TPA Computing Progression Map 2025-2026 (NCCE)

Year groups	Computing Systems and Networks		Creating Media		Programming A		Programming B		Data and Information		Creating Media	
	Overview		Overview		Overview		Overview		Overview		Overview	
	Software/Hardware	Vocabulary	Software/Hardware	Vocabulary	Software/Hardware	Vocabulary	Software/Hardware	Vocabulary	Software/Hardware	Vocabulary	Software/Hardware	Vocabulary
Reception	Kapow **Computing systems and networks: using a computer** Learning about the main parts of a computer and how to use the keyboard and mouse. Logging in and out. To do over one term due to settling in.				Kapow **Programming 1 - all about instructions** Thinking about instructions		Kapow **Programming Bee-Bots** Children learn about directions, experiment with programming a Bee-bot/Blue-bot and tinker with hardware.		Kapow **All about instructions** The children learn to receive and give instructions and understand the importance of precise instructions.		Kapow **Introduction to data** Children sort and categorise data and are introduced to branching databases and pictograms.	
	PC access purplemash (or other program to use) paint	Computer Monitor Mouse Numbers Lowercase Computer Tower Keyboard Letters Uppercase Type Computer safety Password secure lock log out protect private security personal log in arrow paint log out right click cursor stamp left click drag drop	obstacle equipment blindfold selection of clothes soft ball/beanbag digital timer camera	instructions blindfold step over walk around turn left right to the side straight on stand still stop duck under bend down walk hop tiptoe shuffle skip run timer describe two-part instructions adjective algorithm order sequence predict prediction next last first second third			arrow cards beebots	forward back backwards right left arrow direction turn straight on directions route program instructions circle algorithm debug sequence	disconnected computer hardware tools (magnifying class, screwdrivers) working technology to explore (e.g. walkie talkie, toothbrush, ipad) a digital camera ipad/tablet	mouse buttons keyboard keys motherboard USB stick system fan hard drive monitor computer tower speaker click push pull twist under on top of behind open shut larger smaller computer dial memory technology power electricity batteries on off camera ipad tablet lens point shoot capture picture	sorting boxes objects to sort chalk pen and paper camera envelopes large graph paper glue/blutack	sort categorise category group describe texture colour pattern size weight height length more less count in total altogether share divide equal bigger than smaller than thicker than thinner than branch database pictogram column square collect least popular most popular graph row data record more

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	image / gallery / record / photograph / photographer / still / blurred / blurry / crisp / clear				

Year 1

Topic	Technology around us	Digital painting	Moving a robot	Programming animations	Grouping data	Digital writing
Description	Recognising technology in school and using it responsibly.	Choosing appropriate tools in a program to create art, and making comparisons with working non-digitally.	Writing short algorithms and programs for floor robots, and predicting program outcomes.	Designing and programming the movement of a character on screen to tell stories.	Exploring object labels, then using them to sort and group objects by properties.	Using a computer to create and format text, before comparing to writing non-digitally.
Tool	Microsoft paint Purple Mash (program for mouse and keyboard skills)	Microsoft Paint	Bee-Bots	ScratchJr		Microsoft Word
Vocabulary	Technology / Computer / Mouse / Trackpad / Keyboard / Screen / Typing	Paint Program / Tool / Paintbrush / Erase / Fill / Undo / Primary / Colours / Shape Tools / Brush Style / Brush Size / Pointillism	Turn / Clear / Go / Commands / Instructions / Directions / Algorithms / Program / Route / Bee-Bot	ScratchJr / Bee-Bot / Command / Sprite / Program / Programming / Area / Block / Joining / Start Block / Run / Delete / Reset / Algorithm	Object / Label / Group / Search / Image / Property / Data Set / More / Less / Fewer / More / Same	Word Processor / Keyboard / Mouse / Keys / Microsoft Word / Space / Backspace / Cursor / Text Cursor / Toolbar / Font / Undo

Year 2

Topic	Information technology around us	Digital photography	Robot algorithms	Programming quizzes	Pictograms	Digital music
Description	Identifying IT and how its responsible use improves our world in school and beyond.	Capturing and changing digital photographs for different purposes	Creating and debugging programs, and using logical reasoning to make predictions.	Designing algorithms and programs that use events to trigger sequences of code to make an interactive quiz	Collecting data in tally charts and using attributes to organise and present data on a computer.	Using a computer as a tool to explore rhythms and melodies, before creating a musical composition.
Tool		Digital cameras Torches	Bee-Bots	Scratchjr	j2data Pictograms	Chrome Music Lab
Vocabulary	Information Technology / Computer / Barcode / Scan / Scanner	Device / Camera / Photograph / Capture / Image / Digital / Framing / Subject / Compose / Flash / Focus / Background / Editing / Filter / Portrait / Landscape	Instructions / Sequence / Clear / Unambiguous / Algorithm / Program / Order / Command / Prediction / Route / Mat / Debugging	Sequence / Command / Program / Run / Outcome / Predict / Blocks / Sprite / Algorithm / Design / Actions / Project / Modify / Build / Compare / Debug	More Than / Less Than / Most/More / Least/Less / Common / Organise / Data / Objects / Tally Chart / Votes / Total / Pictogram / Compare / Count / Explain / Attribute / Group / Same / Different / Conclusion	Music / Quiet / Loud / Pattern / Rhythm / Pulse / Pitch / Tempo / Instruction / Create / Emotion

