Pearl Class (EYFS) Computational Thinking							
Awesome Autumn	Awesome Autumn Super Space People Who Help Us Springtime Boats Ahoy Summer Fun Busy Bodies						
Pattern, repeating pattern, same, different, fix, in front of, behind, first, then	Solving a problem, algorithm, sequence, debug, test, check, fix, pattern	Algorithm, sequence, route, pattern, repeating, fixes, changes, predict, design, debug	Solving a problem, solution, test, debug, improve, algorithm, position, direction, grid	Algorithm, debug	Object, group, pictogram, collect, organise, pattern, compare, debug, check, fix, test	First, next, last, sequence, algorithm, debug, fix, improve	

Ruby Class (Year 1 & 2) — Cycle A						
Term 1	Term 2	Term 3	Term 4	Term 5	Term 6	
Computing systems and networks	Computing systems and networks	Creating Media	Creating Media	Programming	Programming	
Technology Around Us	Information Technology Around Us	Digital Painting	Digital Photography	Moving a Robot	Robot Algorithms	
<u>Lesson 1</u> Technology	<u>Lesson 1</u> Technology	<u>Lesson 1</u> Paint program, tool, paintbrush, erase, fill, undo	<u>Lesson 1</u> Device, camera, photograph, capture, image, digital	<u>Lesson 1</u> Forwards, backwards, turn, clear, go, commands	<u>Lesson 1</u> Instruction, sequence, clear, unambiguous, algorithm, program	
<u>Lesson 2</u> Computer, mouse/trackpad, keyboard, screen, click, drag	<u>Lesson 2</u> Computer, mouse/trackpad, keyboard, screen, click, drag	<u>Lesson 2</u> Piet Mondrian, primary colours, shape tools, line tool, fill tool, undo tool	<u>Lesson 2</u> Landscape, portrait	<u>Lesson 2</u> Instructions, directions	<u>Lesson 2</u> Sequence, order, algorithm, commands	
<u>Lesson 3</u> Computer mouse/trackpad, draw, click, double-click, click and drag	<u>Lesson 3</u> Computer mouse/trackpad, draw, click, double-click, click and drag	<u>Lesson 3</u> Henri Matisse, shape tool, fill tool	<u>Lesson 3</u> Framing, subject, compose	<u>Lesson 3</u> Forwards, backwards, commands	<u>Lesson 3</u> Sequence, prediction, program	
<u>Lesson 4</u> Input device, computer, keyboard, mouse	<u>Lesson 4</u> Input device, computer, keyboard, mouse	<u>Lesson 4</u> Wassily Kandinsky, tools, feelings, colour, brush style	<u>Lesson 4</u> Light sources, flash, focus, background	<u>Lesson 4</u> Left, right, turn, commands	<u>Lesson 4</u> Artwork, design, route, mat	
<u>Lesson 5</u> Shift, space bar, capital letter, full stop	<u>Lesson 5</u> Shift, space bar <u>,</u> capital letter, full stop	<u>Lesson 5</u> Georges Seurat, Pointillism, brush size	<u>Lesson 5</u> Editing, filter	<u>Lesson 5</u> Plan, algorithm, program	<u>Lesson 5</u> Algorithm	
<u>Lesson 6</u> Safely, responsibly, computer, technology	<u>Lesson 6</u> Safely, responsibly, computer, technology	<u>Lesson 6</u> Pictures, painting, computers, like, prefer, dislike	<u>Lesson 6</u> Format, framing, lighting, focus, filter	<u>Lesson 6</u> Route, plan, program	<u>Lesson 6</u> Debugging, algorithm, program	

Ruby Class (Year 1 & 2) – Cycle B						
Term 1 Data and Information	Term 2 Data and Information	Term 3 <i>Creating Media</i>	Term 4 <i>Creating Media</i>	Term 5 Programming	Term 6 Programming	
Grouping Data	Pictograms	Digital Writing	Digital Music	Programming Animation	Programming Quizzes	
<u>Lesson 1</u> Object, label, group, search, image	<u>Lesson 1</u> More than, less than, most, least, organise, data, object, tally chart, votes, total	<u>Lesson 1</u> Word processor, keyboard, keys, letters, Microsoft Word, Google Docs	<u>Lesson 1</u> Music, planets, Mars, Venus, war, peace, quiet, loud, feelings, emotions	<u>Lesson 1</u> ScratchJr, Bee-Bot, command, sprite, compare, programming, programming area	<u>Lesson 1</u> Sequence, command, program, run, start	
