Computing Progression of Skills

Key	
National Centre for Computing Education	Teach Computing Unit
	Bespoke to St Joseph's
	New Learning
	Previous Learning
	Future Learning

Computing Progression of Skills

Reception			
Technology in our Lives	**Multimedia**	**Programming**	**Handling Data**
Understanding of the world Speaking People, Culture and Communities	Writing Being imaginative and expressive The Natural world/Speaking Creating with materials	Self confidence and self awareness Building relationships Communication and language Managing Self / Self regulation Numerical patterns Speaking	Speaking Building relationships Past and present Communication and language Select and use technology Number Managing self

Computing Progression of Skills

Computer Systems and Networks					
Y1/2 Cycle a	**Y1/2 Cycle b**	**Y3/4 Cycle a**	**Y3/4 Cycle b**	**Y5/6 Cycle a**	**Y5/6 Cycle b**
Safer Internet Day					
Technology Around Us ***New Learning*** *Information Technology Around Us* • To explain that technology is something that can help us • To identify examples of technology • To explain how examples of technology help us • To recognise that a computer is an example of technology • To choose a piece of technology to do a job • To recognise that some technology can be used in different ways • To identify the main parts of a computer • To recognise that choices are made when using technology • To explain why rules are needed when using technology • To use a mouse in different ways • To use a keyboard to type • To use the keyboard to edit text • To show how to use technology safely		**Connecting Computers** *Information Technology Around Us* *The Internet* • To describe what an input is. • To explain the process acts on the input. • To identify input and output devices • To explain the output of produced by the process • To explain a computer system accepts and input and process to produce an output • To explain how computer system can change the way that we work • To identify how changing the process can affect the output • To recognise a digital device is made up of several parts. • To recognise computers can be connected to each other. • To identify how devices in a network are connected with one another • To recognise a network is made up of a number of components • To explain how a computer network can be used to share information • To explain the role of a switch, server and wireless access points in a network		**Systems and Searching** *The Internet* *Communication and Collaboration* • To recognise that a system is a set of interconnected parts which work together • To explain that computers can be connected together to form IT systems • To identify that data can be transferred between IT systems • To recognise inputs, processes, and outputs in large IT systems • To describe the role of a particular IT system in their lives • To relate that search engines are examples of large IT systems • To describe the input and output of a search engine • To demonstrate that different search terms produce different results • To explain why search engines create indices, and that they are different for each search engine • To explain the role of web crawlers in creating an index • To explain how search results are selected • To explain that ranking orders search results to make them more useful • To explain how ranking is determined by rules, and that different search engines use different rules	

Computing Progression of Skills

Computer Systems and Networks *Continued*...

Y1/2 Cycle a	Y1/2 Cycle b	Y3/4 Cycle a	Y3/4 Cycle b	Y5/6 Cycle a	Y5/6 Cycle b
Information Technology Around Us *Technology Around Us* *Connecting Computers* • To recognise different types of computers used in school • To identify that a computer is a part of information technology • To describe some uses of computers • To recognise the features of information technology • To identify information technology in school • To identify information technology beyond school • To talk about uses of information technology • To say how rules for using information technology can help us • To explain how information technology benefits us • To recognise that choices are made when using information technology • To show how to use information technology safely		• To explain how information is passed through multiple connections. • To identify benefits of computer networks • To identify network devices around me • To explain how networks can be connected to other networks. **The Internet** *Connecting Computers* *Systems and Searching* • To describe how networks connect to other networks • To outline how information can be shared via the World Wide Web • To recognise that the World Wide Web is part of the internet • To explain that the global interconnection of networks is the internet • To recognise the need for security on the internet • To describe how to access the World Wide Web • To describe the types of content/media that can be added, created, and shared on the World Wide Web • To explain how the content of the World Wide Web is created, owned, and shared by people • To explain that the internet enables us to view the World Wide Web • To explain that the World Wide Web comprises of websites and web pages • To describe the current limitations of World Wide Web media • The reliability of content and the consequences of unreliable content • To explain the benefits of the World Wide Web		• To explain why the order of results is important and to whom • To explain how search engines make money by selling targeted advertising space • To identify some of the limitations of search engines • To evaluate the results of search terms **Communication and Collaboration** *Systems and Searching* • To recognise that data is transferred across networks using agreed protocols (methods) • To recognise that connections between computers allow access to shared stored files • To explain that data is transferred in packets • To recognise computers connected to the internet allow people in different places to work together • To discuss the opportunities that technology offers for communication and collaboration • 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 • To explain which types of media can be shared through the internet • To decide what you should and should not share online • To explain that communicating and collaboration using the internet can be public or private	