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									Block Diagram Sharing		

	Connecting computers Identifying that digital devices have inputs, processes, and outputs, and how devices can be connected to make networks.		**Stop-frame animation** Capturing and editing digital still images to produce a stop-frame animation that tells a story.		**Sequencing sounds** Creating sequences in a block-based programming language to make music.		**Events and actions in programs** Writing algorithms and programs that use a range of events to trigger sequences of actions.		**Branching databases** Building and using branching databases to group objects using yes/no questions.		**Desktop publishing** Creating documents by modifying text, images, and page layouts for a specified purpose.
Year 3		Technicians Digital Device Input Output Process Program Connection Network Network Switch Server Wireless Access Point (WAP)	iMotion (ipads) Corel Video Studio https://creative cloud.adobe.co m/cc/discover/a rticle/how-to-make-a-stop-motion-animation?local e=en	Animation Flip Book Stop-Frame Animation Frame Sequence Image Photograph Setting Character Event Onion Skinning Consistency Evaluation Delete Import Transition	Scratch	Programming Blocks Commands Code Costume Backdrop Go To Glide Event Run The Code Bug Debug Point In Direction Sprite Stage Motion Sequence/Order Algorithm Note Chord	Scratch	Motion Event Sprite Algorithm Resize Extension Block Pen Up Pen Down Setup Pen Design Action Debugging Errors Code Test	j2data Branching and Pictograms	Attribute Value Questions Objects Branching Database Database Equal/Even Separate Structure Compare Order Selecting	Canva.com (NCCE rec.) Adobe Publisher	Text Images Communicate Font Template Placeholder Layout Content Desktop Publishing Copy Paste Purpose

	The internet Recognising the internet as a network of networks including the WWW, and why we should evaluate online content.		**Audio production** Capturing and editing audio to produce a podcast, ensuring that copyright is considered.		**Repetition in shapes** Using a text-based programming language to explore count-controlled loops when drawing shapes.		**Repetition in games** Using a block-based programming language to explore count-controlled and infinite loops when creating a game.		**Data logging** Recognising how and why data is collected over time, before using data loggers to carry out an investigation.		**Photo editing** Manipulating digital images, and reflecting on the impact of change and whether the required purpose is fulfilled.
Year 4	Various websites	Internet Network Router Network Security Network Switch Wireless Access Point (WAP) Website Web Page Web Address Web Browser World Wide Web Content Files Download Sharing Ownership Permission	Audacity	Audio Record Playback Microphone Speaker Headphones Input Output Sound Open Save File Start Pause Stop Podcast Edit Selection Mixing	FMSLogo (NCCE rec.) ...	Program Turtle Commands Code Snippet Algorithm Debug Pattern Repeat Repetition Count-Controlled Loop Trace Decompose Procedure	Scratch	Scratch Program Sprite Blocks Code Loop Repeat Value Forever Infinite Loop Count-Controlled Loop Costume Animate Event Block Duplicate Modify Design	Data logger associated software	Data Data Logger Analyse Data Set Data Point Interval Sensor Import Export Collection Review Conclusion	Paint.net Microsfot paint pixlr.com/e	Image Edit Arrange Crop Undo Save Copyright Composition Adjustments/Alter Hue/Saturation Sepia Version Illustration Retouch Clone Recolour Magic Wand Background

