



Reception



Foundation (NB above and beyond Early Learning Goals – can be used to assess pupils working below age expectations in KS1)

What is a Computer? Key Skills	Presenting Information & Multimedia	Data	Programming & Algorithms
<ul style="list-style-type: none">- Use different digital devices.- Recognise that you can access content on a digital device.- Use a mouse, touchscreen or appropriate access device to target and select options on screen.- Recognise a selection of digital devices.- Recognise the basic parts of a computer, e.g. mouse, screen, keyboard.- Select a digital device to fulfil a specific task, e.g. to take a photo.	<ul style="list-style-type: none">- Use technology to explore and access digital content.- Operate a digital device with support to fulfil a task.- Create simple digital content, e.g. digital art.- Choose media to convey information, e.g. image for a poster.	<ul style="list-style-type: none">- Access content in a range of formats, e.g. image, video, audio.- Answer basic questions about information displayed in images e.g. more or less.	<ul style="list-style-type: none">- Explore technology.- Repeat an action with technology to trigger a specific outcome.- Recognise the success or failure of an action.- Follow simple instructions to control a digital device.- Recognise that we control computers.- Input a short sequence of instructions to control a device.
Digital Literacy			
<ul style="list-style-type: none">- Are aware that some online content is inappropriate.- Are aware that information can be public or private.		<ul style="list-style-type: none">- Know to tell an appropriate adult if they see something on the computer that upsets them.	



Year 1



Multi-media	Programming	Data	Digital Literacy	Information Technology
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	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Unit/focus	Grouping different objects. (Science materials link). E-safety on what we share online	Using floor robots to follow instructions to reach a given destination	Creating digital art – easier on a tablet	Introduction to using ScratchJr	Introduction to using a laptop/chrome book.	Using a computer to write – a mix of devices can be used to support skills across devices.
Planning resources	Data handling medium term plan	<ul style="list-style-type: none"> Moving a robot BeeBots tinkering Beebots basics Crazy Algorithms 	Digital painting	Introduction to animation	<ul style="list-style-type: none"> Using computers Phonics Kriss Kross resources to support logic and phonics 	Digital Writing
	Jessie and Friends (Ep 2: 2 sessions)					<ul style="list-style-type: none"> Digiduck's big decision
Toca Monsters – problem solving app						
Key Knowledge	<ul style="list-style-type: none"> Labelling and grouping helps to organise. To be considerate and kind online and to think about what we share. 	<ul style="list-style-type: none"> That the order of instructions in an algorithm is important. The four direction commands can be combined to make sequences. 	<ul style="list-style-type: none"> That different effects that can be made using various tools in an art app and explain how to achieve them 	<ul style="list-style-type: none"> Know what a sprite is and that I can use action blocks to make the sprite move. That blocks of code can be sequenced to achieve a result. 	<ul style="list-style-type: none"> Name the main parts of a computer. Identify different examples of technology and say why they are useful. A mouse and trackpad do the same job. 	<ul style="list-style-type: none"> Explain rules to keep myself safe when using technology both in and beyond the home. Make creative choices to present my writing.
Key Skills	<ul style="list-style-type: none"> Match objects to groups Drag images from one place on the screen to another. 	<ul style="list-style-type: none"> Use left and right turns correctly. Predict the outcome of a sequence 	<ul style="list-style-type: none"> Use colour and brush types to create a desired effect. 	<ul style="list-style-type: none"> Use a start block in a program. Plan an algorithm and use it to make a program. 	<ul style="list-style-type: none"> Log on, open and save work. Type their full name, delete and use the cursor keys. 	<ul style="list-style-type: none"> Type capital letters Identify and find keys on a keyboard.