Computing Progression of Skills

Creating Media 1

Y1/2 Cycle a

Digital Painting (Graphics)

New Learning

Stop-Frame Animation (Graphics)

- To explain what different freehand tools do
- To recognise computers can be used to create art
- To create a picture using free hand tool.
- To use shape and line tools when precision is needed
- To use a range of paint colours
- To use the fill tool to colour an enclosed area
- To use the undo button to correct a mistake
- To recognise a tool can be adjusted to suit my need
- To combine a range of tools to create a piece of artwork
- To decide when it's appropriate to use each tool

Y1/2 Cycle b

Digital Photography (Photo and Video)

New Learning

Photo Editing (Photo and Video)

BHCET Media Team Workshop

- To recognise that some digital devices can capture images using a camera
- To capture a digital image
- Talk about how to take a photograph
- To recognise that photographs can be saved and viewed later
- To take photographs in both landscape and portrait format
- To make choices when composing my photograph
- To view photographs on a digital device
- To recognise features of 'good' photographs
- To decide which photographs to keep
- To identify how a photograph could be improved
- To explain the effect of light on a photograph

Y3/4 Cycle a

Stop- Frame Animation (Graphics)

Digital Painting (Graphics)

Introduction to Vectors (Graphics)

Local Animator Workshop

- To explain an animation is made up of a sequence of images
- To identify a capturing device needs to be in a fixed position
- To set up the work area with an awareness of what will be captured
- To plan an animation using a storyboard
- To capture an image
- To use the onion skinning tool to review subject position.
- To move a subject between captures
- To recognise smaller movements create smoother animations
- To explain the need in consistency of working
- To review a captured sequence of frames as an animation
- To remove frames to improve an animation

Y3/4 Cycle b

Photo Editing (Photo and Video)

Digital Photography (Photo and Video)

- To recognise that digital images can be manipulated
- To recognise that digital images can be changed for different purposes
- To use an application to change the whole of a digital image
- To use an application to change part of a digital image
- To use an application to add to the composition of a digital image
- To add text to a digital image
- To use cloning to retouch a digital image
- To use clone, copy, and paste to change the composition of a digital image
- To select part of a digital image
- To apply effects to a digital image
- To apply filters to a digital image
- To adjust colours of a digital image

Y5/6 Cycle a

Y5/6 Cycle b

Introduction to Vectors (Graphics)

Stop- Frame Animation (Graphics)

3D Modelling (Graphics)

- To identify that a vector drawing comprises separate objects
- To add an object to a vector drawing
- To select one object or multiple objects
- To delete objects
- To recognise that each object in a drawing is in its own layer
- To move objects between the layers of a drawing
- To duplicate objects using copy and paste
- To modify objects
- To reposition objects
- To group and ungroup selected objects
- To recognise that vector images can be scaled without impact on quality
- To recognise that objects can be modified in groups
- To explain how alignment and size guides can help create a more consistent drawing
- To combine options to achieve a desired effect

