Trinity Computing Curriculum Overview

CSN = Computing Systems and Networks	CM – Creating Media	D&I = Data and Information	P = Programming

	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
EYFS	Role play - control	Ipad skills	sound	BeeBots	Mouse skills	
Ongoing Resources	Continuous Provision – available throughout the day for both focussed and independent learning –IPads for recording learning. A range of technology will be explored continuously throughout the year for the children to access, both independently and with an adult. - IPads –apps and games linked to the topic or maths/literacy being covered each week. Remote control toys – cars. Battery operated toys Beebots CD players Interactive white boards – Phonics Play / Top marks / Google Earth / Digi map, etc. Talking tins and pegs					
Possible Learning	Play on a touch screen game and use computers/keyboards/mouse in role play Type letters with increasing confidence using a keyboard and tablet. Dictate short, clear sentences into a digital device. Sort physical objects, take a picture and discuss what they have done. Record voice over a picture. Move and resize images with my fingers or mouse. Know the difference between a photo and video. Record a short video using the IPad Watch their recording back Take a photograph Explore a painting app and explore the paint and brush tools Scan a QR code.					

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Y1	Technology Around us – Using Desktop and Laptop Computers (CSN)	Digital Painting (CM1)	Digital Writing – Word Processing (CM2)	Grouping Data (D&I)	Moving a Robot (P1)	Programming Animations (P2)
	https://teachcomputing.org/curriculum/key-stage-1/computing-systems-and-networks-technology-around-us Laptops Desktop PCs iPads https://paintz.app/	https://teachcomputing.org/curriculum/key-stage-1/creating-media-digital-painting paintz.app	https://teachcomputing.org/curriculum/key-stage-1/creating-media-digital-writing MS Word	https://teachcomputing.org/curriculum/key-stage-1/data-and-information-grouping-data https://www.j2e.com/j2data/	https://teachcomputing.org/curriculum/key-stage-1/programming-a-moving-a-robot BeeBots BlueBots	https://teachcomputing.org/curriculum/key-stage-1/programming-b-introduction-to-animation Scratch Jnr App on Ipads or Scratch Jr on PCs
Key Objectives	-To identify technology -To identify a computer and its main parts -To use a mouse in different ways -To use a keyboard to type on a computer -To use the keyboard to edit text -To create rules for using technology responsibly	-To describe what different freehand tools do -To use the shape tool and the line tools -To make careful choices when painting a digital picture -To explain why I chose the tools I used -To use a computer on my own to paint a picture -To compare painting a picture on a computer and on paper	-To use a computer to write -To add and remove text on a computer -To identify that the look of text can be changed on a computer -To make careful choices when changing text -To explain why I used the tools that I chose -To compare typing on a computer to writing on paper	-To label objects -To identify that objects can be counted -To describe objects in different ways -To count objects with the same properties -To compare groups of objects -To answer questions about groups of objects	-To explain what a given command will do -To act out a given word -To combine forwards and backwards commands to make a sequence -To combine four direction commands to make sequences -To plan a simple program -To find more than one solution to a problem	-To choose a command for a given purpose -To show that a series of commands can be joined together -To identify the effect of changing a value -To explain that each sprite has its own instructions -To design the parts of a project -To use my algorithm to create a program
Vocabulary	Technology, computer, mouse, trackpad, keyboard, screen, click, drag, input device, shift, spacebar, capital letter, full stop, safely, responsibly	Paint program, tool, paintbrush, erase, fill, undo, Piet Mondrian, primary colours, shape tools, line tool, fill tool, undo tool, Henri Matisse, Wassily Kandinsky, feelings, colour, brush style, George Seurat, Pointillism, prefer, dislike, like	Word processor Keys, Space Backspace Caps Lock Bold, Italic Underline Double click Font Undo, toolbar	Object, label, group, search, image, colour, shape, property, value, data set, less, most, fewest, the same	Forwards, backwards, turn, clear, go, commands, instructions, directions, left, right, plan, algorithm, route, program	ScratchJr, Bee-Bot, command, sprite, compare, programming, programming area, block, joining, start, program, background, delete, reset, algorithm, predict, effect, change, value, block, instructions, appropriate, design

