Computing Curriculum Intent

Year Group	Advent Term	Lent Term	Penecost Term
Nursery	**Understanding the World** Explore how things work. Shows an interest in technological toys with knobs or pulleys.	**Understanding the World** Shows an interest in technological toys with real objects such as cameras and touchscreen devices such as mobile phones and tablets.	**Understanding the World** Knows how to operate simple equipment, e.g. turns on CD player, uses a remote control, can navigate touch-capable technology with support.
	Sound button books Sensory toys Monster Merits – tapping the board and selecting the reason. **E-safety:** Smartie the Penguin – asking permission / asking or telling an adult if they are unsure or worried about something.	Children taking photos of their own achievements on the iPads Using the listening station – turning it on, pressing play and stop. Listening to Traditional Tales. Starting to learn how to use Mini-mash on the IWB **E-safety:** Safer Internet Day: being kind online Read and discuss 'Digiduck and the magic castle.'	Using mini-mash on iPads / IWB to engage in touch screen activities. Bee-bots Using the listening station – turning it on, pressing play, stop or pause, selecting a song, changing the volume. **E-safety:** Getting a Mini-Mash password Keeping your password safe
	Vocabulary – tap, press, turn, click, sound, ask, tell.	**Vocabulary –** on / off, play, stop, iPad, CD, swipe.	**Vocabulary –** password, select, volume, pause, touch screen, Bee-bot.
Reception	**Uses ICT hardware to interact with age appropriate computer software.** e.g. Photographing signs of Autumn on iPads; taking photos of creations in continuous provision. Using Purple Mash – e.g. Firework picture, Menorah, hedgehog (hibernating animals)	**Create content such as a video recording, stories, and/or draw a picture on screen.** Recoding their own stories based on Traditional Tales, using talking tins / microphones / take videos on iPad Using Purple Mash – e.g. The Three Chairs, Jack and the Beanstalk	**Completes a simple program on electronic devices.** Navigating and completing tasks Mini-Mash Bee-Bots: Maps / Following Directions **Use the internet with adult supervision to find and retrieve information of interest to them.** e.g. researching about space, rockets
	PSED: Explain the reasons for rules, know right from wrong and try to behave accordingly – **E-safety**: **Anti-bullying Week –** Digiduck's Big Decision (discussion / role-play / hot seating)	**PSED: Explain the reasons for rules, know right from wrong and try to behave accordingly** – **E-safety: Safer Internet Day:** Respect and Relationships online Digiduck and the magic castle (e.g. Deliver online safety advice to camera; Create a kinder internet spell)	**PSED: Know and talk about the different factors that support their overall health and wellbeing: sensible amounts of 'screen time'.** Read Unplugged Ninja / Limit your dragon's screen time. Make posters of other activities that do not require a screen.
	Vocabulary – internet, website, laptop, iPad, Interactive Whiteboard, mobile phone.	**Vocabulary –** permission, download, password, website, email, online, devices.	**Vocabulary –** username, password, log in, log out, save, search, screen time, sensible, Bee-Bot.
	Enhancements for Continuous Provision:		

<table>
<tr><td></td><td colspan="6">Assess to the Interactive Whiteboard for educational games, art work, Science activities etc.
Access to old mobile phones, laptops and keyboards.
Access to microphones and talking tins.
Access to iPads for Mini Mash on Purple Mash and taking photos.
Access to Bee Bots.</td></tr>
<tr><td rowspan="4">Year 1</td><td colspan="2">Unit: 1.1 – Online Safety and Exploring Purple Mash</td><td colspan="2">Unit: 1.6 – Animated Story Books</td><td colspan="2">Unit: 1.3 – Pictograms</td></tr>
<tr><td><u>Sticky Knowledge</u></td><td><u>Vocabulary</u></td><td><u>Sticky Knowledge</u></td><td><u>Vocabulary</u></td><td><u>Sticky Knowledge</u></td><td><u>Vocabulary</u></td></tr>
<tr><td>To log in safely.

