

Computing Progression of skills

		YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
A U T U M N T E R M	Enquiry 1 = Autumn 1 2= Autumn 2	<ol style="list-style-type: none"> Technology around us Programming A- Moving a Robot 	<ol style="list-style-type: none"> Computing systems and networks- IT around us Programming A- Robot Algorithms 	<ol style="list-style-type: none"> Computing systems and networks. Connecting Computers- Unit 1 Programming A- Sequence in music 	<ol style="list-style-type: none"> Computing systems and networks- The internet Programming A- Repetition in shapes 	<ol style="list-style-type: none"> Computing systems and Networks Programming A- Selection in physical computers 	<ol style="list-style-type: none"> Computing systems and networks-Communication Programming A- Variables in games
	NC link	<u>Computing</u> <ul style="list-style-type: none"> Recognise common uses of information technology beyond school Use technology purposefully to create, organise, store, manipulate, and retrieve digital content Understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions. Create and debug simple programs Use logical reasoning to predict the behaviour of simple programs Recognise common uses of information technology beyond school 	<u>Computing</u> <ul style="list-style-type: none"> Using the internet safely, respectfully and responsibly; Understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions 	<u>Computing</u> <ul style="list-style-type: none"> Use sequence, selection, and repetition in programs; work with variables and various forms of input and output Design, write, and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts 	<u>Computing</u> <ul style="list-style-type: none"> Understand computer networks including the internet; how they can provide multiple services, such as the World Wide Web, and the opportunities they offer for communication and collaboration Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. 	<u>Computing</u> <ul style="list-style-type: none"> Understand computer networks, including the Internet; Use technology safely, respectfully and responsibly; identify a range of ways to report concerns about content and contact. Select, use & combine a variety of software on a range of digital devices to design & create a range of programs, systems & content that accomplish given goals, including collecting, analysing, evaluating & presenting data & info 	<u>Computing</u> <ul style="list-style-type: none"> Understand computer networks, including the internet; how they can provide multiple services, such as the World Wide Web, and the opportunities they offer for communication and collaboration Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information
	Knowledge	<ol style="list-style-type: none"> This unit progresses students' knowledge and understanding of technology and how they interact with it in school. Learners will build their knowledge of parts of a computer and develop the basic skills needed to effectively use a computer keyboard and mouse. This unit directly precedes the Y2 Computer systems and networks unit, IT around us This unit focuses on developing learners' understanding of computer programming. It highlights that algorithms are a set of clear, precise, and ordered instructions, and that a computer program is the implementation of an algorithm on a digital device. The unit also introduces reading 'code' to predict what a program will do. Learners will engage in aspects of program design, including outlining the project task and creating algorithms. 	<p>Understand that devices can be described as information technology (IT). Examples could include: Computers: PCs, laptops, tablets; Devices made to work with computers: scanners, barcode scanners, printers., smart speakers. Chn will also need to be aware that as technology continues to develop rapidly.</p> <p>It highlights that algorithms are a set of clear, precise, and ordered instructions, and that a computer program is the implementation of an algorithm on a digital device. The unit also introduces reading 'code' to predict what a program will do. Learners will engage in aspects of program design, including outlining the project task and creating algorithms.</p>	<p>1. Understanding of digital and non-digital devices. The key difference between them is that a digital device is capable of some processing, ie it has functions beyond being either on or off. You will also need to be familiar with the concept of input, process, output (IPO), which underpins all digital devices.</p> <p>2. Understanding of sequences in a new programming language. Understanding that sequences is important. This unit also develops learners' understanding of design in programming, using the four levels of abstraction.</p>	<p>1. Understanding of networks, to appreciate the internet as a network of networks which need to be kept secure. They will learn that the World Wide Web is part of the internet, and will be given opportunities to explore the World Wide Web for themselves in order to learn about who owns content and what they can access, add, and create.</p> <p>2. Understand the concept of sequencing in programming through Scratch. Identifying patterns in everyday life. Understanding decomposition.</p>	<p>1. Understanding of computer systems and how information is transferred between systems and devices. Learners consider small-scale systems as well as large-scale systems. They explain the input, output, and process aspects of a variety of different real-world systems. Learners discover how information is found on the World Wide Web, through learning how search engines work (including how they select and rank results) and what influences searching, and through comparing different search engines.