COMPUTING CURRICULUM OVERVIEW 2019-2020

YEAR 1				
Mouse and Keyboard	**Text and Images**	**Music Creation (Task 1)**	**Programming (Lessons 1-3)**	**Digital Art (Project 1)**
1. Move cursor and left click to select. 2. Click and drag to move items. 3. Find letters on a keyboard and begin touch typing.	1. Add and resize images. 2.Add text to label and describe images.	1. Create scales, chords, arpeggios, melodies and rhythm to build a song and experiment with tempo.	1. Understand sequence and algorithms. 2. Sequence instructions (commands) to achieve an objective. 3. Predict, write, execute and debug a simple program.	1. Use lines and fill tools to make interesting patterns. (Mondrian project)

YEAR 2

Recognise uses of IT	Data Handling	Programming	Programming in Scratch Jr	Digital Art	E-safety	Ebook Creation	Animation
1. Spot digital technology in school.	1. Label a pictogram and add data to each column.	1. Sequence code blocks with loops (repetition) to write a program to achieve a goal.	1. Program movements using loops (repetition).	1. Add a variety of shapes (outlines and fill) and label them with text. (Shapes and Text projects)	1.Use technology safely and respectfully, keeping personal information private.	1. Add a book cover with title, author, colour and image.	1. Add a background and objects to a frame.
2. Find a piece of computer equipment amongst day to day objects and choose the correct definition.	2. Edit a table with correct titles and numbers to create a bar chart and pie chart.		2. Program outputs for audio or text Use the 'wait' code appropriately.	2. Use the stamps tools to create different graphics (Stamps project)		2. Add multiple pages based on a theme.	V2. Copy/clone a frame and move objects to create an animation.
	3.Explain what a pictogram and bar chart shows.		3. Find errors in a program (debug).			3. Add text on different pages.	
						4. Add images on different pages to match the theme/text.	
						5. Add voice recordings to match the text and theme.	

YEAR 3

Scratch Programming (Lessons 1-3)	**Kodu Programming (Optional)**	**Comic Creation**	**Digital Art**	**Document Editing**	**Game Creation**	**Music Creation (Tasks 1 and 2)**	**E-safety**
1. Write a simple program with text outputs, wait commands and movement	1. Create a 3D place using various design tools	1. Add, resize and organise colour or picture backgrounds.	1. Use stamps to build graphics and copy and paste to speed up process. *(Stamps project)*	1. Copy and Paste text and images.	1.Design, add and animate backgrounds	1. Create scales, chords, arpeggios, melodies and rhythm to build a song.	1. Identify online dangers.
2. Write a program with movement and repetition	2. Write a program to control using keyboard inputs.	2. Add, resize, organise characters/ object to different panels.	2. Use different shapes (outlines and fill) and label them with text. *(Shapes and text project)*	2. Find and replace words.	2. Design and add characters/ objects.	2. Build up a mix using sampled sounds.	
3. Write programs using different inputs; keyboard, mouse and touch screen.	3. Write a program with conditions.	3. Add narration using text and direct speech using speech bubbles.	4. Use select, copy and paste to duplicate elements. *(Wrapping paper project)*	3. Format text for a purpose.	3.Design and add platforms.	3. Add text on different pages.	
	4. Write a program with variables		5. Transform elements to create symmetry and patterns. Zoom in to add detail.	4. Add an image and edit it inside a document.	4. Create an app store listing with icon, effective description and screenshots.		

YEAR 4							
Scratch Programming (Lessons 4-7)	**Animation**	**Data Handling (Activities 1-4)**	**Internet Research (Activities 1-3)**	**Ebook Creation**	**3D Design**	**App Design**	**E-safety**
1.Program inputs with loops. Use conditions and sensing for interactions.	1. Create a stop-motion video by duplicating slides (frames).	1.Select cells and resize them, fill with colour and add borders.	1. Use search technologies to find specific pieces of information.	1. Add page colour and style then position and format text.	1. Understand 3D spacial awareness.	1. Adjust slide size to mimic a phone/tablet size.	1. Understand how we communicate and share content online safely and respectfully
2. Write a program with audio outputs and inputs (**Scratch Rock Band**)	2. Create animation using transition effects (motion paths, pulse etc).	2. Find and present data as a table and suitable chart.	2. Reference the correct source of information.	2. Add and position images from camera/internet.	2. Add 3D shapes, resize, adjust height, duplicate and use the different perspective.	2. Add text and images to a slide.	
3. Debug a variety of programs. (**Scratch Debug**)	3. Animate individual elements of objects.	3. Give chart a suitable title and label axis correctly.		3. Add audio, including hiding it behind an object.	3.Re-create different types of buildings using 3D shapes.	3. Add icons and text to use as navigation.	
4. Program conditions with data variables and operators. (**Scratch Quiz**)	4. Create animated GIF files by animating pixels.	4. Select and use non-adjacent cells and resize multiple cell widths.		4. Add hyperlinks to text and images.	4. Create roads/paths by adjusting the height of 3D shapes.	4. Duplicate slides to create multiple pages of the app.	