Computing Progression of Skills

Creating Media 1 *Continued...*					
Y1/2 Cycle a	**Y1/2 Cycle b**	**Y3/4 Cycle a**	**Y3/4 Cycle b**	**Y5/6 Cycle a**	**Y5/6 Cycle b**
• To consider impact of choices made • To compare painting using a computer with painting using brushes	• To hold the camera still to take a clear photograph • To use zoom to change the composition of a photograph • To consider lighting before taking a photograph • To recognise that photographs can be change after they have been taken • To recognise that some images are not accurate • To use simple editing tools to change the appearance of a photograph • To improve a photograph by retaking it	• To explain the impact of adding other media to an animation • To add media to enhance an animation • To review a complete project • To explain that a subject must be exported so it can be shared.	• To change the composition of a digital image by cropping • To change the composition of a digital image by rotating and flipping • To choose the most appropriate tool for a particular purpose • To consider the impact of changes made on the quality of the image		**3D Modelling (Graphics)** *Introduction to Vectors (Graphics)* • To create a vector drawing for a given purpose • To explain that 3D models can be created on a computer • To position 3D shapes relative to one another • To recognise that a 3D environment can be viewed from different perspectives • To use digital tools to modify 3D objects • To recognise that digital tools can be used to manipulate 3D objects • To combine objects to create a 3D digital artefact • To show how placeholders can create holes in 3D objects • To use digital tools to accurately size 3D objects • To recognise that artefacts can be broken down into a collection of 3D objects • To construct a 3D model which reflects a real world object

Computing Progression of Skills

Creating Media 2

Y1/2 Cycle a	Y1/2 Cycle b	Y3/4 Cycle a	Y3/4 Cycle b	Y5/6 Cycle a	Y5/6 Cycle b
Digital Writing (Text) ***New Learning*** *Desktop Publishing (Text)* • To recognise that a keyboard is used to enter text into a computer • To use letter, number, and Space keys to enter text into a computer • To recognise that the Shift key changes the output of a key • To use punctuation and special characters • To recognise that text can be edited • To recognise that text can be changed • To recognise that the appearance of text can be changed • To select text • To change the appearance of text on a computer • To use Undo To consider the impact of choices made	**Digital Music (Audio)** ***New Learning*** *Audio Production (Audio)* • To identify that computers can be used to play sounds of different instruments • To identify that the same pattern can be represented in different ways • To experiment with musical patterns on a computer • To experiment with different sounds on a computer • To compare playing music on instruments with making music on a computer • To use a computer to create a musical pattern • To use a computer to compose a rhythm and a melody on a given theme • To use a computer to play the same music in different ways (e.g. tempo) • To evaluate a musical composition created on a computer • To improve a musical composition created on a computer	**Desktop Publishing (Text)** *Digital Writing (Text)* *Web Page Creation (Text)* • To recognise how text and images can be used together to convey information • To define landscape and portrait as two different page orientations • To show that page orientation can be changed • To consider how different layouts can suit different purposes • To recognise that DTP pages can be structured with placeholders • To add text to a placeholder • To organise text and image placeholders in a page layout • To add and remove images to and from placeholders • To edit text in a placeholder • To move resize and rotate images • To recognise how different font styles and effects are used for particular purposes	**Audio Production (Audio)** *Digital Music (Audio)* Video Production (Audio) • To identify that sound can be recorded • To identify that an input device is needed to record sound • To identify that output devices are needed to play audio • To record sound using a computer • To recognise that recorded audio can be stored on a computer • To recognise that audio can be edited • To play recorded audio • To import audio into a project • To recognise that sound can be represented visually as a waveform • To delete a section of audio	**Video Production (Audio)** *Audio Production (Audio)* • To explain the features of video as a visual media format • To recognise which devices can and can't record video • To use different camera angles • To use pan, tilt and zoom • To explain the purpose of a storyboard • To identify features of a video recording device or application • To combine filming techniques for a given purpose • To recognise that filming techniques can be used to create different effects • To determine what scenes will convey your idea • To recognise the need to regularly review and reflect on a video project • To explain the limitations of editing video on a recording device • To identify that videos can be edited on a recording device or on a computer • 'To decide what changes I will make when editing • To use split, trim and crop to edit a video • To recognise projects, need to be exported to be share	