</p> <p>2. Conditions as a means of controlling the flow of actions in a program. Learners will make use of their knowledge of repetition and conditions when introduced to the concept of selection (through the 'if...then...' structure) and write algorithms and programs that utilise this concept.</p>	<p>1. Understanding of the way data is sent over the internet. Some key terms they will need to be familiar with are Internet Protocol (IP) addresses; Domain Name Server (DNS); and data packets, including the main parts of a packet.</p> <p>2. Understanding variables in Scratch, a block-based programming language. Knowing where variables can be used and how they can be set and changed through the running of a program. This unit also develops learners' understanding of design in programming, using the four levels of abstraction.</p>

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Skills	<ul style="list-style-type: none"> To choose a piece of technology to do a job. To use a keyboard to type. To use a mouse in different ways. To identify the main parts of a computer. To choose a piece of technology to do a job. To show how to use technology safely. To enact a given Word. To run a command on a floor robot. To choose a command for a given purpose. To choose a series of commands that can be run as a program. To combine commands in a program. 	<ul style="list-style-type: none"> To describe some uses of computers. To identify information technology in school. To identify information technology beyond school. To show how to use information technology safely. To choose a series of words that can be enacted as a sequence. To trace a sequence to make a prediction To create a program. To run a program on a device. 	<ul style="list-style-type: none"> use sequence, selection, and repetition in programs; work with variables and various forms of input and output To identify input and output devices To build a sequence of commands. To combine commands in a program. To order commands in a program. 	<ul style="list-style-type: none"> Use search technologies effectively. Select, use, and combine a variety of software (including internet services) on a range of digital device. To use an indefinite loop to produce a given outcome To use a count-controlled loop to produce a given Outcome To list an everyday task as a set of instructions including repetition 	<ul style="list-style-type: none"> To describe the input and output of a search engine To demonstrate that different search terms produce different results. To evaluate the results of search terms To create a condition-controlled loop. To use a condition in an 'if...then...' statement to start an action. To use selection to switch the program flow in one of two ways. 	<ul style="list-style-type: none"> To outline methods of communicating and collaborating using the internet To choose methods of internet communication and collaboration for given purposes. To evaluate different methods of online communication and collaboration. Evaluate different methods of online communication and collaboration To identify a variable in an existing program To decide where in a program to set a variable. To choose a name that identifies the role of a variable to make it easier for humans to understand it
Vocabulary	<ul style="list-style-type: none"> IT, Device, Computer, Tablet, Laptop, Printer Program, Algorithm, Command, Floor robot (Bee-Bot or Blue-Bot) ,Sequence, Instruction, Clear memory button, Run program button. 	<ul style="list-style-type: none"> IT, Device, Computer, Tablet, Laptop, Printer Program, Algorithm, Command , Debugging, Bee-Bot or Blue-Bot Sequence, Instruction 	<ul style="list-style-type: none"> Input, output, processing, device, computer network, server Program, Algorithm, Command, Sprite, Sequence, Code, Block, Scratch 	<ul style="list-style-type: none"> Internet, Computer network, router, World Wide Web, website, URL. Program Algorithm, Command, Condition, Repetition, Loop (condition-controlled) , Loop (count-controlled) ,Procedure, Subroutine, Decompose 	<ul style="list-style-type: none"> Computer, computer system, input, process, output, web search engine. Program , Algorithm , Command Condition, Repetition, Infinite loop, Condition-controlled loop, Count, controlled loop, Selection 	<ul style="list-style-type: none"> Internet, data, protocol, Domain Name Server (DNS), Internet protocol addresses (IP), Data packets, header, data payload. Program, Algorithm, Command, Condition, Repetition, Infinite loop, Condition-controlled loop, Count-controlled loop, Selection, Variable

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		YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
S P R I N G	Enquiry	1. Creating media- Digital painting 2.Programming B- Moving a robot	1. Crating media- Digital photography 2. Programming B	1. Creating media- stop-frame animation. 2. Programming B- Events and actions in programs	1. Creating media- Audio production 2. Programming B- Repetition in games	1.Creating media- Video production 2. Programming B- Selection in qyizzes	1. Creating media- Web page creation 2. Programming B- sensing
