Computing Knowledge Progression

Reception

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2

	Unit of study 1	Unit of study 2	Unit of study 3	Unit of study 4	Unit of study 5	Unit of study 6
Year 1	Autumn 1/2 **Technology is all around us** To know what the word technology means To know that technology is all around them and can't always be seen To recognise technology at home and at school	Autumn 1/2 **Technology is all around us** To know what the word technology means To know that technology is all around them and can't always be seen To recognise technology at home and at school	Spring 1/ 2 **How can Digi Duck and Hector help us to stay safe online?** **Using Digi Duck stories and Hector's World:** To always ask an adult before using a device To know who to speak to when they see something they don't recognise online To never speak to anyone online (you don't know who it could be) To have a safe profile To never share personal information online To know that bullying online is as bad as in real life To understand that once something is online it can't be deleted	Spring 1/ 2 **How can Digi Duck and Hector help us to stay safe online?** **Using Digi Duck stories and Hector's World:** To always ask an adult before using a device To know who to speak to when they see something they don't recognise online To never speak to anyone online To have a safe profile To never share personal information online To know that bullying online is as bad as in real life To understand that once something is online it can't be deleted	Summer 1 **Espresso Coding** To know how to log into the ipads To know how to add their password To understand the word coding To know how to make characters move in different directions To know how to access different characters and scenes To predict what might happen next To know how to store To know how to print	Summer 2 **Espresso Coding** To know how to log into the ipads To know how to add their password To understand the word coding To know how to make characters move in different directions To know how to access different characters and scenes To predict what might happen next To know how to store To know how to print

Year 2	**Lightbot coding**	**Basic computing skills using Paintz**	**Creating a presentation on Google Slides**	**E safety and using a safe search engine**	**Word processing skills on Google Docs**	**Espresso Coding**
	To know how to use algorithms in programming. To predict and purposefully alter the behaviour of algorithms. To know that programmes run by following clear instructions. To know how to fix simple bugs in programmes.	To know how to log on to Chromebooks. To know how to navigate around the school's Chromebooks. To know about the importance of being careful with the Chromebooks. To use the software programme Paintz to create a picture. To save a picture from Paintz on to the Chromebooks. To know how to find, open and edit a picture on Paintz. To know how to use a trackpad on the Chromebooks to control cursor movements.	To know how to find Google Classroom to open the task for the day. To know how to add a heading to Google Slides. To know how to insert a picture from the internet through Google Slides. To know how to 'turn' in work after completing the task on Google Slides. To know how to add a text box and add in information retrieved from the internet on Google Slides. To know how to change text colour and font size on Google Slides To add animation to created Google Slides.	To know how easily it is to spread photos etc online and how everything is connected there. To know the importance of keeping personal information safe. To know that digital information can be found online and can answer specific questions. To know why safe search engine are available for children. To know how to safely use key words to help find information using Kiddle search engine. To know how to store and locate links using bookmarks. To develop key questions and use Kiddle to help answer them.	To know how to log in to Google Docs and navigate around it. To know how to add a title and heading. To know how to insert a picture. To know how to type up paragraphs. To know how to edit and make changes to a document. To know how to improve speed and accuracy when word processing.	To know that an algorithm is a set of instructions for a computer to achieve a task To know how to create a simple programme to perform a task. To predict and purposefully alter the behaviour of algorithms. To know how to fix an instruction by debugging.
Year 3 (Teach Computing)	**Computing Systems and Networks** **Connecting Computers** To identify that digital devides have inputs, processes and outputs To understand how devices can be connected to make networks To understand the uses and drawbacks of the internet when collaborating	**Creating Media** **Stop-Frame Animation** To capture digital still images accurately To edit digital images and create a sequence that tells a story	**Programming A** **Sequencing Sounds** To identify that commands have an outcome To know that a program has a start, and a sequence of commands has an order To create a project based on a task description To test and debug a piece of code	**Data & Information** **Branching Databases** To understand why it is important or a database to be well structured To identify attributes about an object needed to collect data To plan and execute a branching database	**Creating Media** **Desktop Publishing** To know how text and images convey information To know that text and layout can be edited To know how different layouts can suit different purposes To choose appropriate page settings	**Programming B** **Events & Actions in Programs** To know what causes a sprite to move To know how to code a program to move a sprite in four directions To know how to add features to a program To know how to identify and fix bugs in a program

Year 4	Learning to touch type.	Light Bot	Espresso Coding		Word processing skills	Online safety
	To know the correct posture for typing
To revise the home row and know which fingers should be used for which keys
To improve flow and fluency of typing, typing with comfort	To understand what an algorithm is
To know the definition of and how to debug a code
To use procedures and loops to write more complex code in a simple manner	To know the definition of the words algorithm, debugging, code
To know that an algorithm is a set of instructions for a computer to achieve a task
To know that debugging is a troubleshooting method for ensuring your code does what it is supposed to
To deepen understanding of the sequence of coding and ensure specificity in instructions given by coding as the computer executes exactly what it is told		To use Google Docs to present information
To use formatting to present data in an effective way
To insert pictures, tables and diagrams to present data	To know how to keep ourselves safe online
To have an understanding of age restrictions for online games and why they exist
To understand how to approach certain scenarios when gaming online or starting to use messaging services
Year 5	We are cryptographers/ Cracking Codes (Aut 1)
To be familiar with semaphore, Morse code and Braille.
To appreciate the need to use complex passwords and keep them secure.
To encrypt and decrypt in simple ciphers.
To understand how encryption works online. | Espresso Coding (Aut 2)

To understand that sequences of instructions are used to control computing technology. | Stop motion videos (Spr1)

To understand what animation is.
To understand what stop motion animation is. | Videoing (Spr2)

To understand that video is the recording, reproducing, or broadcasting of moving visual images.
To understand the basic functions of the device being used for filming.
To understand the use of different filming techniques for a given purpose. | Espresso coding- HTML (Sum 1)

To understand what HTML is.
To understanding de-bugging and how to do so for HTML.
To understand HTML formatting and CSS. | Search engines (Sum 2)

To understand what a search engine is and how to use it.
To be aware that not everything online is true.
To understand how search engines work. |
| Year 6
(Teach Computing) | Computing Systems and Networks
Communication and Collaboration
To understand how devices can be connected to make networks
To understand the physical construction of the Internet
To understand the uses and drawbacks of the | Data and Information
Introduction to Spreadsheets
To know how to use spreadsheets to organise data
To know the definition of cell references
To know that formulas use cell references to calculate | Creating Media
Webpage Creation
To know what makes a usable website
To know that websites are designed using maps
To know how to present data in a coherent manner | Programming A
Variables in Games
To know the definition of the word 'variable'
To know how variables are used in coding
To know how variables can be used within a game in different ways | Creating Media
3D Modelling
To understand that 3D shapes can be represented on a computer screen
To know that 3D objects can be modified digitally
To plan a 3D model of a physical object
To know how to evaluable and improve a 3D object. | Programming B
Sensing Movement
To know that programs can run on physical controllable devices
To know that variables can be updated in response to user input
To know how to find and fix bugs in programming |

	internet when collaborating					