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Y2	Digital Photography (CM1)	Robot Algorithms (P1)	Information Tech Around us (CSN)	Pictograms (D&I)	Programming Quizzes (P2)	Digital Music (CM2)
Resources	https://teachcomputing.org/curriculum/key-stage-1/creating-media-digital-photography Ipads	https://teachcomputing.org/curriculum/key-stage-1/programming-a-robot-algorithms BeeBots BlueBots	https://teachcomputing.org/curriculum/key-stage-1/computing-systems-and-networks-it-around-us	https://teachcomputing.org/curriculum/key-stage-1/data-and-information-pictograms https://www.j2e.com/j2data/	https://teachcomputing.org/curriculum/key-stage-1/programming-b-an-introduction-to-quizzes Scratch Junior on ipads	https://teachcomputing.org/curriculum/key-stage-1/creating-media-making-music Garageband iPads
Key Objectives	-To use a digital device to take a photograph -To make choices when taking a photograph -To describe what makes a good photograph -To decide how photographs can be improved -To use tools to change an image -To recognise that photos can be changed	-To describe a series of instructions as a sequence -To explain what happens when we change the order of instructions -To use logical reasoning to predict the outcome of a program -To explain that programming projects can have code and artwork -To design an algorithm -To create and debug a program that I have written	-To recognise the uses and features of information technology -To identify the uses of information technology in the school -To identify information technology beyond school -To explain how information technology helps us -To explain how to use information technology safely -To recognise that choices are made when using information technology	-To recognise that we can count and compare objects using tally charts -To recognise that objects can be represented as pictures -To create a pictogram -To select objects by attribute and make comparisons -To recognise that people can be described by attributes -To explain that we can present information using a computer	-To explain that a sequence of commands has a start -To explain that a sequence of commands has an outcome -To create a program using a given design -To change a given design -To create a program using my own design -To decide how my project can be improved	-To say how music can make us feel -To identify that there are patterns in music -To experiment with sound using a computer -To use a computer to create a musical pattern -To create music for a purpose -To review and refine our computer work
Vocabulary	Capture Digital photograph Portrait, Landscape, Format, Photography composition Retake, Artificial light Natural light Camera focus Effects, Edit, Adjust	Outcome Algorithm Execute (run)	Information technology Device Examples of IT- Barcode scanner, printer, tablet, chip and pin machine, card reader	Pictogram Tally Count Compare Attributes Block diagram	Green flag (Within scratch Jr.) Background Modify Debug	Rhythm Rhythm pattern Pitch Musical pattern Sequence of notes

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Y3	Desktop Publishing Word (CM2)	Connecting Computers (CSN)	Branching Databases (DI)	Stop-Motion Animation (CM1)	Sequences (P1)	Events and Actions in Programmes (P2)
Resources	https://teachcomputing.org/curriculum/key-stage-2/creating-media-desktop-publishing MS Word Canva.com	https://teachcomputing.org/curriculum/key-stage-2/computing-systems-and-networks-connecting-computers Any Painting Program	https://teachcomputing.org/curriculum/key-stage-2/data-and-information-branching-databases J2Data Branch and Pictogram	https://teachcomputing.org/curriculum/key-stage-2/creating-media-animation iMotion app GreenScreen app	https://teachcomputing.org/curriculum/key-stage-2/programming-a-sequence-in-music Scratch	https://teachcomputing.org/curriculum/key-stage-2/programming-b-events-and-actions Scratch
Key Objectives	To recognise how text and images convey information To recognise that text and layout can be edited To choose appropriate page settings To add content to a desktop publishing publication To consider how different layouts can suit different purposes To consider the benefits of desktop publishing	To explain how digital devices function To identify input and output devices To recognise how digital devices can change the way we work To explain how a computer network can be used to share information To explore how digital devices can be connected To recognise the physical components of a network	To create questions with yes/no answers To identify the object attributes needed to collect relevant data To create a branching database To identify objects using a branching database To explain why it is helpful for a database to be well structured To compare the information shown in a pictogram with a branching database	To explain that animation is a sequence of drawings or photographs To relate animated movement with a sequence of images To plan an animation To identify the need to work consistently and carefully To review and improve an animation To evaluate the impact of adding other media to an animation	To explore a new programming environment I can identify that each sprite is controlled by the commands I choose To explain that a program has a start To recognise that a sequence of commands can have an order To change the appearance of my project To create a project from a task description	To explain how a sprite moves in an existing project To create a program to move a sprite in four directions To adapt a program to a new context To develop my program by adding features To identify and fix bugs in a program To design and create a maze-based challenge
Vocabulary	Adobe spart Text Image Desktop publishing Return Shift Template Page orientation Place holder Layout	Input Process Output Network Network components Server Wireless Access Point Network switch	Tree structure Branching database	Animation Frame Stop-frame animation Story board Sequence of frames Onion skinning	Scratch Backdrop Code Motion block Event block Motion Stage	Event Action Code Programming extension Pen extension Pen down block Bugs Debugging Outcome Pen trail Set up block