Year 2



Multi-media	Programming	Data	Digital Literacy	Information Technology
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	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Unit/focus	How to take good photographs Keeping personal information safe	Use of sequencing in algorithms to create a program with a floor robot	Using tallies, pictograms and block graphs to represent data digitally	Consolidation of Y1 work and creating a quiz using ScratchJr	Ensure that children can operate a laptop/Chrome book.	Using digital software to create music.
Planning resources	Digital photography	Robot Algorithms	Pictograms	An Introduction to quizzes	Information Technology around us	Making music
	Jessie and Friends Episode 3 (2 sessions)	Smartie the penguin Book 2			Digital 5-a-day (lesson 6 of above MTP)	Detective Digiduck
Sending colour - pixel pictures; Problem solving: Colourful kits (2 lessons); Toca Builders (ipad app)						
Key Knowledge	<ul style="list-style-type: none"> Some images are modified on computers I should ask a trusted adult before clicking 'yes', 'agree' or 'accept' online. 	<ul style="list-style-type: none"> Instructions in an algorithm need to be clear and unambiguous. Know that some information found online may not be real or true. 	<ul style="list-style-type: none"> That data on grouped objects can be plotted as a pictogram digitally. Explain information shown in a simple chart or pictogram. 	<ul style="list-style-type: none"> Explain the difference between an algorithm and program That computers have no intelligence and we have to program them to do things. 	<ul style="list-style-type: none"> A computer is an input, process and output That a range of digital devices contain computers Explain what the basic parts of a computer are used for. 	<ul style="list-style-type: none"> That we can use technology to record and playback audio. Explain what voice activated searching is and know it is not a real person.
Key Skills	<ul style="list-style-type: none"> Describe ways to ask for, give, or deny my permission online. I can use photo editing software to make changes to my image. 	<ul style="list-style-type: none"> Use logical reasoning to predict the outcome of a program. I can create an algorithm to meet my goal and debug it 	<ul style="list-style-type: none"> Collect data on a topic and present in a pictogram or chart. 	<ul style="list-style-type: none"> I can decide which blocks to use to meet the design Predict the outcome of an algorithm or program with multiple steps. 	<ul style="list-style-type: none"> Save and open files to/from a given folder. Resize an image in a document. Highlight text and use arrow keys. 	<ul style="list-style-type: none"> I can save my work under a suitable title / name so that others know it belongs to me I can use a computer to create a musical pattern using three notes
Ongoing skills	How to use a mouse - start to use a track pad Become more confident in finding the letters on the keyboard Being able to login to school devices and follow instructions to open applications Use simple keywords in search engines.					



Year 3



Multi-media	Programming	Data	Digital Literacy	Information Technology
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Unit/focus	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Unit/focus	Consolidate laptop skills and solid introduction to Word and PowerPoint	Using sequencing in Scratch to make simple games	Sorting data by creating branching database	Consolidation of earlier learning in Scratch – making a maze	How computers might be networked and the advantages of this.	Creating an animation
Planning resources	Desktop publishing – Word and PowerPoint – teacher created	Programming A – Sequencing in music medium term plan	Data and Information – branching databases medium term plan	Programming B – Events and Actions	Connecting Computers medium term plan	Creating media – animation medium term plan
	Smart Crew Chapter 1 - accept	Smart Crew Ch 2 Reliable	Smart Crew Ch 3 Safe	Smart crew Ch 4 Tell		Smart Crew Ch 5 Meet
Key Knowledge	<ul style="list-style-type: none"> Design and create digital content for a purpose Importance of who we trust online 	<ul style="list-style-type: none"> Names of the different work areas in Scratch Sequences of events can be applied to sprites Difference between fact and opinion online 	<ul style="list-style-type: none"> Identify an object using a branching database Questions need to be ordered to split objects into similarly sized groups Some online activities have age restrictions 	<ul style="list-style-type: none"> How to get help from a trusted adult if we see something upsetting online Explain the relationship between event and action 	<ul style="list-style-type: none"> Identify input and output devices Explain how a computer network can be used to share information 	<ul style="list-style-type: none"> Relate animated movement with a sequence of images People may change their identity whilst online (e.g. use of avatars)
Key Skills	<ul style="list-style-type: none"> Log on using individual login Save files with relevant names Open a saved file Insert an image 	<ul style="list-style-type: none"> Use sound in a sequence Alter the costume of a sprite 	<ul style="list-style-type: none"> Create a branching database using pre-prepared images and questions 	<ul style="list-style-type: none"> Modify an existing program Debug simple errors in a program 	<ul style="list-style-type: none"> Save work to the cloud, shared folder or own computer Open a file from an application or folder system 	<ul style="list-style-type: none"> Create a storyboard Evaluate an animation Use onion skinning to help me make small changes between frames
Ongoing skills	<ul style="list-style-type: none"> Demonstrate how to use key phrases in search engines to gather accurate information online. Explain what autocomplete is and how to choose the best suggestion. 					