Computing Progression of Skills

Creating Media 2 *Continued...*					
Y1/2 Cycle a	**Y1/2 Cycle b**	**Y3/4 Cycle a**	**Y3/4 Cycle b**	**Y5/6 Cycle a**	**Y5/6 Cycle b**
• To use the Backspace key to remove text • To position the text cursor in a chosen location • To choose options to achieve a desired effect • To change the appearance of text on a computer		• To choose fonts and apply effects to text • To review a document • To consider the benefits of using a DTP application	• To recognise that audio can be layered so that multiple sounds can be played at the same time • To change the volume of tracks in a project • To consider the results of editing choices made	• To identify videos can be improved through and reshooting or editing • To choose to reshoot a scene or improve later through editing **Website Creation (Text)** *Desktop Publishing (Text)* • To review an existing website (navigation bars, header) • To recognise the relationship between HTML and visual display • To recognise that web pages can contain different media types • To recognise that web pages are written by people • To recognise that a website is a set of hyperlinked web pages • To recognise components of a web page layout • To create a new blank web page • To consider the ownership and use of images (copyright) • To add text to a web page • To set the style of text on a web page • To change the appearance of text • To embed media in a web page • To recognise the need to preview pages (different screens / devices) • To recognise the need for a navigation path • To insert hyperlinks between pages • To insert hyperlinks to another site • To recognise the implications of linking to content owned by others • To add web pages to a website • To preview a web page (different screen sizes)	

Computing Progression of Skills

Programming A					
Y1/2 Cycle a	**Y1/2 Cycle b**	**Y3/4 Cycle a**	**Y3/4 Cycle b**	**Y5/6 Cycle a**	**Y5/6 Cycle b**
Moving a Robot **New Learning** *Robot Algorithms* • To enact a given word • To recall words that can be enacted • To predict the outcome of a command on a device • To list which commands can be used on a given device • To explain what a given command does • To match a command to an outcome • To run a command on a floor robot • To choose a command for a given purpose • To understand that a program is a set of commands that a computer can run • To choose a series of words that can be enacted as a program • To recall that a series of instructions can be issued before they are enacted		**Sequencing Sound** *Robot Algorithms* Repetition in shapes • To explain that programs start because of an input • To explain what a sequence is • To identify that a program includes sequences of commands • To build a sequence of commands • To combine commands in a program • To identify that the sequence of a program is a process • To order commands in a program • To explain that the order of commands can affect a program's output • To identify that different sequences can achieve the same output • To identify that different sequences can achieve different outputs			**Selection in Physical Computing** *Repetition in shapes* *Variables in Games* • To explain that a condition can only be true or false • To relate that a count-controlled loop contains a condition • To compare a count-controlled loop with a condition-controlled loop • To explain that a condition-controlled loop will stop when a condition is met • To explain that when a condition is met, a loop will complete a cycle before it stops • To create a condition-controlled loop • To use a condition in an 'if…then…' statement to start an action • To explain that selection can be used to branch the flow of a program • To use selection to switch the program flow in one of two ways

Computing Progression of Skills

Programming A *Continued...*					
Y1/2 Cycle a	**Y1/2 Cycle b**	**Y3/4 Cycle a**	**Y3/4 Cycle b**	**Y5/6 Cycle a**	**Y5/6 Cycle b**
• To choose a series of commands that can be run as a program • To build a sequence of commands in steps • To combine commands in a program • To run a program on a device **Robot Algorithms** *Moving a Robot* *Sequencing Sound* • To describe that a series of instructions is a sequence • To choose a series of words that can be enacted as a sequence • To explain what happens when we change the order of instructions • To recall that a series of instructions can be issued before they are enacted • To choose a series of instructions that can be run as a program • To recognise that you can predict the outcome of a program.		**Repetition in Shapes** *Sequencing Sounds* *Selection in Physical Computing* • To create a sequence of commands to produce a given outcome • To relate what 'repeat' means • To identify everyday tasks that include repetition as part of a sequence, eg brushing teeth, dance moves • To list an everyday task as a set of instructions including repetition • To explain that we can use a loop command in a program to repeat instructions • To identify patterns in a sequence • To identify a loop within a program • To explain that in programming there are indefinite loops and count-controlled loops			• To explain that a loop can be used to repeatedly check whether a condition has been met • To use a condition in an 'if…then…else…' statement to produce given outcomes **Variables in Games** *Selection in Physical Computing* • To explain the importance of instruction order in 'if…then…else…' statements • To define a 'variable' as something that is changeable • To identify examples of information that is variable, for example, a football score during a match • To explain that a variable can be used in a program, eg 'score • To define a program variable as a placeholder in memory for a single value • To explain that a variable has a name and a value • To recognise that the value of a variable can be used by a program • To identify a variable in an existing program • To recognise that the value of a variable can be updated