	NC link	<p>Computing</p> <ul style="list-style-type: none"> Use technology purposefully to create, organise, store, manipulate, and retrieve digital content <p>Art and Design</p> <p>Pupils should be taught:</p> <ul style="list-style-type: none"> To develop a wide range of art and design techniques in using colour, pattern, texture, line, shape, form, and space About the work of a range of artists, craft makers, and designers, describing the differences and similarities between different practices and disciplines and making links to their own work 	<p>Computing</p> <ul style="list-style-type: none"> Use technology purposefully to create, organise, store, manipulate, and retrieve digital content Recognise common uses of information technology beyond school Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies <p>Art and design</p> <ul style="list-style-type: none"> To develop a wide range of art and design techniques in using colour, pattern, texture, line, shape, form, and space 	<p>Computing</p> <p>Literacy links</p> <ul style="list-style-type: none"> Pupils should be taught to: draft and write by: in narratives, creating settings, characters and plot Pupils should be taught to: proof-read for spelling and punctuation errors <p>History</p> <ul style="list-style-type: none"> The Roman Empire and its impact on Britain 	<p>Computing – KS2</p> <p>Science – Year 4 (Lesson 2)</p> <ul style="list-style-type: none"> Sound: Find patterns between the volume of a sound and the strength of the vibrations that produced it 	<p>Computing</p> <p>Internet safety</p> <ul style="list-style-type: none"> Use technology safely, respectfully, and responsibly; recognise acceptable/unacceptable behaviour 	<p>Computing</p> <p>English links</p> <ul style="list-style-type: none"> Writing composition: Identifying the audience for and purpose of the writing, selecting the appropriate form, and using other similar writing as models for their own.
	Knowledge	<ol style="list-style-type: none"> Learners will develop their understanding of a range of tools used for digital painting. They will then use these tools to create their own digital paintings, while gaining inspiration from a range of artists’ work. Learners will consider their preferences when painting with and without the use of digital devices. Learners will be introduced to on-screen programming through ScratchJr. Learners will understand the way a project looks by investigating sprites and backgrounds. They will use programming blocks to use, modify, and create programs. Learners should understand the early stages of program design through the introduction of algorithms. 	<ol style="list-style-type: none"> Learners will learn to recognise that different devices can be used to capture photographs and will gain experience capturing, editing, and improving photos. Finally, they will use this knowledge to recognise that images they see may not be real. Learners begin to understand that sequences of commands have an outcome, and make predictions based on their learning. They use and modify designs to create their own quiz questions in ScratchJr, and realise these designs in ScratchJr using blocks of code. Finally, learners evaluate their work and make improvements to their programming projects. 	<ol style="list-style-type: none"> Learners will use a range of techniques to create a stop-frame animation using tablets. Next, they will apply those skills to create a story-based animation. This unit will conclude with learners adding other types of media to their animation, such as music and text. This unit explores the concept of sequencing in programming through Scratch. It begins with an introduction to the programming environment, which will be new to most learners. They will be introduced to a selection of motion, sound, and event blocks which they will use to create their own programs, featuring sequences. The final project is to make a representation of a piano. The unit is paced to focus on all aspects of sequences, and make sure that knowledge is built in a structured manner. Learners also apply stages of program design through this unit. 	<ol style="list-style-type: none"> Learners will identify the input device (microphone) and output devices (speaker or headphones) required to work with sound digitally. They will discuss the ownership of digital audio and the copyright implications of duplicating the work of others. In order to record audio themselves, learners will use Audacity to produce a podcast, which will include editing their work, adding multiple tracks, and opening and saving the audio files. Finally, learners will evaluate their work and give feedback to their peers. Where learners can discover similarities between two environments. Learners look at the difference between count-controlled and infinite loops, and use their knowledge to modify existing animations and games using repetition. Their final project is to design and create a game which uses repetition, applying stages of programming design throughout. 	