Lesson 2 Group, object, label, image	<u>Lesson 2</u> Pictogram, enter, data, tally chart, compare, more than, less than, objects, count	<u>Lesson 2</u> Word processor, keyboard, keys, letters, numbers, space, backspace, text cursor, Microsoft Word, Google Docs	<u>Lesson 2</u> Pattern, rhythm, pulse	<u>Lesson 2</u> Block, joining, run, command, start, block, program, delete, programming area, background, reset, algorithm, predict	<u>Lesson 2</u> Sequence, command, outcome, predict, program, blocks	
Lesson 3 Group, object, property, label, colour, size, shape	<u>Lesson 3</u> Tally chart, data, pictogram, explain, more, less, most, least, more common, least common	<u>Lesson 3</u> Word processor, keys, keyboard, capital letters, toolbar, bold, italic, underline, Microsoft Word, Google Docs	<u>Lesson 3</u> Neptune, pitch, tempo, rhythm, notes	<u>Lesson 3</u> Effect, change, value, block	<u>Lesson 3</u> Sprite, algorithm, blocks, design, sequence, predict	
<u>Lesson 4</u> Group, object, property, value, label, colour, data set	<u>Lesson 4</u> Attribute, group, same, different, object, more than/less than, most/least	<u>Lesson 4</u> Word processor, keyboard, mouse, cursor, select, font, toolbar, bold, italic, underline, Microsoft Word, Google Docs	<u>Lesson 4</u> Pattern, notes, instrument, tempo	<u>Lesson 4</u> Instructions, sprite, delete, program, algorithm	<u>Lesson 4</u> Actions, sprite, project, blocks, design, sequence, modify, change	
<u>Lesson 5</u> Group, object, size, property, value, label, colour, shape, more, less, most, fewest	<u>Lesson 5</u> Attribute, compare, tally chart, pictogram, more than, less than, most popular, least popular, conclusion	<u>Lesson 5</u> Word processor, keyboard, keys, cursor, undo, font, toolbar, bold, italic, underline, Microsoft Word, Google Docs	<u>Lesson 5</u> Create, emotion, pitch, pulse/beat, tempo, instrument, rhythm, notes	<u>Lesson 5</u> Sprite, background, appropriate, algorithm	<u>Lesson 5</u> Design, algorithm, build, sequence, blocks, match	

G	<u>Lesson 6</u> iroup, object, property,	<u>Lesson 6</u> Tally chart, pictogram,	<u>Lesson 6</u> Word processor, keyboard,	<u>Lesson 6</u> Open, edit	<u>Lesson 6</u> Sprite, design,	<u>Lesson 6</u> Compare, design,
vo	alue, label, colour, data	block diagram, most,	keys, undo, backspace,	open, cuit	programming blocks,	debug, program,
set	, more, less, most, least, fewest, the same	least, common, sharing, data	toolbar, bold, italic, underline, Microsoft Word,		algorithm, programs	features, evaluate
	· ·		Google Docs			

Sapphire Class (Year 3 & 4) – Cycle A						
Term 1 Computing systems and networks	Term 2 Computing systems and networks	Term 3 Creating Media	Term 4 Creating Media	Term 5 <i>Programming</i>	Term 6 <i>Programming</i>	
Connecting Computers	The Internet	Stop-frame Animation	Audio Production	Sequencing Sounds	Repetition in Shapes	
Lesson 1 Digital device, input, output, process	<u>Lesson 1</u> Internet, network, router, network security	<u>Lesson 1</u> Animation, flip book	<u>Lesson 1</u> Audio, record, playback, microphone, speaker, headphones, input, output	<u>Lesson 1</u> Scratch, blocks, programming, commands, code, sprite, costume, stage, backdrop	<u>Lesson 1</u> Program, turtle, commands, code	
<u>Lesson 2</u> Digital device, input, output, process	<u>Lesson 2</u> Network switch, server, wireless access point (WAP), router	<u>Lesson 2</u> Stop-frame animation, frame, sequence, image, photograph	<u>Lesson 2</u> Audio, sound, record, playback, start, pause, stop, podcast	<u>Lesson 2</u> Sprites, programming blocks, motion, turn, point in direction, go to, glide	<u>Lesson 2</u> Algorithm, design, debug, logo commands	