Computing Progression of Skills

Programming A *Continued*...					
Y1/2 Cycle a	**Y1/2 Cycle b**	**Y3/4 Cycle a**	**Y3/4 Cycle b**	**Y5/6 Cycle a**	**Y5/6 Cycle b**
• To create a program • To trace a sequence to make a prediction • To run a program on a device • To debug a program that I have written		• To explain that an indefinite loop will run until the program is stopped • To explain that you can program a loop to stop after a specific number of times • To identify patterns in a sequence, eg 'step 3 times' means the same as 'step, step, step' • To use an indefinite loop to produce a given outcome • To use a count-controlled loop to produce a given outcome • To justify when to use a loop and when not to • To plan a program that includes appropriate loops to produce a given outcome • To explain the importance of instruction order in a loop • To recognise tools that enable more than one process to be run at the same time (concurrency) • To create two or more sequences that run at the same time • To recognise that not all tools enable more than one process to be run at once			• To define the way that a variable is changed • To recognise that a variable can be set as a constant (fixed value) • To choose a name that identifies the role of a variable to make it easier for humans to understand it • To explain the importance of setting up a variable at the start of a program (initialisation) • To decide where in a program to set a variable • To update a variable with a user input • To use an event in a program to update a variable • To use a variable in a conditional statement to control the flow of a program • To explain that there is only one value for a variable at any one time • To explain that if you change the value of a variable, you cannot access the previous value (cannot undo) • To explain that if you read a variable, the value remains • To use the same variable in more than one location in a program • To explain that the name of a variable is meaningless to the computer • To explain that the name of a variable needs to be unique

Computing Progression of Skills

Programming B					
Y1/2 Cycle a	**Y1/2 Cycle b**	**Y3/4 Cycle a**	**Y3/4 Cycle b**	**Y5/6 Cycle a**	**Y5/6 Cycle b**
	Programming Animations ***New Learning*** *Programming Quizzes* • To enact a given word • To recall words that can be enacted • To predict the outcome of a command on a device • To list which commands can be used on a given device • To explain what a given command does • To match a command to an outcome • To run a command on a floor robot • To choose a command for a given purpose • To understand that a program is a set of commands that a computer can run • To choose a series of words that can be enacted as a program • To recall that a series of instructions can be issued before they are enacted • To choose a series of commands that can be run as a program • To build a sequence of commands in steps • To combine commands in a program		**Events and Actions in Programs** *Programming Quizzes* *Repetition in Games* • To explain that programs start because of an input • To explain what a sequence is • To identify that a program includes sequences of commands • To build a sequence of commands • To combine commands in a program • To identify that the sequence of a program is a process • To order commands in a program • To explain that the order of commands can affect a program's output • To identify that different sequences can achieve the same output • To identify that different sequences can achieve different outputs	**Selection in Quizzes** *Repetition in Games* *Sensing Movement* • To explain that a condition can only be true or false • To relate that a count-controlled loop contains a condition • To compare a count-controlled loop with a condition-controlled loop • To explain that a condition-controlled loop will stop when a condition is met • To explain that when a condition is met, a loop will complete a cycle before it stops • To create a condition-controlled loop • To use a condition in an 'if…then…' statement to start an action • To explain that selection can be used to branch the flow of a program • To use selection to switch the program flow in one of two ways • To explain that a loop can be used to repeatedly check whether a condition has been met • To use a condition in an 'if…then…else…' statement to produce given outcomes • To explain the importance of instruction order in 'if…then…else…' statements.	