YEAR 5

Scratch Programming (Independent projects)	**Music Creation (Tasks 3 and 4) Option Task 5 for iPad.**	**Data Handling (Tour De France project)**	**Internet Research (Tasks 4-5)**	**Ebook Creation**	**3D Design**	**Computer Networks**	**Physical Systems**	**E-safety**
1. Program list variables that chooses randomly. (**Scratch Sentences**)	1. Edit sampled music with code by changing variables and using loops.	1.Find data from internet (Google maps)	1. Be discerning in evaluating digital content.	1. Add page colour and style then position and format text.	1. Understand 3D spacial awareness.	1. Understand computer networks, internet and cloud computing.	1. Understand that computers use physical inputs and outputs and give examples.	1.Communicate and share content online safely, responsibly and respectfully.
2. Program inputs, conditions and sensing for interaction, data variables for scoring and a game timer. (**Scratch Maze**)	2. Layer sounds to create mult i-track music and add effects.	2. Find and present data as a table and suitable chart.	2. Check the internet for fake news by cross-referencing facts.	2. Add and position images from camera/internet.	2. Add 3D shapes, resize, adjust height, duplicate and use the different perspective.	2. What is email and how can we use it safely?	2. Program physical inputs and outputs (e.g program LED lights)	
3.Program Inputs, outputs, loops, conditions, sensing and variables. (**Scratch Football**)	3. Build tracks of music using virtual instruments. Adjust levels and effects of each track.	3. Give chart a suitable title and label axis correctly.		3. Add audio, including hiding it behind an object.	3.Re-create different types of buildings using 3D shapes.	3. How and why can we collaborate online.		
		4. Use formulae to find totals, averages and maximum/ minimum numbers.		4. Add hyperlinks to text and images.	4. Create roads/paths by adjusting the height of 3D shapes.			

YEAR 6

Scratch Programming (Independent projects)	History of Computing	Binary Code	Web Design	Virtual Reality	HTML Web Programming	Image Editing	Programming in Python	E-safety
1. Program inputs, conditions, random variables for unpredictability, game timer. (**Scratch Space Invaders**)	1. Design and create digital content to accomplish goals.	1. Understand why computers/ electronics use binary.	1. Add and format text within a website.	1. Understand what virtual reality is and how it can be used to help people.	1. Add and align text and change colour.	1. Take and crop a screenshot and understand ratios.	1. Program movements using Python Turtle.	1.Communicate and share content online safely, responsibly and respectfully.
2. Program inputs, conditions, sensing, random variables, operators for direction and data variables for scoring. (**Scratch Tennis)**	2. Use search technologies effectively and be discerning in evaluating digital content.	2. To convert binary code to denary numbers (decimal numbers) and visa versa.	2. Organise sections of web-pages and multiple page with relevant titles.	2. Add, move and resize objects in a virtual reality environment	2. Program background colour.	2. Adjust the colours, brightness, contrast and filters.	2. Use the PRINT command for text.	
3.Use inputs, conditions, loops, sensing, costume changes and broadcasts. **(Scratch Paint)**	3. Understand how technology has changed over time. Combine text and images to present ideas.		3. Add and edit images.	3. Animate objects for realism.	3. Add and align images.	3. Add drawing and text layers.	3. Program a simple calculator in Python	
	4. Understand the impact (positive/negative) technological changes have on society.		4. Include other features such as hyperlinks, buttons and files.	4. Use code blocks to add movement (with grouping) and interactions (conditions).	4. Add hyperlinks and use them effectively to build navigation between different pages and external sites.	4. Import new images as layers and resize/add effects.	4. Program loops to repeat text.	