<ol style="list-style-type: none"> They will be exposed to topic-based language and develop the skills of capturing, editing, and manipulating video. Learners are guided with step-by-step support to take their idea from conception to completion. At the conclusion of the unit, learners have the opportunity to reflect on and assess their progress in creating a video. Understand ‘selection’ by and how ‘conditions’ can be used in programming. Demonstrate how the ‘if... then... else...’ structure can be used to select different outcomes depending on whether a condition is ‘true’ or ‘false’. They represent this understanding in algorithms, and then construct programs in the Scratch programming environment. Write programs that ask questions and use selection to control the outcomes based on the answers given. They use this knowledge to design a quiz in response to a given task and implement it as a program 	<ol style="list-style-type: none"> Can create websites for a chosen purpose. Learners identify what makes a good web page and use this information to design and evaluate their own website using Google Sites. Throughout the process, learners pay specific attention to copyright and fair use of media, the aesthetics of the site, and navigation paths. Children bring together elements of all the four programming constructs: sequence from Year 3, repetition from Year 4, selection from Year 5, and variables (introduced in Year 6 – ‘Programming A’. It offers pupils the opportunity to use all of these constructs in a different, but still familiar environment, while also utilising a physical device — the micro:bit. The unit begins with a simple program for pupils to build in and test within the new programming environment, before transferring it to their micro:bit. Pupils then take on three new projects in Lessons 2,

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							3, and 4, with each lesson adding more depth. 3.
Skills	<ul style="list-style-type: none">To use shape and line tools when precision is neededTo create a picture using freehand toolsTo use a range of paint ColoursTo use the fill tool to colour an enclosed areaTo use the undo button to correct a mistakeTo combine a range of tools to create a piece of artworkTo choose a series of words that can be enacted as a programChoose a series of commands that can be run as a programTo run a program on a device	<ul style="list-style-type: none">To capture a digital ImageTo view photographs on a digital deviceTo take photographs in both landscape and portrait formatTo decide which photographs to keepTo hold the camera still to take a clear photographTo use zoom to change the composition of a photograph	<ul style="list-style-type: none">To plan an animation using a story board.To capture an image.To review subject position and move a subject between captures.To remove frames to improve animationTo build a sequence of commandsTo combine commands in a programTo order commands in a programTo create a sequence of commands to produce a given outcome	<ul style="list-style-type: none">To record sound using a computerTo play a recorded audioTo import audio into a projectTo delete a section of audioTo change the volume of tracks in a projectTo list an everyday task as a set of instructions including repetitionTo use an indefinite loop to produce a given outcomeTo use a count-controlled loop to produce a given outcomeTo plan a program	<ul style="list-style-type: none">To use different camera anglesTo use pan, tilt and zoomTo identify features of a video recording device or applicationTo combine filming techniques for a given purposeTo determine what scenes will convey your ideaTo choose to reshoot a scene or improve later through editingTo decide what changes I will make when editingTo use split, trim and crop to edit a videoTo choose a condition to use in a programTo create a condition-controlled loopTo use a condition in an ‘if... then...’ statement to start an actionTo use selection to switch program flowTo use ‘if... then... else...’ to switch program flow in one of two ways	<ul style="list-style-type: none">To review an existing website (navigation bars, header)To create a new blank web pageTo add text to a web pageTo set the style of text on a web pageTo embed media in a web pageTo change the appearance of textTo add web pages to a websiteTo preview a web page (different screen sizes)To insert hyperlinks between pagesTo insert hyperlinks to another siteTo identify a variable in an existing programTo experiment with the value of an existing variableTo choose a name that identifies the role of a variable to make it more usable (to humans)To decide where in a program to set a variableTo update a variable with a user inputTo use an event in a program to update a variableTo use a variable in a conditional statement to control the flow of a programTo use the same variable in more than one location in a program	
Vocabul ary	<ul style="list-style-type: none">Computer, picture, digital tool, line tool, shape tool, digital picture.Program, algorithm, command, code, sprite, run a program, start block.	<ul style="list-style-type: none">Digital device, capture, photograph, editing, framing, editing software, adjust tool.Program, algorithm, sequence, command, code, debug, block.	<ul style="list-style-type: none">Animation, on-screen animation, off-screen animation, flipbook, ownership, copyright, frame.Algorithm, program, command, sprite, sequence, block, motion block, pen block, debugging.	<ul style="list-style-type: none">Input device, output device, digital audio, digital audio, podcast, voice tracks, ownership, copyright.Program, algorithm, command, condition, repetition, code snippet, loop (count-controlled), infinite loop, code, software.	<ul style="list-style-type: none">Video, capturing, editing, re-shoot, digital device, scene, filming, filming techniques, visual effects.Program, algorithm, condition, repetition, infinite loop, condition-controlled loop, count-controlled loop, selection, variable.	<ul style="list-style-type: none">Webpage, user, fair use, copyright, copyright-free images, navigation paths or Breadcrumb tails, hyperlink.Program, code, variable, selection, conditional statement, software, accelerometer, debugging, input device, output device.	