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Y4	Photo Editing (CM2)	Audio Production Podcasting (CM1)	Data Logging (D&I)	Logo – Repetition in Shapes - Loops (P1)	The Internet Networks (CSN)	Repetition in Games (P2)
Resources	https://teachcomputing.org/curriculum/key-stage-2/creating-media-photo-editing paint.net (windows)	https://teachcomputing.org/curriculum/key-stage-2/creating-media-audio-editing Garageband iMovie Audacity	https://teachcomputing.org/curriculum/key-stage-2/data-and-information-data-logging Dataloggers (in Science resources)	https://teachcomputing.org/curriculum/key-stage-2/programming-a-repetition-in-shapes FMSLogo	https://teachcomputing.org/curriculum/key-stage-2/computing-systems-and-networks-the-internet Web access	https://teachcomputing.org/curriculum/key-stage-2/programming-b-repetition-in-games Scratch
Key Objectives	To explain that digital images can be changed To change the composition of an image To describe how images can be changed for different uses To make good choices when selecting different tools To recognise that not all images are real To evaluate how changes can improve an image	To identify that sound can be digitally recorded: To use a digital device to record sound: To explain that a digital recording is stored as a file: To explain that audio can be changed through editing: To show that different types of audio can be combined and played together: To evaluate editing choices made:	To explain that data gathered over time can be used to answer questions To use a digital device to collect data automatically To explain that a data logger collects 'data points' from sensors over time To use data collected over a long duration to find information To identify the data needed to answer questions To use collected data to answer questions	To identify that accuracy in programming is important To create a program in a text-based language To explain what 'repeat' means To modify a count-controlled loop to produce a given outcome To decompose a program into parts To create a program that uses count-controlled loops to produce a given outcome	To describe how networks physically connect to other networks To recognise how networked devices make up the internet To outline how websites can be shared via the World Wide Web To describe how content can be added and accessed on the World Wide Web To recognise how the content of the WWW is created by people To evaluate the consequences of unreliable content	To develop the use of count-controlled loops in a different programming environment To explain that in programming there are infinite loops and count controlled loops To develop a design which includes two or more loops which run at the same time To modify an infinite loop in a given program To design a project that includes repetition To create a project that includes repetition
Vocabulary	Rotate Crop Filter Colour effect Cloning Photo retouch Duplicate Combined image	Input device Output device Microphone Copyright Recording Podcast Soundwave view 'Trim' recording Import Align Layers (in recording)	Data logger Data set Data collection Sensors Data points Data file Logged data	Logo (website used) Logo command Code snippet Repeat Loop Count controlled loop Decompose/ decomposition Procedures	Router World Wide Web Online content	Count-controlled loop Loop Snippet of code Infinite loop Event block Code blocks

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		Sound effect Background music Audio file				

Y5	Flat-file Databases (D&I)	Systems and Searching – Sharing Information (CSN)	Selection in Physical Computing (P1)	3D Modelling – Vector Drawing (CM2)	Video Production – Vlogs – iMovie (CM1)	Selection in Quizzes (P2)
Resources	https://teachcomputing.org/curriculum/key-stage-2/data-and-information-flat-file-databases j2data databases https://www.j2e.com/database	https://teachcomputing.org/curriculum/key-stage-2/computing-systems-and-networks-sharing-information Search engines Youtube links	https://teachcomputing.org/curriculum/key-stage-2/programming-a-selection-in-physical-computing Microbits	https://teachcomputing.org/curriculum/key-stage-2/creating-media-vector-drawing https://vectr.com/design/	https://teachcomputing.org/curriculum/key-stage-2/creating-media-video-editing iMovie MS Photos	https://teachcomputing.org/curriculum/key-stage-2/programming-b-selection-in-quizzes Scratch
Key Objectives	To use a form to record information To compare paper and computer-based databases To outline how grouping and then sorting data allows us to answer questions To explain that tools can be used to select specific data To explain that computer programs can be used to compare data visually To apply my knowledge of a database to ask and answer real-world questions	To explain that computers can be connected together to form systems To recognise the role of computer systems in our lives To recognise how information is transferred over the internet To explain how sharing information online lets people in different places work together To contribute to a shared project online To evaluate different ways of working together online	To control a simple circuit connected to a computer To write a program that includes count-controlled loops To explain that a loop can stop when a condition is met, eg number of times To conclude that a loop can be used to repeatedly check whether a condition has been met To design a physical project that includes selection To create a controllable system that includes selection	To identify that drawing tools can be used to produce different outcomes To create a vector drawing by combining shapes To use tools to achieve a desired effect To recognise that vector drawings consist of layers To group objects to make them easier to work with To evaluate my vector drawing	To recognise video as moving pictures, which can include audio To identify digital devices that can record video To capture video using a digital device To recognise the features of an effective video To identify that video can be improved through reshooting and editing To consider the impact of the choices made when making and sharing a video	To explain how selection is used in computer programs To relate that a conditional statement connects a condition to an outcome To explain how selection directs the flow of a program To design a program which uses selection To create a program which uses selection To evaluate my program
Vocabulary	Database, data,	Digital system	Microcontroller, crumble	Vector, drawing tools,	Video, audio, recording,	Selection, condition,