Year 4



Multi-media	Programming	Data	Digital Literacy	Information Technology
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	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Unit/focus	To create digital images	Using repetition in LOGO to create shapes	Overview of e-safety and communicating online	Using repetition to create a game in Scratch	Organising saved work in folders	Creating a podcast
Planning resources	Vector drawing Medium term plan (note this is a Y5 plan)	Programming A Repetition in shapes medium term plan	Communicating electronically – teacher made unit	Programming B- Repetition in games	Keeping it organised – teacher made unit	Audio editing medium term plan
Kriss Kross puzzles-year 4 spellings						
Key Knowledge	<ul style="list-style-type: none"> Elements added to vector drawings are called objects Design and create digital content for a specific purpose 	<ul style="list-style-type: none"> When to use forever loops and count-controlled loops, and use them in programs The effect of changing a value of a command 	<ul style="list-style-type: none"> Content shared online may feel unimportant to one person but may be important to other people's thoughts feelings and beliefs. Describe methods used to get people to buy online 	<ul style="list-style-type: none"> Decompose a problem into smaller parts to help solve it. Some programming languages enable more than one process to be run at once 	<ul style="list-style-type: none"> Files can be saved locally or in the cloud Create new folders with appropriate names Delete and move files. 	<ul style="list-style-type: none"> Open and save a digital recording from a file need to use specific software to work with video, images, audio
Key Skills	<ul style="list-style-type: none"> Move, resize, and rotate duplicated objects Group objects together 	<ul style="list-style-type: none"> Program a computer by typing commands predict the outcome of a program containing a count-controlled loop 	<ul style="list-style-type: none"> Describe strategies for keeping personal information private, depending on context. 	<ul style="list-style-type: none"> re-use existing code snippets on new sprites 	<ul style="list-style-type: none"> Choose where to save work depending on future access needs Organise work in a folder framework 	<ul style="list-style-type: none"> use a device to record audio and play back sound edit sections of an audio recording
Ongoing skills	<ul style="list-style-type: none"> Use key parts of a keyboard effectively (e.g. shift, arrow keys, delete). Know how to copy and paste text or images in a document. Crop an image and apply simple filters. Use a search engine to find specific information. Know how to mute and unmute audio on a computer or tablet 					