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		YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
S u m m e r T e r m	Enquiry	1. Creating media- Digital Writing 2. Data and Information- Grouping Data	1. Crating media- Digital music 2. Programming B-Programming quizzes	1. Creating media- Desktop Publishing 2. Data and information- Branching databases	1. Data and information- Data logging 2. Creating media- Photo editing	1. Data and information- Flat-file databases 2. Creating media- Introduction to vector drawing	1. Data and information- Introduction to Spreadsheets 2. Creating media- 3D Modelling
	NC link	Computing <ul style="list-style-type: none"> Use technology purposefully to create, organise, store, manipulate, and retrieve digital content English – Write sentences by: <ul style="list-style-type: none"> saying out loud what they are going to write about composing a sentence orally before writing it 	Computing <ul style="list-style-type: none"> Use technology purposefully to create, organise, store, manipulate, and retrieve digital content Recognise common uses of information technology beyond school Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions Create and debug simple programs Use logical reasoning to predict the behaviour of simple programs Use technology purposefully to create, organise, store, manipulate and retrieve digital content develop a range of art and design techniques in using, pattern, form, and	Computing Literacy links <ul style="list-style-type: none"> Pupils should be taught to: draft and write by: in narratives, creating settings, characters and plot Pupils should be taught to: proof-read for spelling and punctuation errors 	Computing – KS2 <ul style="list-style-type: none"> Select, use, and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems, and content that accomplish given goals, including collecting, analysing, evaluating, and presenting data and information Use technology safely, respectfully, and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact 	Computing – KS2 <ul style="list-style-type: none"> Select, use, and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems, and content that accomplish given goals, including collecting, analysing, evaluating, and presenting data and information. 	Computing Mathematics- Number – addition, subtraction, multiplication, and division: <ul style="list-style-type: none"> Solve problems involving addition, subtraction, multiplication, and division Statistics: <ul style="list-style-type: none"> Interpret and construct pie charts and line graphs, and use these to solve problems Calculate and interpret the mean as an average Art and design – KS2 Design and technology – KS2
	Knowledge	<ol style="list-style-type: none"> Learners will develop their understanding of the various aspects of using a computer to create and manipulate text. They will be able to justify their reasoning in making changes to text. They will consider the differences between using a computer to create text, and writing text on paper. They will be able to explain which method they prefer and explain their reasoning for choosing this. Learners will understand that to search data, it must have labels. This unit of work focuses on assigning data (images) with different labels in order to demonstrate how computers are able to group and present data. 	<ol style="list-style-type: none"> Learners will listen to a variety of pieces of music and consider how music can make them think and feel. Learners will compare creating music digitally and non-digitally. Learners will look at patterns and purposefully create music. Learners begin to understand that sequences of commands have an outcome, and make predictions based on their learning. They use and modify designs to create their own quiz questions in ScratchJr, and realise these designs in ScratchJr using blocks of code. Finally, learners evaluate their work and make improvements to their programming projects. 	<ol style="list-style-type: none"> Become familiar with the terms 'text' and 'images' and understand that they can be used to communicate messages. They will use desktop publishing software and consider careful choices of font size, colour and type to edit and improve premade documents. Learners will be introduced to the terms 'templates', 'orientation', and 'placeholders' and begin to understand how these can support them in making their own template for a magazine front cover Understand what a branching database is and how to create one. They will use yes/no questions to gain an understanding of what attributes are and how to use them to sort groups of objects. Using an identification tool using a branching database, which they will test by using it. They will also consider real-world applications for branching databases. 	