Computing Progression of Skills

Programming B *Continued...*					
Y1/2 Cycle a	**Y1/2 Cycle b**	**Y3/4 Cycle a**	**Y3/4 Cycle b**	**Y5/6 Cycle a**	**Y5/6 Cycle b**
	Programming Quizzes *Programming Animations* *Events and Actions in Programmes* • To run a program on a device • To describe a series of instructions as a 'sequence • To choose a series of words that can be enacted as a sequence • To explain what happens when we change the order of instructions • To recall that a series of instructions can be issued before they are enacted • To choose a series of commands that can be run as a program • To use logical reasoning to predict the outcome of a program • To trace a sequence to make a prediction • To test a prediction by running the sequence • To create and debug a program that I have written • To run a program on a device		**Repetition in Games** *Events and Actions in Programmes* *Selection In Quizzes* • To create a sequence of commands to produce a given outcome • To relate what 'repeat' means • To identify everyday tasks that include repetition as part of a sequence, eg brushing teeth, dance moves • To list an everyday task as a set of instructions including repetition • To explain that we can use a loop command in a program to repeat instructions • To identify patterns in a sequence • To identify a loop within a program • To explain that in programming there are indefinite loops and count-controlled loops • To explain that an indefinite loop will run until the program is stopped	**Sensing Movement** *Selection in Quizzes* • To define a 'variable' as something that is changeable • To identify examples of information that is variable, for example, a football score during a match • To explain that a variable can be used in a program, eg 'score • To define a program variable as a placeholder in memory for a single value • To explain that a variable has a name and a value • To recognise that the value of a variable can be used by a program • To identify a variable in an existing program • To recognise that the value of a variable can be updated • To experiment with the value of an existing variable	

Computing Progression of Skills

Programming B *Continued...*					
Y1/2 Cycle a	**Y1/2 Cycle b**	**Y3/4 Cycle a**	**Y3/4 Cycle b**	**Y5/6 Cycle a**	**Y5/6 Cycle b**
			• To explain that you can program a loop to stop after a specific number of times • To identify patterns in a sequence, eg 'step 3 times' means the same as 'step, step, step' • To use an indefinite loop to produce a given outcome • To use a count-controlled loop to produce a given outcome • To justify when to use a loop and when not to • To plan a program that includes appropriate loops to produce a given outcome • To explain the importance of instruction order in a loop • To recognise tools that enable more than one process to be run at the same time (concurrency) • To create two or more sequences that run at the same time • To recognise that not all tools enable more than one process to be run at once	• To identify that variables can hold numbers (integers) or letters (strings) • To define the way that a variable is changed • To recognise that a variable can be set as a constant (fixed value) • To choose a name that identifies the role of a variable to make it easier for humans to understand it • To explain the importance of setting up a variable at the start of a program (initialisation) • To decide where in a program to set a variable • To update a variable with a user input • To use an event in a program to update a variable • To use a variable in a conditional statement to control the flow of a program • To explain that there is only one value for a variable at any one time • To explain that if you change the value of a variable, you cannot access the previous value (cannot undo) • To explain that if you read a variable, the value remains • To use the same variable in more than one location in a program • To explain that the name of a variable is meaningless to the computer • To explain that the name of a variable needs to be unique	

