Computing Curriculum Map 24-25
(Teach Computing)

Year 1	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Computing Strand	Computing Systems and Networks	Programming A	Programming B	Data and Information	Creating Media	Creating Media
Unit Title	Technology Around Us	Moving a Robot	Programming Animations	Grouping Data	Digital Writing	Digital Painting
Outcome	Recognising technology in school and using it responsibly.	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	Choosing appropriate tools in a program to create art, and making comparisons with working non-digitally
Key Vocabulary	technology, computer, mouse, trackpad, keyboard, screen, double click, typing.	Bee-Bot, forwards, backwards, turn, clear, go, commands, instructions, directions, left, right, route, plan, algorithm, program.	ScratchJr, command, sprite, compare, programming, area, block, joining, start, run, program, background, delete, reset, algorithm, predict, effect, change, value, instructions, design.	object, label, group, search, image, property, colour, size, shape, value, data set, more, less, most, fewest, least, the same	word processor, keyboard, keys, letters, type, numbers, space, backspace, text cursor, capital letters, toolbar, bold, italic, underline, mouse, select, font, undo, redo, format, compare, typing, writing.	paint program, tool, paintbrush, erase, fill, undo, shape tools, line tool, fill tool, undo tool, colour, brush style, brush size, pictures, painting, computers
Curriculum Links	**PSHE** Acceptable Use Policy			**Science** Link to science unit Everyday Materials	**English – Writing** **(Y1)** Link to Talk for Writing Unit	**Art and Design** Georges Seurat Wassily Kandinsky Henri Matisse Piet Mondrian

Education for a Connected World	**Health, well-being and lifestyle**I can identify and explain rules that help keep us safe and healthy in and beyond the home when using technology.				**Privacy and Security** I can give reasons why I should only share information with people I choose to and can trust. (Y1)	
	Copyright and Ownership I can explain why work I create using technology belongs to me. I can say why it belongs to me (e.g. 'I designed it' or 'I filmed it''). I can save my work under a suitable title / name so that others know it belongs to me (e.g. filename, name on content). I understand that work created by others does not belong to me even if I save a copy.					

Year 2	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Computing Strand	Computing Systems and Networks	Creating Media	Programming A	Creating Media	Programming B	Data and Information
Unit Title	Information Technology Around Us	Digital Music	Robot Algorithms	Digital Photography	Programming Quizzes	Pictograms
Outcome	Identifying IT and how its responsible use improves our world in school and beyond.	Using a computer as a tool to explore rhythms and melodies before creating a musical composition.	Creating and debugging programs and using logical reasoning to make predications.	Capturing and changing digital photographs for different purposes.	Designing algorithms and programs that use events to trigger sequences of code t make an interactive quiz.	Collecting data in tally charts and using attributes to organise and present data on a computer.
Key Vocabulary	Information technology (IT), computer, barcode, scanner/scan	music, quiet, loud, feelings, emotions, pattern, rhythm, pulse, pitch, tempo, rhythm, notes, create, emotion, beat, instrument, open, edit.	instruction, sequence, clear, unambiguous, algorithm, program, order, prediction, artwork, design, route, mat, debugging, decomposition	device, camera, photograph, capture, image, digital, landscape, portrait, framing, subject, compose, light sources, flash, focus, background, editing, filter, format, framing, lighting	sequence, command, program, run, start, outcome, predict, blocks, design, actions, sprite, project, modify, change, algorithm, build, match, compare, debug, features, evaluate, decomposition, code.	more than, less than, most, least, common, popular, organise, data, object, tally chart, votes, total, pictogram, enter, data, compare, objects, count, explain, attribute, group, same, different, conclusion, block