To start to add pictures and text to work.

To learn how to open, save and print.

To log out safely.</td><td>Log in
Username
Password
Avatar
Log out
Save</td><td>To know what an e-book is.

To add animation to a story.

To know how to add sound to a page.

To know how to make a story more complex, including adding backgrounds and copying and pasting pages.

To save their work and overwrite the file.</td><td>Animation
E-Book
Font
File
Sound Effect</td><td>To understand that data can be represented in picture format.

To know how to use a pictogram to record the results of an experiment.</td><td>Pictogram
Data
Collate</td></tr>
<tr><td colspan="2">Unit: 1.2– Grouping and Sorting</td><td colspan="2">Unit: 1.5 – Maze Explorers</td><td colspan="2">Unit: 1.8 – Spreadsheets</td></tr>
<tr><td><u>Sticky Knowledge</u></td><td><u>Vocabulary</u></td><td><u>Sticky Knowledge</u></td><td><u>Vocabulary</u></td><td><u>Sticky Knowledge</u></td><td><u>Vocabulary</u></td></tr>
<tr><td>To sort items using a range of criteria.

To sort items on the computer using the ‘Grouping’ activities.</td><td>Sort
Criteria</td><td>To understand the functionality of the direction keys.

To understand how to create and debug a set of instructions (algorithm).

To know how to use the additional direction keys as part of an algorithm.</td><td>Algorithm
Arrow
Backwards
Debug
Direction
Forwards
Instruction
Right / Left turn
Undo</td><td>To know how to enter data into spreadsheet cells.

To know how to add clipart to cells.

To know how to use control tools: lock, move cell, speak and count.</td><td>Arrow keys Backspace key
Cursor
Columns
Cells
Delete key
Rows
Spreadsheet</td></tr>
</table>

	Unit: 1.4 – Lego Builders		**Unit: 1.9 – Technology Outside School**		**Unit: 1.7 – Coding**	
	Sticky Knowledge	**Vocabulary**	**Sticky Knowledge**	**Vocabulary**	**Sticky Knowledge**	**Vocabulary**
	To compare the effects of adhering strictly to instructions to completing tasks without complete instructions. To follow and create simple instructions on the computer. To consider how the order of instructions affects the result.	Instruction Algorithm Computer Program Debug	To know of examples of where technology is used in the local community.	Technology	To understand what instructions are and predict what might happen when they are followed. To use code to make a computer program. To understand what objects, actions and backgrounds are. To understand what an event is. To use an event to control an object.	Action Algorithm Background Character Code block Coder Coding Collision Detection Command Object Stop command When clicked
Year 2	**Unit: 2.5 – Effective Searching**		**Unit: 2.2 – Online Safety**		**Unit: 2.4 – Questioning**	
	Sticky Knowledge	**Vocabulary**	**Sticky Knowledge**	**Vocabulary**	**Sticky Knowledge**	**Vocabulary**
	To understand how to carry out a search on the Internet. To identify the basic parts of a web search engine search page.	Internet Search Search Engine	To open and send simple online communications in the form of email. To understand how things can be shared electronically for others to see. To know how we should talk to others in an online situation. To know that the information put online	Search Display board Internet Sharing Email Attachment Digital Footprint	To learn about data handling tools that can give more information than pictograms. To use yes/no questions to separate information. To construct a binary tree to identify items. To use a binary tree to answer questions.	**New vocab:** Question Binary Tree **Vocab from Year 1:** Pictogram Data Collate

