



	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Using devices							
Knowledge			To know that closing the lid of a laptop does not shut it down	To know that logging off is different to shutting down			
		To know that a keyboard is used for typing		To know that some punctuations needs the shift key			
		to understand that text can be created on a computer	To know that font styles are similar to handwriting styles				
		To know that digital documents can be printed					
Skills	To be able to take photos on an iPad	To be able to open an app on an iPad					
			To be able to switch on a laptop				
			To be able to follow instructions to shut down a laptop		To be able to shut down a laptop		
			To be able to follow instructions to log into a laptop	To be able to log in to a laptop using a given login			
				To be able to follow instructions to log out of a laptop	To be able to log out of a laptop		
		To be able to use the touchpad to move the cursor on screen					
		To be able to use click and drag to move items	To be able to use click and drag to select a section of text.				
			To be able to use caps lock for capital letters	To be able to type capital letters using the shift key			
		To be able to type a full stop	To be able to type . and ,	To be able to type ? ! and "		To be able to type () ; : and -	
		To be able to open windows explorer from the task bar					
		To be able to follow instructions to find a file in windows explorer		To be able to find a file from a known location in windows explorer			
		To be able to follow instructions to open a document from windows explorer					
		To be able to follow instructions to click on the word icon to open a new word document	To be able to click on the PowerPoint icon to open a new PowerPoint document	To be able to open a known application from the desktop	To be able to open an application from the desktop		

			To be able to click on the publisher icon to open a new document				
		To be able to follow instructions to save a word file in the documents folder	To be able to follow instructions to save a Microsoft Office file in the documents folder		To be able to save a Microsoft office file in the documents folder		To be able to save a file in a specified folder
		To be able to re-save a word document using the save icon	To be able to use the save icon to re-save a document in Microsoft Office				
				To be able to follow instructions to re-save a document with a different name.		To be able to re-save a document with a different name.	
				To be able to log into a given tinkercad account	To be able to log into their school google account		
Computer Science							
Knowledge		To know that algorithms are implemented as programs on a range of digital devices.	To understand what an algorithm is	To understand that a program is a sequence of statements written in a programming language			
	To know that some instructions need to be completed in the correct order	To know that algorithms are precise instructions that can be followed			To understand that computer programs consist of statements that perform a task		To understand that apps are computer programs that are developed according to a plan
		To know that programs follow clear instructions			To understand that decomposition can help to solve problems.	To know strategies for testing and debugging computer games	
	To know that BeeBots follow the instructions given to them.	To know that you can program a sprite	To understand the commands in Scratch Jr				
			To know the blocks used in Scratch				
						To know that websites are written in HTML	
						To know that HTML gives a web page structure.	To understand how HTML provides structure for web content.
				To understand that computer simulations can represent a range of situations			
				To understand that simulations help us understand difficult concepts			
				To understand that simulations can help people try things quickly and inexpensively			

				To understand that broadcasts can be used to trigger other algorithms in scratch.		To know a range of inputs that computer games can use	
					To understand that computer programs contain graphics use X and Y coordinates		
				To understand what a variable is and why they are useful	To understand that programs can do different things depending on the value of a variable		
					To understand that some variables can only be true or false (Boolean)		
					To understand that programs can do different things if the value of a Boolean variable is true or false (conditional statements)		
						To know the features of a micro:bit	
	To be able to test ideas	To be able to plan and test a simple algorithm			to be able to plan and develop algorithms and programs.	To be able to develop an outline of tasks and activities required to develop a project	To be able to plan a simple website design including html code for colour names.
	To be able to plan what they need to do	To be able to plan a simple algorithm to control a toy.					
		to be able to create a storyboard for a program		To be able to design a simple computer simulation	To be able to design a virtual pet	To be able to develop an algorithm according to a plan.	To be able to develop an app according to a plan
		To be able to write a program using a plan					To be able to program an algorithm according to a plan.
							To be able to evaluate an app, with consideration to the initial plan
	To be able to follow simple instructions to complete a task	To be able to follow a simple algorithm				To be able to read basic HTML code.	To be able to use html code to create a simple website.
						To be able to change an image on a web page.	
	To be able to make predictions about what might happen.	To be able to make predictions about an outcome based on a simple algorithm		To be able to use observations to make predictions about a simulation			
	To be able to enter commands into a BeeBot	To be able to give instructions to a programmable toy	To be able to write a code in scratch Jr				To be able to use a text-based programming language to write an event driven program
	To be able to program a virtual object to move on-screen	To be able to control a sprite in scratch	To be able to include sound in scratch projects	To be able to code sprites to interact with each other in different ways	To be able to program a screen Turtle to execute a series of statements		