						diagram, sharing
Curriculum Links and Educational Visits	**PSHE** Acceptable Use Policy and Healthy and Safer Lifestyles: Digital Lifestyles			**Educational Visits** Opportunity for links to taking Photographs in Alexandra Palace.		**Maths** Linked to White Rose Maths Statistics
Education for a Connected World	**Health, well-being, and lifestyle** I can identify rules that help keep us safe and healthy in and beyond the home when using technology I can give some simple examples	**Copyright and ownership** I know that work I create belongs to me.		To identify that some images are not real (fake)		See Below*
	***Self-image and identity** I can recognise that I can say 'no'/'please stop'/'I'll tell'/'I'll ask' to somebody who asks me to do something that makes me feel sad, embarrassed or upset. I can explain how this could be either in real life or online. If something happens that makes me feel sad, worried, uncomfortable, or frightened I can give examples of when and how to speak to an adult I can trust **Health, wellbeing and lifestyle** I can identify rules that help keep us safe and healthy in and beyond the home when using technology. I can give some simple examples **Privacy and security** I can identify some simple examples of my personal information (e.g. name, address, birthday, age, location). I can describe the people I can trust and can share this with; I can explain why I can trust them. I can recognise more detailed examples of information that is personal to me (e.g. where I live, my family's names, where I go to school)					

Year 3	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Computing Strand	Computing Systems and Networks	Data and Information	Programming A	Creating Media	Programming B	Creating Media

Unit Title	Connecting Computers	Branching Databases	Sequencing Sounds	Stop-frame Animation	Events and Actions in Programs	Desktop Publishing
Outcome	Identifying that digital devices have inputs, processes and outputs and how devices can be connected to make networks.	Building and using branching databases to group objects using yes/no questions.	Creating sequences in a block-based programming language to make music.	Capturing and editing digital still images to produce a stop-frame animation that tells a story.	Writing algorithms and programs that use a range of events to trigger sequences of actions.	Creating documents by modifying text, images ad page layouts for a specified purpose.
Key Vocabulary	digital device, input, process, output, program, digital, non-digital, connection, network, switch, server, wireless access point, cables, sockets	attribute, value, questions, table, objects, branching, database, objects, equal, even, separate, structure, compare, order, organise, selecting, information, decision tree	animation, flip book, stopframe, frame, sequence, image, photograph, setting, character, events, onion skinning, consistency, evaluation, delete, media, import, transition	text, images, advantages, disadvantages, communicate, font, style, landscape, portrait, orientation, placeholder, template, layout, content, desktop publishing, copy, paste, purpose, benefits	motion, event, sprite, algorithm, logic, move, resize, extension block, pen up, set up, pen, design, action, debugging, errors, setup, code, test, debug, actions	Scratch, programming, blocks, commands, code, sprite, costume, stage, backdrop, motion, turn, point in direction, go to, glide, sequence, event, task, design, run the code, order, note, chord, algorithm, bug, debug, code
Curriculum Links		**Science** Link to Animals, Including Humans to create branching database to sort vertebrates and invertebrates and other animal groups e.g. mammals, fish, birds, reptiles and amphibians.		**Reading** Link to Destination Reader and Georges Marvellous Medicine		**Geography** Non-chronological report about Earthquakes, Volcanoes and Mountains

Education for a Connected World	**Spring 2** **Managing online information** I can use key phrases in search engines. / I can use search technologies effectively. **Copyright and ownership** I can explain why copying someone else's work from the internet without permission can cause problems. / I can give examples of what those problems might be. / When searching on the internet for content to use, I can explain why I need to consider who owns it and whether I have the right to reuse it. I can give some simple examples. / I can give examples of content that is permitted to be reused. / I can demonstrate the use of search tools to find and access online content which can be reused by others. **Summer 1** **Managing online information** I can use key phrases in search engines / I can use search technologies effectively **Copyright and ownership** When searching on the internet for content to use, I can explain why I need to consider who owns it and whether I have the right to reuse it. / I can demonstrate the use of search tools to find and access online content which can be reused by others

Year 4	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Computing Strand	Computing Systems and Networks	Data and Information	Creating Media	Programming B	Programming A	Creating Media
Unit Title	The Internet	Data Logging	Photo Editing	Repetition in Games	Repetition in Shapes	Audio Production
Outcome	Recognising the internet as a network of networks including the WWW and why we should evaluate online content.	Recognising how and why data is collected over time, before using data loggers to carry out an investigation.	Manipulating digital images, and reflecting on the impact of changes and whether the required purpose is fulfilled.	Using a block-based programming language to explore count-controlled and infinite loops when creating a game.	Using a text-based programming language to explore count-controlled loops when drawing shapes.	Capturing and editing audio to produce a podcast, ensuring that copyright is considered.