			leaves a digital footprint or trail. To identify the steps that can be taken to keep personal data and hardware secure.			
	Unit: 2.1 – Coding		**Unit: 2.3 – Spreadsheets**		**Unit: 2.6 – Creating Pictures**	
	Sticky Knowledge	**Vocabulary**	**Sticky Knowledge**	**Vocabulary**	**Sticky Knowledge**	**Vocabulary**
	To understand what an algorithm is. To create a computer program using an algorithm and given design. To understand the collision detection event. To design an algorithm that follows a timed sequence. To understand that different objects have different properties. To understand what different events do in code. To understand the function of buttons in a program. To understand and debug simple programs.	**New vocab:** Bug Button Debug/Debugging Design Mode Event Nesting Properties Repeat Run Scale Scene Sequence Sound Timer Test Text When swiped **Vocab from Year 1:** Action, Algorithm, Background,	To know how to use image, lock, move cell, speak and count tools to make a counting machine. To know how to copy and paste in 2Calculate. To know how to use the totalling tools. To know how to use the 2Calculate equals tool to check calculations. To use 2Calculate to collect data and produce a graph.	**New vocab:** Copy and Paste Count Tool Equals tool Image Toolbox Lock tool Move cell tool Speak Tool **Vocab from Year 1:** Backspace key, Cells, Columns, Delete key, Rows, Spreadsheet	To know about the Impressionist style of art (Monet, Degas, Renoir). To recreate Pointillist art and look at the work of pointillist artists such as Seurat. To learn about the work of Piet Mondrian and recreate the style using the lines template. To learn about the work of William Morris and recreate the style using the patterns template. To combine more than one effect to enhance their patterns. To create surrealist art using drawing and clipart.	Palette Pointillism Share Template

<table>
<tr><td></td><td></td><td>Collision Detection,
Object, When clicked</td><td></td><td></td><td></td><td></td></tr>
<tr><td rowspan="4">Year 3</td><td colspan="2">Unit: 3.1 – Coding</td><td colspan="2">Unit: 3.3 – Spreadsheets</td><td colspan="2">Unit: 3.8 – Graphing</td></tr>
<tr><td><u>Sticky Knowledge</u></td><td><u>Vocabulary</u></td><td><u>Sticky Knowledge</u></td><td><u>Vocabulary</u></td><td><u>Sticky Knowledge</u></td><td><u>Vocabulary</u></td></tr>
<tr><td>To understand what a flowchart is and how flowcharts are used in computer programming.

To understand that there are different types of timers and select the right type for purpose.

To understand how to use the repeat command.

To understand the importance of nesting.

To design and create an interactive scene.</td><td>New vocab:
Alert
Blocks of Command
Command
Execute
Flowchart
Output
Values

Vocab from previous years:
Action, Algorithm, Background, Button, Collision Detection, Debug/Debugging, Event, Object, Nesting, Properties, Repeat, Scene, Sequence, Timer</td><td>To know how to use a spreadsheet program to automatically create pie charts and bar graphs from data.

To know how to use the ‘more than’, ‘less than’ and ‘equals’ tools to compare different numbers and help to work out solutions to sums.

To describe a cell location in a spreadsheet using the notation of a letter for the column followed by a number for the row.</td><td>New vocab:
< > = symbols
Advance mode
Spin Tool

Vocab from previous years:
Cells, Copy and Paste, Columns, Delete key, Equals tool, Move cell tool, Rows, Spreadsheet</td><td>To enter data into a graph and answer questions.

To solve an investigation and present the results in graphic form.</td><td>Graph
Field
Data
Bar chart
Block graph
Line graph
Pie chart
Row
Column</td></tr>
<tr><td colspan="2">Unit: 3.2 – Online Safety</td><td colspan="2">Unit: 3.5 – Email</td><td colspan="2">Unit: 3.4 – Touch Typing</td></tr>
<tr><td><u>Sticky Knowledge</u></td><td><u>Vocabulary</u></td><td><u>Sticky Knowledge</u></td><td><u>Vocabulary</u></td><td><u>Sticky Knowledge</u></td><td><u>Vocabulary</u></td></tr>
<tr><td>To know what makes a safe password, how to keep passwords safe and the consequences of giving my passwords away.