<ol style="list-style-type: none"> Understand how and why data is collected over time. Consider the senses that humans use to experience the environment and how computers can use special input devices called sensors to monitor the environment. Learners will data as well as access data captured over long periods of time and spend time using a computer to review and analyse data. Understanding of how digital images can be changed and edited, and how they can then be resaved and reused. They will consider the impact that editing images can have, and evaluate the effectiveness of their choices. 	<ol style="list-style-type: none"> Understand how a flat-file database can be used to organise data in records. To explain that a computer program can be used to organise data. To choose different ways to view data. Understand how to use different drawing tools to help them create images. Learners recognise that images in vector drawings are created using shapes and lines, and each individual element in the drawing is called an object. Learners will layer their objects and begin grouping and duplicating them to support the creation of more complex pieces of work. 	<ol style="list-style-type: none"> Understand how to organise data into columns and rows to create their own data set. Learners will know the importance of formatting data to support calculations, while also being introduced to formulas and will begin to understand how they can be used to produce calculated data. Learners will understand they can use spreadsheets to plan different events and answer questions. Knowledge and understanding of using a computer to produce 3D models. Understanding of 3D space, moving, resizing, and duplicating objects. Ability to examine the benefits of grouping and ungrouping 3D objects, knowing how to plan, develop, and evaluate their own 3D model of a building.

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Skills	<ul style="list-style-type: none">• Use letter, number, and Space keys to enter• Text into a computer• Use punctuation and special characters• Select text• Position the text cursor in a chosen location• Choose options to change the appearance of text on a computer<ul style="list-style-type: none">• To identify some attributes of an object• To collect simple data• To show that collected data can be counted• To describe the properties of an object• To choose an attribute to group objects by• To describe a group of objects (based on commonality)	<p>To experiment with musical</p> <ul style="list-style-type: none">• patterns on a computer <p>To experiment with different sounds on a</p> <ul style="list-style-type: none">• computer <p>To use a computer to</p> <ul style="list-style-type: none">• create a musical pattern <p>To use a computer to compose a rhythm and a</p> <ul style="list-style-type: none">• melody on a given theme <p>To use a computer to play the same music in different</p> <ul style="list-style-type: none">• ways (e.g. tempo) <p>To evaluate a musical composition created on a computer</p> <ul style="list-style-type: none">• Use logical reasoning to predict the outcome of a program• Recall that a series of instructions can be issued before they are enacted• Choose a series of words that can be enacted as a sequence	<ul style="list-style-type: none">• To show that page orientation can be changed• To organise text and image placeholders in a page layout• To add and remove images to and from placeholders• To add text to a placeholder• To edit text in a placeholder<ul style="list-style-type: none">• To review a document• To create questions with yes/no answers• To choose questions that will divide objects into evenly sized subgroups• To repeatedly create subgroups of objects• To identify an object using a branching database• To retrieve information from different levels of the branching database	<ul style="list-style-type: none">• To use a digital device to collect data automatically• To choose how often to automatically collect data• Samples• To use a set of logged data to find information• To use a computer program to sort data by one attribute• To export information in different formats<ul style="list-style-type: none">• To recognise that digital images can be changed for different purposes• To recognise that digital images can be manipulated• To choose the most appropriate tool for a particular purpose• To consider the impact of changes made on the quality of the image	<p>To choose different ways to</p> <ul style="list-style-type: none">• view data <p>To choose which attribute and value to search by to answer a</p> <ul style="list-style-type: none">• given question (operands) <p>To choose which attribute to sort data by to answer a given</p> <ul style="list-style-type: none">• question <p>To choose multiple criteria to search data to answer a given</p> <ul style="list-style-type: none">• question (AND and OR)<ul style="list-style-type: none">○ To add an object to a vector drawing○ To select one object or choices made multiple objects○ To delete objects○ To duplicate objects using copy and paste○ To move objects between the layers of a drawing○ To modify objects○ To reposition objects○ To group and ungroup selected objects○ To combine options to achieve a desired effect	<p>To calculate data using a</p> <ul style="list-style-type: none">• formula for each operation <p>To use functions to create new</p> <ul style="list-style-type: none">• data <p>To use existing cells within a</p> <ul style="list-style-type: none">• formula <p>To choose suitable ways to</p> <ul style="list-style-type: none">• present spreadsheet data<ul style="list-style-type: none">○ To position 3D shapes relative to one another○ To use digital tools to modify 3D objects○ To combine objects to create a 3D digital artefact○ To use digital tools to accurately size 3D objects○ To construct a 3D model which reflects a real world object	
Vocabulary	<ul style="list-style-type: none">• Toolbar, spacebar, font, keyboard, data, record, classify, properties.• Grouping, object, properties of objects, label objects, classify objects, compare objects.	<ul style="list-style-type: none">• Pictogram, organise data, data collection, tally chart, grouping, block diagram.• Patterns, rhythm, rhythm pattern, pitch, sequence, musical pattern	<ul style="list-style-type: none">• Data, data set, database, attribute, data collection, tree structure, branching database.• Text, image, layout, editing, desktop-publishing, page orientation, placeholders, template.	<ul style="list-style-type: none">• Data, data set, data collection, importing data, data logger, database.• Editing, rotate images, crop images, image composition, filters, cloning tool, photo retouching.	<ul style="list-style-type: none">• Data, data set, data collection, database, flat-file database, database field, database value.• Vector, vector drawing, resize, rotate, layers, duplicate objects, ungroup objects, group objects.	<ul style="list-style-type: none">• Data, data set, data collection, database, formatting, database field, database value.• 3D object, 3D model, resize, workplane, 3D name badge, 3D printing, placeholeders.	

EARLY YEARS

	Autumn	Spring	Summer
Enquiry	Electronic Communication Understanding Technologies Text and Multimedia	Research and E-Safety Digital images and audio	Algorithms Handling information
Early Years Curriculum Links	Playing & Exploring - Engagement <ul style="list-style-type: none"> Finding out & exploring Playing with what they know Being willing to 'have a go' 	Active Learning - Motivation <ul style="list-style-type: none"> Being involved & concentrating Keep on trying Enjoying achieving what they set out to do 	Creating & Thinking Critically – Thinking <ul style="list-style-type: none"> Having their own ideas (creative thinking) Making links (building theories) Working with ideas (critical thinking)
Knowledge	<ul style="list-style-type: none"> Can follow teachers' instructions when using an online interactive programme such as paint or draw. Can turn on an Ipad, open a programme and follow instructions. <ul style="list-style-type: none"> Can identify a range of technologies (phone, ipad, smartboard, computer) 	<ul style="list-style-type: none"> Can write a variety of CVC words using a virtual keyboard. Can explain how to stay safe when using the internet. <ul style="list-style-type: none"> Can access and visual and audio media from the internet. 	<ul style="list-style-type: none"> Can use the iPad and class cameras to take their own images Can turn on and log in to a computer Can use 'google' to find out more information about animals and use the images to support their own representations.
Skills	<ul style="list-style-type: none"> Completes a simple program on electronic devices 	<ul style="list-style-type: none"> Can access applications on an ipad Can follow simple instructions in a program Can respond appropriately to unsafe situations online. Can play, pause and forward a video 	<ul style="list-style-type: none"> Develops digital literacy skills by being able to access, understand and interact with a range of technologies <ul style="list-style-type: none"> Can use a physical keyboard to type a variety of cvc words.
Vocabulary	<ul style="list-style-type: none"> Ipad, computer, click, mouse, technology, open, exit, press 	<ul style="list-style-type: none"> Ipad, computer, click, mouse, exit, E-safety, Online safety, 	<ul style="list-style-type: none"> Internet, website, mouse, keyboard, power, button, search, type, collect