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	Information Accurate Honest Adverts		Time Shift Export MP3		Algorithm Debug Refine Evaluate		Foreground Original Orientation Sharpen Brighten
Year 5	**Systems and searching** Recognising IT systems in the world and how some can enable searching on the internet.	**Introduction to vector graphics** Creating images in a drawing program by using layers and groups of objects.	**Selection in physical computing** Exploring conditions and selection using a programmable microcontroller.	**Selection in quizzes** Exploring selection in programming to design and code an interactive quiz.	**Flat-file databases** Using a database to order data and create charts to answer questions.	**3D modelling** Planning, developing, and evaluating 3D computer models of physical objects. (Yr 6 swap)
	Google slides — System, Connection, Digital, Input, Process, Output, Protocol, Address, Packet, Chat, Explore, Reuse, Remix, Collaboration	Google Drawings — Vector, Objects, Icons, Toolbar, Vector Drawing, Duplicate/Copy, Organise, Zoom, Alignment Grid, Consistency, Modify, Layers, Group, Ungroup	crumble kits pcs — Microcontroller, Components, LED, Connect, Program, Repetition, Infinite Loop, Count-Controlled Loop, Condition, Input, Selection, Action, Algorithm, Program, Debug	Scratch — Selection, Condition, True, False, Count-Controlled Loop, Outcomes, Conditional Statement, Algorithm, Program, Debug, Design, Input, Implement, Run	J2data Databases — Database, Data, Information, Record, Field, Sort, Order, Group, Search, Criteria, Compare, Filter, Graph/Chart	Tinkercad — 3D Object, Workplane, View, Resize, Lift, Rotate, Position, Select, Duplicate, Dimensions, Hole, Group, Ungroup, Design, Modify, Placeholder
Year 6	**Communication and collaboration** Exploring how data is transferred by working collaboratively online.	**Video production** Planning, capturing, and editing video to produce a short film. (yr5 swap)	**Variables in games** Exploring variables when designing and coding a game.	**Sensing movement** Designing and coding a project that captures inputs from a physical device.	**Introduction to spreadsheets** Answering questions by using spreadsheets to organise and calculate data.	**Webpage creation** Designing and creating webpages, giving consideration to copyright, aesthetics, and navigation.
	Google Slides — Search, Search Engine, Search Engine Optimisation, Refine, Index, Crawler, Web Crawler, Bot, Ranking, Selection, Communication, Internet, Public, One-Way, Two-Way, One-To-Many, SMS, Email	Microsoft software, Corel Video Studio — Filming, Tripod, Chroma Key Scene, Digital Video, Editing Software, Production, Overlay, FX, Transition, Capture, Render	Scratch — Variable, Name, Value, Design, Event, Algorithm, Code, Program, Test, Debug, Improve, Evaluate	Micro:bits — Micro:Bit, MakeCode, Input, Process, Output, Flashing, USB, Selection, Condition, If Then Else, Variable, Sensing, Accelerometer, Compass, Navigation, Design, Algorithm, Step Counter, Code, Test, Debug	Microsoft Excel — Spreadsheet, Data, Data Heading, Data Item, Data Set, Cells, Columns, Rows, Spreadsheet Application, Format, Formula, Calculation, Calculate, Operation, Duplicate, Sigma, Input, Ouptut	Google Sites — Website, Web Page, Browser, Media, Hypertext Markup Language (HTML), Logo, Layout, Header, Purpose, Copyright, Fair Use, Home Page, Preview, Evaluate, Device, Google Sites, Breadcrumb Trail

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		WhatsApp Blog Youtube Twitter							Cell Reference Organised Graph Chart		Navigation Hyperlink Subpage External Link Embed

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National Curriculum Coverage — Years 1 and 2	1.1 Technology around us	1.2 Digital painting	1.3 Moving a robot	1.4 Grouping data	1.5 Digital writing	1.6 Programming animations	2.1 Information technology around us	2.2 Digital photography	2.3 Robot algorithms	2.4 Pictograms	2.5 Digital music	2.6 Programming quizzes
Understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions			✓			✓			✓			✓
Create and debug simple programs			✓			✓			✓			✓
Use logical reasoning to predict the behaviour of simple programs			✓			✓			✓			✓
Use technology purposefully to create, organise, store, manipulate, and retrieve digital content	✓	✓		✓	✓		✓	✓		✓	✓	✓
Recognise common uses of information technology beyond school	✓		✓				✓	✓				
Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies	✓			✓	✓		✓	✓	✓	✓		

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National curriculum coverage - Years 5 and 6	5.1 Systems and searching	5.2 Video production	5.3 Selection in physical computing	5.4 Flat-file databases	5.5 Introduction to vector graphics	5.6 Selection in quizzes	6.1 Communication and collaboration	6.2 Webpage creation	6.3 Variables in games	6.4 Introduction to spreadsheets	6.5 3D modelling	6.6 Sensing movementz
Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts			✔			✔	✔		✔			✔
Use sequence, selection, and repetition in programs; work with variables and various forms of input and output			✔			✔			✔			✔
Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs			✔			✔			✔			✔
Understand computer networks, including the internet; how they can provide multiple services, such as the World Wide Web, and the opportunities they offer for communication and collaboration	✔						✔					
Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content		✔		✔				✔				
Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact	✔	✔						✔	✔		✔	