Skills	To be able to give instructions to complete a task	To be able to create a simple algorithm			To be able to use broadcasts in scratch programs	To be able to create a game that senses events on screen	
						To be able to program statements that make something happen in response to events on screen	To be able to code a program that reacts differently to different inputs
		To be able to program a sprite for a purpose	To be able to write programs that run at the same time to create an effect	To be able to program a simple simulation	To be able to create algorithms for a purpose		To be able to code a micro:bit to make a cutebot move
			To be able to include multiple sprites in a project	To be able to program a sequence of instructions that create visual effects			To be able to code a micro:bit so the cutebot follows an unmarked path.
							To be able to code a micro:bit so the cutebot goes to a specific point
							To be able to code a micro:bit to make a cutebot follow a line
			To be able to use repeat blocks to make efficient codes	to be able to use repetition in code		To be able to combine repetition and conditional statements in a program	To be able to program a computer game by sequencing conditional statements
				To be able to explore the effect of changing variables in a simulation	To be able to apply variables to a scratch program	To be able to use computational concepts of sequence, selection, repetition and variables to program a computer game	
	To be able to adapt ideas to solve a problem	To understand that codes can be altered to change what they do	To be able to modify code			To be able alter an algorithm to change to properties of a shape	To understand how changes to codes alter what the user can see and do
			To be able to identify errors in code		To be able to correct errors in codes	To be able to test and debug computer programs	To be able to test and debug the programming for an app
Digital Media							
		To know what the word icon looks like	To know what the PowerPoint icon looks like		To know what the excel icon looks like		
			To know what the publisher icon looks like				
			To understand that there are different Microsoft office programs				To know how to select an appropriate Microsoft Office Program
		To know what the windows explorer icon looks like					
		To know what the save icon looks like in word	To know what the save icon looks like in Microsoft Office applications				

Knowledge			To know what the ribbon is in Microsoft office			
			To know that many tools in the ribbon are the same across different Microsoft Office applications			
			To understand how information is organised in a database	To understand how filters can be used to sort and find information in excel tables		
						To know how cells are referenced in excel
						To know that excel uses * for multiplication and / for division
						To know that you can enter formulae into excel cells
						To understand that spreadsheets allow recalculations to be completes quickly and easily
						To understand that spreadsheets can be used to store numerical data and to perform calculations
		To know what an eBook is				
						to understand that sound can be stored digitally
						to understand that sounds which are stored digitally can be manipulated
						To understand what a podcast is
		To know what an animation is			To understand what an animation is	
	To know some uses of digital drawing tools		To know that graphical modelling software allows users to create digital 3D models	To understand that digital tools can be used to create images	To understand that animations can be created using digital tools	
				To understand that vector images are made up of shapes and lines		
				To understand that vector images are constructed of layers		
			To understand that graphical models can be easily changed			
		To be able to add text to a word document	To be able to edit text in a PowerPoint document	To be able to add and edit text in Microsoft Office applications		
		To be able to use a keyboard to type their name in word	To be able to enter text into a PowerPoint document			

		To be able to add text in Publisher	To be able to add text boxes in PowerPoint			
			To be able to move text boxes in PowerPoint			
			To be able to resize text boxes in PowerPoint			
		To be able to add images to PowerPoint	To be able to add images in Microsoft Office			
		To be able to move images in PowerPoint	To be able to resize images in PowerPoint			
		To be able to change font colour in PowerPoint		To be able to change font colour in Microsoft office	To be able to choose appropriate formatting for a task	
		To be able to change font size in PowerPoint		To be able to change font size in Microsoft office		
		To be able to change text font in PowerPoint		To be able to change text font in Microsoft office		
			To be able to underline text in Microsoft office with support	To be able to underline text in Microsoft office	To be able to use some keyboard shortcuts for formatting text in Microsoft Office (Bold, Underline, Italic)	
			To be able to make text bold in Microsoft office with support	To be able to make text bold in Microsoft office		
			To be able to highlight text in Microsoft office with support	To be able to make text italic in Microsoft office		
			To be able to make text italic in Microsoft office with support	To be able to highlight text in Microsoft office		
		To be able to format the background of slides in PowerPoint				
		To be able to follow instructions to copy and paste text in office applications	To be able to copy and paste text between documents.			To be able to use control C and control V to copy and paste between documents
		To be able to follow instructions to copy and paste an image in office applications	To be able to copy and paste images between documents.	To be able to copy images from a web browser and paste it into Microsoft Office programs		
			To be able to hide and pin the ribbon in Microsoft Office applications			
					To be able to include animations in PowerPoint	
			To be able to enter data into a pre-formatted table in excel	To be able to enter text into an excel cell		To be able to enter simple calculation formulae into excel such as =2+4