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	information, record, field, sort, order, group, search, criteria, value, graph, chart, axis, compare, filter, presentation System, connection, digital, input, process, output, protocol, address, packet, chat, explore, slide deck, reuse, remix, collaboration	Physical connection Electronic connection Computer system Search engine Rank Web search Web crawler Seach engine index Content creator	controller, components, LED, Sparkle, crocodile clips, connect, battery box, program, repetition, infinite loop, count-controlled loop, condition, true, false, input, action, selection, motor, switch, algorithm, debug, evaluate	shapes, object, icons, toolbar, move, resize, colour, rotate, duplicate/copy, zoom, select, alignment grid, handles, consistency, modify, layers, front, back, copy, paste, group, ungroup, reuse, improvement, evaluate, alternatives	storyboard, script, soundtrack, dialogue, capture, zoom, storage, digital, tape, AV (audiovisual), videographer, video techniques, zoom, pan, tilt, angle, YouTuber, content, camera, colour, export, trim/clip, titles, end credits, timeline, transitions, soundtrack, retake/reshoot, special effects, constructive feedback	true, false, count-controlled loop, outcomes, conditional statement – the linking together of a condition and outcomes, algorithm, program, debug, implement, question, answer, task, input, outcomes, test, run, setup, share, evaluate, constructive

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Y6	3D Modelling - Vector Graphics (CM2)	Spreadsheets - Intro to (D&I)	Webpage Creation (CM1)	Programming 1 Variables in Games (P1)	Communication and Collaboration Data Transfer (CSN)	Sensing Movement (P2)
Resources	https://teachcomputing.org/curriculum/key-stage-2/creating-media-3d-modelling Tinkercad online	https://teachcomputing.org/curriculum/key-stage-2/data-and-information-spreadsheets Excel	https://teachcomputing.org/curriculum/key-stage-2/creating-media-web-page-creation Canva Sway	https://teachcomputing.org/curriculum/key-stage-2/programming-a-variables-in-games Scratch Online	https://teachcomputing.org/curriculum/key-stage-2/computing-systems-and-networks-communication Google Kiddle Kidsafe	https://teachcomputing.org/curriculum/key-stage-2/programming-b-sensing Microbits
Key Objectives	To use a computer to create and manipulate three-dimensional (3D) digital objects To compare working digitally with 2D and 3D graphics To construct a digital 3D model of a physical object To identify that physical objects can be broken down into a collection of 3D shapes To design a digital model by combining 3D objects To develop and improve a digital 3D model	To identify questions which can be answered using data To explain that objects can be described using data To explain that formula can be used to produce calculated data To apply formulas to data, including duplicating To create a spreadsheet to plan an event To choose suitable ways to present data	To review an existing website and consider its structure To plan the features of a web page To consider the ownership and use of images (copyright) To recognise the need to preview pages To outline the need for a navigation path To recognise the implications of linking to content owned by other people	To define a 'variable' as something that is changeable To explain why a variable is used in a program To choose how to improve a game by using variables To design a project that builds on a given example To use my design to create a project To evaluate my project	To identify how to use a search engine To describe how search engines select results To explain how search results are ranked To recognise why the order of results is important, and to whom To recognise how we communicate using technology To evaluate different methods of online communication	To create a program to run on a controllable device To explain that selection can control the flow of a program To update a variable with a user input To use an conditional statement to compare a variable to a value To design a project that uses inputs and outputs on a controllable device To develop a program to use inputs and outputs on a controllable device
Vocabulary	3D model Three dimensions Lift Lower Workplane Recolour Placeholders	Data input Spreadsheet Cell Cell format Produce calculated data Formula Cell references	HTML code Web layout Copyright Copyright-free Fair use Navigation path Hyperlink	Variable Program variable Value	Web address IP address Domain Name Server (DNS) Data packet Header Data payload Copyright Internet communication Internet collaboration	Micro:bit Input, process, output device Emulator Controllable device Selection Accelerometer

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		Duplicate	User experience		Security Privacy	Operand