to set a variable -Update a variable with a user input -Use an event in a program to update a variable -Use a variable in a conditional statement to control the flow of a program -Use the same variable in more than one location in a program