To know how the Internet can be used in</td><td>New vocab:
Blog
Concept map
Website
Webpage
Spoof website</td><td>To open and respond to an email using an address book.

To write an email to someone, using an address book.

To add an attachment to an email.</td><td>New vocab:
Communication
Compose
Attachment
Address book
Save to draft</td><td>To know the correct way to sit at the keyboard.

To learn how to use the home, top and bottom row keys.

To touch type using the left hand.</td><td>Posture
Top row keys
Home row keys Bottom row keys
Space bar</td></tr>
</table>

	effective communication. To understand how a blog can be used to communicate with a wider audience. To know the meaning of age restrictions symbols on digital media and devices. To know where to turn for help if they see inappropriate content or have inappropriate contact from others. To understand why spoof sites might exist and how to check that the information is accurate. To consider the truth of the content of websites.	PEGI rating **Vocab from previous years:** Password Internet Username	To know the rules about how to stay safe using email. To know what CC means and how to use it.	Send CC Formatting **Vocab from previous years:** Email, Password	To touch type using the right hand. To use two hands to type the letters on the keyboard.	
Year 4	**Unit: 4.1 – Coding**		**Unit: 4.3 – Spreadsheets**		**Unit: 4.6 – Animation**	
	Sticky Knowledge	**Vocabulary**	**Sticky Knowledge**	**Vocabulary**	**Sticky Knowledge**	**Vocabulary**
	To begin to understand selection in computer programming. To understand how an IF statement works. To understand how to use co-ordinates in computer programming. To understand the 'repeat until' command.	**New vocab:** Code block Co-ordinates If If/Else Number Variable Object Types Predict Prompt	To format cells as currency, percentage, decimal to different decimal places or fraction. To use the formula wizard to calculate averages. To combine tools to make spreadsheet activities such as timed times tables tests.	**New vocab:** Average Charts Formula Formula Wizard Move cell tool Random tool Timer **Vocab from previous years:**	To put together a simple animation using paper to create a flick book. To know what makes a good animated film or cartoon. To know what the Onion Skin tool does in animation and use it to create an animated image.	Animation Flipbook Frame Onion skinning Background Play Sound Stop motion Video clip

	To understand how an IF/ELSE statement works. To understand what a variable is in programming. To use a number variable. To create a playable game.	Selection Variable Variable Value **Vocab from previous years:** Action, Alert, Background, Button, Command, Debug/Debugging, Execute, Flowchart Nesting, Properties, Repeat, Timer	To use a spreadsheet to model a real-life situation. To add a formula to a cell to automatically make a calculation in that cell.	Advance mode, Cells, Copy and Paste, Columns, Equals tool, Rows, Spin Tool, Spreadsheet	To know what stop motion animation is and how it is created. To add backgrounds and sounds to animations. To share animation on the class display board or by blogging.	
	Unit: 4.2 – Online Safety		**Unit: 4.5 – Logo**		**Unit: 4.7 – Effective Searching**	
	Sticky Knowledge	**Vocabulary**	**Sticky Knowledge**	**Vocabulary**	**Sticky Knowledge**	**Vocabulary**
	To know how you can protect yourself from online identity theft. To understand that information put online leaves a digital footprint or trail and that this can aid identity theft. To identify the risks and benefits of installing software including apps. To understand that copying the work of others and presenting it as their own is called 'plagiarism' and to consider the	**New vocab:** Computer virus Cookies Copyright Malware Phishing Plagiarism Spam **Vocab from previous years:** Digital footprint, Email	To input simple instructions in Logo. To follow simple instructions to create shapes in Logo. To use the Repeat function in Logo to create shapes.	To write Logo instructions for letters. **LOGO** **BK** **FD** **RT** **LT** **REPEAT** **SETPC** **SETPS** **PU** **PD**	To know how to structure search queries to locate specific information. To know how to use search to answer a series of questions. To analyse the contents of a web page for clues about the credibility of the information.	**New vocab:** Easter egg Internet browser Search engine **Vocab from previous years:** Internet, Search, Spoof website, Website