Year 5



Multi-media	Programming	Data	Digital Literacy	Information Technology
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Unit/focus	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
	Self-esteem and identity linked with photo editing	Using micro controllers (Crumbles) to create using selection	Using a flat file database to sort data and answer given questions.	Selection in quizzes using Scratch	Computing systems and networks. Computational thinking.	3D design using CAD. Digital literacy on gaming.
Planning resources	Creating digital media – Photo editing	Programming A Selection in physical computing medium term plan	Flat file Databases	Programming B Selection in quizzes medium term plan	Internet medium term plan	3D modelling medium term plan
	Self-image – editing photos and avatar use		Trust me – Lesson 1 on reliable content		Intelligent piece of paper Spit not so	All fun and games Parent leaflet on online gaming
Key Knowledge	<ul style="list-style-type: none"> Where to find copyright-free content (images) Give examples of positive and negative effects that retouching can have on an image 	<ul style="list-style-type: none"> Build a simple circuit to connect a micro-controller to a computer A condition is something that can either be true or false A condition being met can start an action 	<ul style="list-style-type: none"> Evaluate digital content and can explain how to make choices about what is trustworthy Grouping and then sorting data allows us to answer questions 	<ul style="list-style-type: none"> Why an infinite loop needs to be used with selection How selection directs the flow of a program 	<ul style="list-style-type: none"> How information is transferred over the internet or through networked computers Computers are not intelligent and need to be programmed logically to work. 	<ul style="list-style-type: none"> Computers can be used to create and manipulate 3D digital objects Physical objects can be broken down into a collection of 3D shapes to design a digital 3D model by combining the shapes.
Key Skills	<ul style="list-style-type: none"> Explain ways that some online 'information' could have been created, copied or shared by others. 	<ul style="list-style-type: none"> use selection (an 'if... then...' statement) to direct the flow of a program Write an algorithm to control lights and a motor 	<ul style="list-style-type: none"> Explain what a 'field' and a 'record' is in a database Apply knowledge of a database to ask and answer real-world questions 	<ul style="list-style-type: none"> Decompose a game into parts Use an if, then, else statement to create a game 	<ul style="list-style-type: none"> Evaluate different methods of sharing work digitally to work with others Complete an online shared project 	<ul style="list-style-type: none"> Position 3D objects in relation to each other Rotate a 3D object Select and duplicate multiple 3D objects Regulate own screen time use.
Ongoing skills	<ul style="list-style-type: none"> Type using fingers on both hands. Use common keyboard shortcuts, e.g. ctrl C (copy), ctrl V (paste). Recognise that there is more than one search engine, and they may produce different results. Use a search engine effectively to find information and images. Know how to search for an application on a computer/tablet. 					



Year 6



Multi-media	Programming	Data	Digital Literacy	Information Technology
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	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Unit/focus	Creating a webpage, using design skills	Create a game in Scratch	Introduction to using Excel and spreadsheets	Using sensing in physical computing	How search engines work	Creating media – recording a video
Planning resources	Web page creation medium term plan	Programming A Using variables in games medium term plan	Spreadsheets	Sensing using crumbles	Communication medium term plan	Video editing medium term plan
	Using group chats appropriately	Online gender bullying Just a joke? Lesson 2	Online gender bullying Just a joke? Lesson 3			Live streaming (2 lessons)
Key Knowledge	<ul style="list-style-type: none"> Select, combine and remix a range of media to create original content. Online content can cause upset, hurt or shock. Sharing this content for a joke is not kind or respectful. 	<ul style="list-style-type: none"> Define a 'variable' as something that is changeable and give examples. Choose how to improve a game by using variables. The value of a variable can be used by a program 	<ul style="list-style-type: none"> Strategies for dealing with cyberbullying and ways they can be an upstander for those being bullied. Use simple formulae in a spreadsheet to find out information from a set of data. 	<ul style="list-style-type: none"> Design and program a physical computing system that uses sensors. Know and use a range of approaches to find and fix bugs 	<ul style="list-style-type: none"> How search engines select results. Things shared privately online can have unintended consequences for others (e.g. screen-grabs). 	<ul style="list-style-type: none"> Locate and identify the working features of a digital device that can record video Lighting and angle are important in creating an effective video Taking or sharing inappropriate images of someone is not ok.
Key Skills	<ul style="list-style-type: none"> Find copyright-free images and explain why they should be used. Make multiple web pages and link them using hyperlinks Evaluate user experience 	<ul style="list-style-type: none"> Decide where in a program to change a variable Plan out a program in detail and create it. Use nested selection statements in a program or algorithm effectively. 	<ul style="list-style-type: none"> Apply a number format to a cell. Create a formula which includes a range of cells Identify and evaluate online content that may share hurtful representations of different groups. 	<ul style="list-style-type: none"> Use an operand (e.g. <=>) in an if... then... statement Create a program based on the design 	<ul style="list-style-type: none"> Decide when I should and should not share on the internet Use the advanced search tools when using a search engine to find specific information and images 	<ul style="list-style-type: none"> Select the correct tools to make edits to video creations. Store, retrieve, and export recordings to a computer
Ongoing skills	<ul style="list-style-type: none"> Type efficiently using both hands. Use a range of keyboard shortcuts. Recognise that different devices may have different operating systems. Organise files effectively using folders and file names. Recognise common file types and extensions e.g. jpeg, png, doc, wav 					