				To be able to format data as a table in excel		To be able to enter formulae that refer to other cells in excel such as =A2+B2
				To be able to use excel table tools to put data into order		
				To be able to use excel table filters to answer simple questions about their data		
						To be able to make an audio recording
						To be able to edit an audio recording
						To be able to trim a voice clip
						To be able to use multiple audio clips within a project
		To be able to create a stop-motion animation			To be able to create a digital animation	
		To be able to create a storyboard for a short stop motion animation			To be able to create a storyboard a short animation	
					To be able to create a scene for a digital animation	
		To be able to use a storyboard to create a stop-motion animation			To be able to use a storyboard to create a short animation	
	To be able to use simple digital mark-making tools					
	To be able to use shape and fill tools					
	To be able to recreate a given digital image					
	To be able to use a range of digital drawing tools		To be able to use graphical modelling software to create a digital 3D model	To be able to design and create vector images.		
			To be able to evaluate a digital 3D model	To be able to evaluate images and make improvements.		
			To be able to use graphical modelling software to improve a digital 3D model	To be able to use digital tools to improve detail in images		

Computers, Systems and Networks

	To know what technology and information technology are	To understand how information technology has changed over time				
	to know that information technology can be used for many different things	To know how information technology is used today				
		To know some input and output devices				
	To know how to use devices in school	To understand how to use technology safely				

			To know what a computer network is			To understand that a computer network is a group of computers that are connected.
			To know the parts of a computer network and their roles			
			to know how different parts of the network are linked and information is exchanged.			To know that a router sends/receives information as packets of data
		To know what the world wide web is and how it had developed over time	To know that the internet is many computers that are connected		To understand that the world wide web is one of the services offered on the internet	To understand that the internet in many networks that are connected to each other.
			To know that devices have a unique address			To know that computers connected to the internet have their own address.
					To understand that the world wide web consists of many websites and web pages that can be accessed using the internet	To understand that websites can be traced to a particular webserver.
					To know that websites are written in HTML	
					To know that HTML gives a web page structure.	To understand how HTML provides structure for web content.
			To know the main features of web browsers			
			To know that you can move around the web using hyperlinks			
			To know the difference between a search bar and the address bar			
		To know what a search engine is	To understand how to find information using a search engine			To know that internet search engines maintain, and rank, a list (or index) of other websites available on the world wide web.
		To know a safe search engine				
			To understand that not all information on the web is reliable.			
			To understand that copyright is and author's right of ownership			
		To know how to stay safe online	To know some ways to identify safe and credible websites			
					To understand that signalling is a form of communications,	

				To know different ways messages can be sent	To understand that messages can be sent and received secretly	
				To know what e-mail is		
					To understand the importance of cryptography historically and today	
				To know the basic concept of AI		To understand what Artificial Intelligence is
				To understand that computers are taught to learn		To understand that AI systems are trained using Machine Learning.
				To know this what machine learning is		
				To understand that computers learn using information given to them by people		To understand the effect training data has on a machine learning system
				To understand the importance of using high quality data to train and test a machine learning model		
						To understand the output from an AI model is a prediction
				To know some uses of AI in everyday life		To understand the role AI plays in our lives
Skills			To be able to enter a URL into the address bar			
		To be able to use hyperlinks to navigate a website	To be able to use basic navigation skills to browse the world wide web			
		To be able to use websites to find information				
		To be able to enter a query into a search engine				
		To be able to use a search engine to find the answers to questions	To be able to select key words for an internet search			To be able to use clear search terms when conducting searches in order to find things out.
					To be able to encode and decode a simple message,	
				To be able to read an e-mail		
				To be able to write an email to another person		
				To be able to add attachments to emails		

				To be able to use chat features to work collaboratively with others		