Computing Progression of Skills

Data and Information					
Y1/2 Cycle a	**Y1/2 Cycle b**	**Y3/4 Cycle a**	**Y3/4 Cycle b**	**Y5/6 Cycle a**	**Y5/6 Cycle b**
	Grouping Data ***New Learning*** *Pictograms* • To identify some attributes of an object • To collect simple data • To identify that objects can be counted • To show that collected data can be counted • To describe the properties of an object • To choose an attribute to group objects by • To group objects to answer questions • To explain that objects can be grouped by similarities (attribute) • To recognise that information can be presented • To describe a group of objects (based on commonality) • To recognise that information can be presented in different ways **Pictograms** *Grouping Data* *Branching Databases* • *To use a tally chart to collect data*		**Branching Databases** *Pictograms* *Data Logging* • To investigate questions with yes/no answers • To identify attributes that you can ask yes/no questions about • To create questions with yes/no answers • To select an attribute to separate objects into two similarly sized groups • To choose questions that will divide objects into evenly sized subgroups • To repeatedly create subgroups of objects • To explain that a branching database is an identification tool • To recognise that a data set can be structured using yes/no questions • To identify an object using a branching database • To retrieve information from different levels of the branching database • To explain that a well-structured branching database will enable you to identify objects using fewer questions • To relate two levels of a branching database using AND • To suggest real-world applications for branching databases		**Flat File Database** *Data Loggin* *Introduction to Spreadsheets* • To explain that a computer program can be used to organise data • To choose different ways to view data • To explain that tools can be used to select data to answer questions • To outline how ordering data allows us to answer some questions • To outline how operands can be used to filter data • To ask questions that need more than one attribute to • To choose which attribute and value to search by to answer a given question (operands) • To choose which attribute to sort data by to answer a given question • To outline how 'AND' and 'OR' can be used to refine data selection' • To choose multiple criteria to search data to answer a given question (AND and OR) • To explain that computer programs can be used to compare data visually • To select an appropriate graph to visually compare data • To explain that we present information to communicate a message • To choose suitable ways to present information to other people

Computing Progression of Skills

Data and Information *Continued*...					
Y1/2 Cycle a	**Y1/2 Cycle b**	**Y3/4 Cycle a**	**Y3/4 Cycle b**	**Y5/6 Cycle a**	**Y5/6 Cycle b**
	• To show I can enter data onto a computer • To recognise that people, animals and objects can be described by attributes • To use a computer to view data in different formats • To use pictograms to answer single-attribute questions • To compare objects that have been grouped by attribute • To suggest appropriate headings for tally charts and pictograms • To use a computer to answer comparison questions (graphs, tables) • To construct (complete) a given comparison question, • To use a computer program to present information in different ways • To explain that we can present information using a computer • To give simple examples of why some information should not be shared		**Data Logging** *Branching Databases* *Flat File Databases* • To suggest questions that can be answered using a table or data • To identify data that can be logged over time • To identify sensors are input devices. • To recognise that a sensor can be used as an input device for data collection • To use a digital device to collect data automatically • To choose an appropriate timeframe when collecting data automatically • To explain that a data logger captures data points from sensors over time • To use a set of logged data to find information • To use a computer programme to sort data by one attribute. • To export information in different formats		**Introduction to Spreadsheets** *Flat File Databases* To identify questions that can be answered using spreadsheet data To explain what an item of data is in a spreadsheet To outline that there are different software tools to work with data To explain how the data type determines how a spreadsheet can process the data To explain that formulas can be used to produce calculated data To calculate data using a formula for each operation To recognise cells can be linked To use functions to create new data To explain why data should be organised in a spreadsheet To use existing cells within a formula To recognise that a cell's value automatically updates when the value in a linked cell is changed To evaluate results in comparison to the question asked To choose suitable ways to present spreadsheet data

Computing Progression of Skills

Progression in Software and Hardware						
	Y1/2 Cycle a	**Y1/2 Cycle b**	**Y3/4 Cycle a**	**Y3/4 Cycle b**	**Y5/6 Cycle a**	**Y5/6 Cycle b**
Computer Systems and Networks	Paintz Microsoft Powepoint		Microsoft Paint Various Websites		Google Slides	
Creating Media 1 (Graphics)	Microsoft Paint		iMotion			Microsoft Powerpoint TinkerCAD
Creating Media 1 (Photo and Video)	Photobooth		Paint.Net			
Creating Media 2 (Audio)		Chrome Music Lab		Audacity	iMovie	
Creating Media 2 (Text)	Microsoft Word		Canva			
Programming A	Bee-bot (Hardware)		Scratch FMS Logo			Crumble Controller Start Kit and Motors Scratch
Programming B		ScratchJr		Scratch	Scratch Micro:bit	
Data and Information		Microsoft Powerpoint J2data pictogram		J2data branch Data Logger		J2data databases Microsoft Excel