Key Vocabulary	internet, network, router, security, switch, server, wireless access point (WAP), website, web page, web address, routing, web browser, World Wide Web, content, links, files, use, download, sharing, ownership, permission, information, accurate, honest, content, adverts	data, table, layout, input device, sensor, logger, logging, data point, interval, analyse, dataset, import, export, logged, collection, review, conclusion	Logo (programming environment), program, turtle, commands, code snippet, algorithm, design, debug, pattern, repeat, repetition, count controlled loop, value, trace, decompose, procedure	Scratch, programming, sprite, blocks, code, loop, repeat, value, infinite loop, count-controlled loop, costume, repetition, forever, animate, event block, duplicate, modify, design, algorithm, debug, refine, evaluate	image, edit, digital, crop, rotate, undo, save, adjustments, effects, colours, hue, saturation, sepia, vignette, image, retouch, clone, select, combine, made up, real, composite, cut, copy, paste, alter, background, foreground, zoom, undo, font	audio, microphone, speaker, headphones, input device, output device, sound, podcast, edit, trim, align, layer, import, record, playback, selection, load, save, export, MP3, evaluate, feedback
Curriculum Links		**Science** Linked to Sound Unit	**Art** Use Andy Warhol as inspiration for pictures.		**Maths** Linked to unit on Shape	**PSHE** Linked to Health Living Unit.
Educated for a Connected World	**Autumn 1** **Managing online information** I can analyse information to make a judgement about probable accuracy, and I understand why it is important to make my own decisions regarding content and that my decisions are respected by others. / I can explain what is meant by fake news, e.g. why some people will create stories or alter photographs and put them online to pretend something is true when it isn't. / I can describe ways of identifying when online content has been commercially sponsored or boosted, (e.g. by commercial companies or by vloggers, content creators, or influencers). / I can describe how fake news may affect someone's emotions and behaviour, and explain why this may be harmful. **Spring 2** **Self-image and identity** I can describe ways in which people might make themselves look different online. **Summer 2** **Copyright and ownership** I can explain why copying someone else's work from the internet without permission can cause problems. / I can give examples of what those problems might be. / When searching on the internet for content to use, I can explain why I need to consider who owns it and whether I have the right to reuse it. / I can give some simple examples.					

Year 5	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Computing Strand	Computing Systems and Networks	Creating Media	Programming A	Data and Information	Creating Media	Programming B
Unit Title	Systems and Searching	Video Production	Selection in Physical Computing	Flat-files Databases	Introduction to Vector Graphics	Selection in Quizzes
Outcome	Recognising IT systems in the world and how some can enable searching on the internet.	Planning, capturing, and editing vide to produce a short film.	Exploring conditions and selection using a programmable microcontroller.	Using a database to order data and create charts to answer questions.	Creating images n a drawing program by sing layers and groups of objects.	Exploring selection n programming to design and code an interactive quiz.
Key Vocabulary	system, connection, digital, input, process, storage, output, search, search engine, refine, index, bot, ordering, links, algorithm, search engine optimisation (SEO), web crawler, content creator, selection, ranking	vector, drawing tools, object, toolbar, vector drawing, move, resize, colour, rotate, duplicate/copy, zoom, select, align, modify, layers, order, copy, paste, group, ungroup, reuse, reflection	video, audio, camera, talking head, panning, close up, video camera, microphone, lens, mid range, long shot, moving subject, side by side, angle (high, low, normal), static, zoom, pan, tilt, storyboard, filming, review, import, split, trim, clip, edit, reshoot, delete, reorder, export, evaluate, share	database, data, information, record, field, sort, order, group, search, value, criteria, graph, chart, axis, compare, filter, presentation	microcontroller, USB, components, connection, infinite loop, output component, motor, repetition, count controlled loop, Crumble controller, switch, LED, Sparkle, crocodile clips, connect, battery box, program, condition, Input, output, selection, action, debug, circuit, power, cell, buzzer	Selection, condition, true, false, count-controlled loop, outcomes, conditional statement, algorithm, program, debug, question, answer, task, design, input, implement, test, run, setup, operator
Curriculum Links				Link to Science: Earth and Space		