<u>Lesson 3</u> Program	<u>Lesson 3</u> Website, web page, web address, router, routing, route tracing, browser	<u>Lesson 3</u> Setting, character, events, stop-frame animation, onion skinning	<u>Lesson 3</u> Audio, sound, record, playback, start, pause, stop, podcast, save, file	<u>Lesson 3</u> Sequence, event, task, design, code, run the code	<u>Lesson 3</u> Sequence, event, task, design, code, run the code	
<u>Lesson 4</u> Connection, network, network switch	<u>Lesson 4</u> World Wide Web, internet, content, website, web page, links, files	<u>Lesson 4</u> Stop-frame animation, onion skinning, consistency	Lesson 4 Audio, sound, record, playback, edit, selection, open, save, file	<u>Lesson 4</u> Sequence, order, note, chord	<u>Lesson 4</u> Pattern, repeat, repetition, count- controlled loop, algorithm, value	
Lesson 5 Network switch, server, wireless access point (WAP)	<u>Lesson 5</u> Website, use, content, download, sharing, ownership, permission	<u>Lesson 5</u> Evaluation, animation, onion skinning, delete, frame	<u>Lesson 5</u> Audio, sound, edit, selection, open, save, mixing, time shift	<u>Lesson 5</u> Sprite, stage, costume, backdrop	<u>Lesson 5</u> Repeat, count- controlled loop, decompose, procedure	
Lesson 6 Network switch, server, wireless access point (WAP)	<u>Lesson 6</u> Information, sharing, accurate, honest, content, adverts	<u>Lesson 6</u> Animation, media, import, transition	<u>Lesson 6</u> Export, MP3, audio, editing, evaluate, feedback	<u>Lesson 6</u> Design, algorithm, bug, debug	<u>Lesson 6</u> Count-controlled loop, procedure, debug, program	

		Sapphire Class (Year	[.] 3 & 4) – Cycle B		
Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Data and Information	Data and Information	Creating Media	Creating Media	Programming	Programming
Branching Databases	Data Logging	Desktop Publishing	Photo Editing	Events and Actions in Programs	Repetition in Games
<u>Lesson 1</u> Attribute, value, questions, table, objects	<u>Lesson 1</u> Data, table (layout)	<u>Lesson 1</u> Text, images, advantages, disadvantages, communicate	<u>Lesson 1</u> Image, edit, arrange, select, digital, crop, undo, save	<u>Lesson 1</u> Motion, event, sprite, algorithm, logic	<u>Lesson 1</u> Scratch, code, loop, programming, sprite, blocks, repeat, value
<u>Lesson 2</u> Branching database, database, attribute, value, questions, objects, equal, even, separate	<u>Lesson 2</u> Input device, sensor, data logger	<u>Lesson 2</u> Font, font style, communicate, template	<u>Lesson 2</u> Image, search, save, copyright, composition, edit, save, pixels, crop, rotate, flip	<u>Lesson 2</u> Move, resize, algorithm	<u>Lesson 2</u> Block, repeat, forever, infinite loop, count- controlled loop, costume
<u>Lesson 3</u> Branching database, database, attribute, value, questions, objects	<u>Lesson 3</u> Data logger, logging, data point, interval	<u>Lesson 3</u> Landscape, portrait, orientation, placeholder, template, layout, content	<u>Lesson 3</u> Image, adjustments, effects, colours, hue/saturation, sepia, save, version, illustrator, vignette	<u>Lesson 3</u> Extension block, pen up, set up	<u>Lesson 3</u> Repetition, forever, infinite loop, count- controlled loop, animate, costume, event block, duplicate
<u>Lesson 4</u> Branching database, attribute, questions, structure, compare, order, organise	<u>Lesson 4</u> Analyse, data set, import, export	<u>Lesson 4</u> Desktop publishing, copy, paste	<u>Lesson 4</u> Image, edit, retouch, clone, recolour, magic wand, select, adjust, sharpen, brighten	<u>Lesson 4</u> Pen, design, event, action, algorithm	<u>Lesson 4</u> Block, repeat, forever, infinite loop, modify, design
<u>Lesson 5</u> Branching database, attribute, value, question, j2data, selecting	<u>Lesson 5</u> Data, data logger, logged, collection	<u>Lesson 5</u> Layout, purpose	<u>Lesson 5</u> Image, fake, real, cut, composite, copy, paste, alter, background, foreground	<u>Lesson 5</u> Debugging, errors, setup	<u>Lesson 5</u> Infinite loop, count- controlled loop, repetition, design, sprite, algorithm