	consequences of plagiarism. To know that malware is software that is specifically designed to disrupt, damage, or gain access to a computer. To know what a computer virus is. To understand the importance of balancing game and screen time with other parts of their lives. To identify the positive and negative influences of technology on health and the environment.					
					Unit: 4.8 – Hardware Investigators	
					Sticky Knowledge	**Vocabulary**
					To know the name of the different parts of a desktop computer. To know what the functions of the different parts of a computer are.	Motherboard CPU RAM Graphics card Network card Monitor Speakers Keyboard and mouse
Year 5	**Unit: 5.1 – Coding**		**Unit: 5.3 – Spreadsheets**		**Unit: 5.4 – Databases**	
	Sticky Knowledge	**Vocabulary**	**Sticky Knowledge**	**Vocabulary**	**Sticky Knowledge**	**Vocabulary**

	To use a sketch or storyboard to represent a program design and algorithm. To know how to use the design to create a program. To combine the use of variables, If/else statements and Repeats to achieve the desired effect in code. To know about string and text variable types so that you can choose the most appropriate to use in programs. To program a playable game with timers and scorepad. To read code so that it can be adapted, personalised and improved.	**New vocab:** Abstraction Called Decomposition Function Physical System **Vocab from previous years:** Action, Algorithm, Button, Co-ordinates, Event, If, Nesting, Object, Properties, Run, Repeat, Score, Sequence, Simulation, Timer, Variable	To know how to create a formula in a spreadsheet to convert m to cm. To use the count tool to answer hypotheses about common letters in use. To use formulae to calculate area and perimeter of rectangles. To create simple formulae that use different variables. To use a spreadsheet to model a real-life situation and come up with solutions that can be practically applied.	**No new vocab in Year 5** **Vocab from previous years to embed:** Average, Advance mode, Copy and Paste, Columns, Cells, Charts, Equals tool, Formula, Formula Wizard, Move cell tool, Random tool, Rows, Spin Tool, Spreadsheet, Timer	To know how to enter information into a class database. To know how to create a database around a chosen topic. To know what a database field is and how to correctly add field information. To know how to word questions so that they can be effectively answered using a search of their database.	Avatar Binary tree (branching database) Charts Collaborative Data Database Find Record Sort, Group and Arrange Statistics and reports Table
	Unit: 5.2 – Online Safety		**Unit: 5.6 – 3D Modelling**		**Unit: 5.8 – Word Processing with Microsoft Word**	
	Sticky Knowledge	**Vocabulary**	**Sticky Knowledge**	**Vocabulary**	**Sticky Knowledge**	**Vocabulary**
	To gain a greater understanding of the impact that sharing digital content can have. To review sources of support when using technology and children's responsibility to one another in their online behaviour.	**New vocab:** Online safety Smart rules Reputable Encryption Identity theft Shared image Citations	To know what the 2Design and Make tool is for. To explore the effect of moving points when designing. To design a 3D Model to fit certain criteria.	CAD – Computer aided Design Modelling 3D Viewpoint Polygon 2D	To know what a word processing tool is for. To add and edit images to a word document. To know how to use word wrap with images and text.	Copyright Cursor Document Font Merge cells Text formatting Text wrapping