Education for a Connected World	I am aware that a person's online activity, history or profile (their 'digital personality') will affect the type of information returned to them in a search or on a social media feed, and how this may be intended to influence their beliefs, actions and choices. I can explain how search engine rankings are returned and can explain how they can be influenced (e.g. commerce, sponsored results)	**Internet safety** Use technology safely, respectfully, and responsibly; recognise acceptable/unacceptable behaviour				

Year 6	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Computing Strand	Computing Systems and Networks	Programming A	Programming B	Data and Information	Creating Media	Creating Media
Unit Title	Communication and Collaboration	Variables in Games	Sensing Movement	Introduction to Spreadsheets	3D Modelling	Webpage Creation
Outcome	Exploring how data is transferred by working collaboratively online.	Exploring variables when designing and coding a game.	Designing and coding a project that captures inputs from a physical device.	Answering questions by using spreadsheets to organise and calculate data.	Planning, developing, and evaluating 3D computer models of physical objects.	Designing and creating webpages, giving consideration to copyright, aesthetics and navigation.

Key Vocabulary	communication, protocol, data, address, Internet Protocol (IP), Domain Name Server (DNS), packet, header, data payload, chat, explore, slide deck, reuse, remix, collaboration, internet, public, private, oneway, two-way, one-to one, one-to-many	TinkerCAD, 2D, 3D, shapes, select, move, perspective, view, handles, resize, lift, lower, recolour, rotate, duplicate, group, cylinder, cube, cuboid, sphere, cone, prism, pyramid, placeholder, hollow, choose, combine, construct, evaluate, modify	Micro:bit, MakeCode, input, process, output, flashing, USB, trace, selection, condition, if then else, variable, random, sensing, accelerometer, value, compass, direction, navigation, design, task, algorithm, step counter, plan, create, code, test, debug	data, collecting, table, structure, spreadsheet, cell, cell reference, data item, format, formula, calculation, spreadsheet, input, output, operation, range, duplicate, sigma, propose, question, data set, organised, chart, evaluate, results, sum, comparison, software, tools	variable, change, name, value, set, design, event, algorithm, code, task, artwork, program, project, code, test, debug, improve, evaluate, share, assign, declare+-	website, web page, browser, media, Hypertext Markup Language (HTML), logo, layout, header, media, purpose, copyright, fair use, home page, preview, evaluate, device, Google Sites, breadcrumb trail, navigation, hyperlink, subpage, evaluate, implication, external link, embed
Curriculum Links					Linked to Maths: Shape	Linked to Humanities: Migration to Britain.
Education for a Connected World	**Autumn 1** I can describe and assess the benefits and the potential risks of sharing information online. / I can assess and justify when it is acceptable to use the work of others. / I can give examples of content that is permitted to be reused **Spring 2** **Managing information online** I can describe how I can search for information within a wide group of technologies (e.g. social media, image sites, video sites). / I can use different search technologies. / I can evaluate digital content and can explain how I make choices from search results **Summer 1** **Strand** Lesson 1 and Lesson 3 – Privacy and Security (Y4) – I can describe strategies for keeping my personal information private, depending on context **Summer 2** **Online relationships** I can use the internet with adult support to communicate with people I know. (EY-7) **Managing information Online** I can navigate online content, websites, or social media feeds using more sophisticated tools to get to the information I want (e.g. menus, sitemaps, breadcrumb-trails, site search functions). (11-14) **Copyright and ownership** I can explain why copying someone else's work from the internet without permission can cause problems. / I can give examples of what those problems might be. / When searching on the internet for content to use, I can explain why I need to consider who owns it and whether I have the right to reuse it. I can give some simple examples. / I can assess and justify when it is acceptable to use the work of others. / I can give examples of content that is permitted to be reused. / I can demonstrate the use of search tools to find and access online content which can be reused by others. **/** I can demonstrate how to make references to and acknowledge sources I have used from the internet. / I can explain the principles of fair use and apply this to case studies. (11-14)					