<u>Lesson 6</u> Branching database, attribute, value, questions, j2data, pictogram, compare, information, decision tree	<u>Lesson 6</u> Analyse, review, conclusion	<u>Lesson 6</u> Desktop publishing, benefits	<u>Lesson 6</u> Image, publication, elements, original, font style, shapes, border, layer	<u>Lesson 6</u> Design, code, setup, test, debug, actions, events	<u>Lesson 6</u> Repetition, design, algorithm, duplicate, debug, refine, evaluate

Emerald Class (Year 5 & 6) — Cycle A							
Term 1 Computing systems and networks	Term 2 Computing systems and networks	Term 3 <i>Creating Media</i>	Term 4 <i>Creating Media</i>	Term 5 <i>Programming</i>	Term 6 <i>Programming</i>		
Systems and Searching	Communication and Collaboration	Video Production	Web Page Creation	Selection in Quizzes	Variables in Games		
<u>Lesson 1</u> System, connection, digital, input, process, output	<u>Lesson 1</u> Search, search engine, Google, Bing, Yahoo!, Swisscows, DuckDuckGo, refine	<u>Lesson 1</u> Video, audio, recording, storyboard, script, soundtrack, dialogue	<u>Lesson 1</u> Website, web page, browser, media, Hypertext Markup Language (HTML)	<u>Lesson 1</u> Selection, condition, true, false, count-controlled loop	<u>Lesson 1</u> Variable, change, name, value		
<u>Lesson 2</u> System, connection, digital, input, process, output	<u>Lesson 2</u> Index, crawler, bot, search engine	<u>Lesson 2</u> Video, audio, recording, capture, zoom, storage, digital, tape	<u>Lesson 2</u> Web page, website, logo, layout, header, media, purpose	Lesson 2 Selection, condition, true, false, outcomes, debug, conditional statement (the linking together of a condition and outcomes), algorithm, program	<u>Lesson 2</u> Variable, name, value, set, change		
<u>Lesson 3</u> Protocol, address, packet	<u>Lesson 3</u> Ranking, search engine, search engine optimisation, links, web crawlers	<u>Lesson 3</u> Video, audio, AV (audio- visual), recording, save, videographer Video techniques: Zoom, pan, tilt, angle	<u>Lesson 3</u> Copyright, fair use	<u>Lesson 3</u> Selection, condition, true, false, outcomes, question, answer, algorithm, program, debug	<u>Lesson 3</u> Variable, set, change, design, event		
<u>Lesson 4</u> Chat, explore, slide deck	<u>Lesson 4</u> Searching, search engine, web crawler, content creator, selection, ranking	<u>Lesson 4</u> Video, lighting, setting, YouTuber, content, light, audio/sound, camera angle, colour	<u>Lesson 4</u> Web page, home page, preview, evaluate, device, Google Sites	<u>Lesson 4</u> Task, design, algorithm, input, program, selection, condition, outcomes	<u>Lesson 4</u> Design, algorithm, code		
<u>Lesson 5</u> Chat, explore	<u>Lesson 5</u> Communication, internet	Lesson 5 Export, computer, Microsoft Movie Maker, split, trim/clip, edit, titles, end credits, timeline, transitions, audio, soundtrack, content, retake/reshoot (choose agreed language)	<u>Lesson 5</u> Website, web page, breadcrumb trail, navigation, hyperlink, subpage (choose agreed language)	<u>Lesson 5</u> Implement, design, algorithm, program, selection, condition, outcome, test, run	<u>Lesson 5</u> Task, algorithm, design, artwork, program, project, code, test, debug		

<u>Lesson 6</u> Reuse, remix, collaboration	<u>Lesson 6</u> Communication, public, private, one-way, two-way, one-to-one, one-to-many, SMS, email, WhatsApp, blog, YouTube, Twitter, BBC Newsround	<u>Lesson 6</u> Video, special effects, title screen, end credits, export, constructive feedback	<u>Lesson 6</u> Hyperlink, evaluate, website, web page, implication, external link, embed	<u>Lesson 6</u> Implement, design, algorithm, program, debug, test, setup, selection, condition, outcome, share, evaluate, constructive	<u>Lesson 6</u> Improve, evaluate, share