	To know how to maintain secure passwords. To understand the advantages, disadvantages, permissions and purposes of altering an image digitally and the reasons for this. To be aware of appropriate and inappropriate text, photographs and videos and the impact of sharing these online. To learn about how to reference sources in their work. To search the Internet with a consideration for the reliability of the results of sources to check validity and understand the impact of incorrect information.	Reference Bibliography **Vocab from previous years:** Password, Plagiarism	To print a design as a 2D net and then create a 3D model.	Net 3D Printing Points Template	To change the look of text within a document. To add features to a document to enhance its look and usability. To use tables within MS Word to present information. To consider page layout including heading and columns.	Word Art Paragraph formatting Readability - Template Word Processing tool
Year 6	**Unit: 6.1 – Coding**		**Unit: 6.3 – Spreadsheets**		**Unit: 6.5 – Text Adventures**	
	Sticky Knowledge	**Vocabulary**	**Sticky Knowledge**	**Vocabulary**	**Sticky Knowledge**	**Vocabulary**
	To know how to design a playable game with a timer and a score.	**New vocab:** Developer String User Input	To use a spreadsheet to investigate the probability of the results of throwing many dice.	**New vocab:** Count (how many) tool Dice	To find out what a text adventure is. To use 2Connect to plan a story adventure.	Text-based adventure Concept map Debug

	To plan and use selection and variables. To understand how the launch command works. To use functions and understand why they are useful. To understand how functions are created and called. To use flowcharts to create and debug code. To create a simulation of a room in which devices can be controlled. To understand how user input can be used in a program. To understand how 2Code can be used to make a text-adventure game.	**Vocab from previous years to embed:** Action, Alert, Algorithm, Background, Button, Called, Command, Co-ordinates, Debug/Debugging, Decomposition, Event, Flowchart, Function Get Input, If/Else, Nested, Object, Predict, Procedure Prompt, Repeat, Scene, Selection, Simulation, Sequence, Tabs, Timer, Variable	To use a spreadsheet to calculate the discount and final prices in a sale. To know how to use the formula wizard to add a formula to a cell to automatically make a calculation in that cell. To use a spreadsheet to plan how to spend pocket money and the effect of saving money. To use a spreadsheet to plan a school charity day to maximise the money donated to charity.	**Vocab from previous years to embed:** Average, Advance mode, Copy and Paste, Columns, Cells, Charts, Equals tool, Formula, Formula Wizard, Move cell tool, Random tool, Rows, Spin Tool, Spreadsheet, Timer	To make a story-based adventure using 2Create a Story. To introduce an alternative model for a text adventure which has a less sequential narrative. To use written plans to code a map-based adventure in 2Code.	Sprite Function
	Unit: 6.2 – Online Safety		**Unit: 6.4 – Blogging**		**Unit: 6.6 – Networks**	
	Sticky Knowledge	**Vocabulary**	**Sticky Knowledge**	**Vocabulary**	**Sticky Knowledge**	**Vocabulary**
	To identify benefits and risks of mobile devices broadcasting the location of the user/device. To identify secure sites by looking for privacy	**No new vocab in Y6** **Vocab from previous years to embed:** Digital footprint Password PEGI rating	To identify the purpose of writing a blog. To identify the features of a successful blog. To plan the theme and content for a blog.	Audience Blog Blog page Blog Collaborative	To learn about what the Internet consists of. To know the difference between the World Wide Web and the internet.	Internet World Wide Web Network Local area network (LAN) Wide area network (WAN)

	seals of approval, e.g. https, padlock icon. To identify the benefits and risks of giving personal information. To know the meaning of a digital footprint. To have a clear idea of appropriate online behaviour and how you can protect yourself and others from possible online dangers, bullying and inappropriate behaviour. To begin to understand how information online can persist. To understand the importance of balancing game and screen time with other parts of their lives. To identify the positive and negative influences of technology on health and the environment.	Phishing Screen time Spoof website	To understand how to write a blog and a blog post. To consider the effect upon the audience of changing the visual properties of the blog. To understand how to contribute to an existing blog. To understand how and why blog posts are approved by the teacher. To understand the importance of commenting on blogs.	Icon	To know what a LAN and a WAN are. To research and find out about the age of the Internet. To know who Tim Berners-Lee is. To find out how the Internet is accessed in school. To think about what the future might hold.	Router Network cables Wireless