		Emerald Class (Year	5 & 6) – Cycle B		
Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Data and Information	Data and Information	Creating Media	Creating Media	Programming	Programming
Flat-File Databases	Introduction to Spreadsheets	Introduction to Vector Graphics	3D Modelling	Selection in Physical Computing	Sensing Movement
<u>Lesson 1</u> Spreadsheet, data, data heading, data set, cells, columns and rows.	<u>Lesson 1</u> Spreadsheet, data, data heading, data set, cells, columns and rows	<u>Lesson 1</u> Vector, drawing tools, shapes, object, icons, toolbar	Lesson 1 2D, 3D, 3D object, 3D space, view	Lesson 1 Microcontroller, Crumble controller, components, LED, Sparkle, crocodile clips, connect, battery box, program, repetition, infinite loop	<u>Lesson 1</u> Micro:bit, MakeCode, input, process, output, flashing, USB
Lesson 2 Data, data item, data set, object, spreadsheet application, format, common attribute	<u>Lesson 2</u> Data, data item, data set, object, format, spreadsheet application, common attribute	<u>Lesson 2</u> Vector drawing, object, move, resize, colour, rotate, duplicate/copy	<u>Lesson 2</u> 2D, 3D, 3D object, 3D space, resize, colour, lift	<u>Lesson 2</u> Microcontroller, Crumble controller, output devices, motor, LED, Sparkle, crocodile clips, connect, battery box, program, repetition, count-controlled loop	<u>Lesson 2</u> Selection, condition, if then else, variable, random
<u>Lesson 3</u> Formula, calculation, data, spreadsheet, input, output. cells, cell reference	<u>Lesson 3</u> Formula, calculation, data, spreadsheet, input, output. cells, cell reference	<u>Lesson 3</u> Organise, zoom, select, rotate, object, alignment grid, resize, handles, consistency, modify	<u>Lesson 3</u> Rotate, position, select, duplicate	<u>Lesson 3</u> Microcontroller, Crumble controller, components, switch, motor, LED, Sparkle, crocodile clips, connect, battery box, program, condition, true, false, input	<u>Lesson 3</u> Input, selection, condition, variable, sensing, accelerometer
Lesson 4	<u>Lesson 4</u>	<u>Lesson 4</u> Layers, object, front, back, order	<u>Lesson 4</u> Dimensions, placeholder, hole, group, ungroup	Lesson 4	<u>Lesson 4</u> Compass, direction, variable, navigation

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Data, calculate,	Data, calculate, operation,			Microcontroller, output	
operation, formula, cell,	formula, cell, range, duplicate,			devices, selection,	
range, duplicate, sigma	sigma			condition, action	
Lesson 5	Lesson 5	<u>Lesson 5</u>	<u>Lesson 5</u>	<u>Lesson 5</u>	<u>Lesson 5</u>
Propose, question, data	Propose, question, data set,	Copy, paste, group,	Resize, group, ungroup,	Task, design, selection,	Micro:bit, design, task,
set, data, organised,	data, organised, formula	ungroup, duplicate, object,	design	repetition, condition,	algorithm, variable,
formula		vector drawing, reuse	_	action, microcontroller,	step counter
-				Crumble controller,	
				output devices, motor,	
				LED, Sparkle, switch,	
				crocodile clips, battery	
				box	
Lesson 6	Lesson 6	Lesson 6	<u>Lesson 6</u>	<u>Lesson 6</u>	Lesson 6
Graph, chart, evaluate,	Graph, chart, evaluate, results,	Improvement, evaluate,	Modify, evaluate, improve	Task, design, selection,	Plan, create, code, test,
results, comparison,	comparison, questions,	alternatives, vector		repetition, condition,	debug
questions, software,	software, tools, data	drawing		action, microcontroller,	_
tools, data	• · · · ·	-		Crumble controller,	
, , , , , , , , , , , , , , , , , , ,				output devices, motor,	
				LED, Sparkle, switch,	
				algorithm, program,	
				debug, evaluate	