Computing Progression of Pitch (EYFS – KS2)

EYFS	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Computing and mapping skills		• Use prepositional language to describe position e.g., behind, under, on, in, next to.	• Use technology to program directions e.g., BeeBots or Apps. Building upon prepositional language.			• Understand how technology is used to gain and share information e.g.., Google Earth
Communication and language	**Understanding Skills:** Understand one step instructions e.g. put your coat on your peg	**Understanding Skills:** Understand a question or instruction that has two parts, such as "Get your coat and wait at the door".	**Understanding Skills:** Ask questions to find out more and to check they understand what has been said to them.	**Speaking:** Sequencing for example: Retell a story, once they have developed a deep familiarity with the text; some as exact repetition and some in their own words	**Listening & Attention:** Listen and understand instructions about what they are doing, whilst on another task e.g., while putting on shoes listen to the next instruction	**Speaking:** Use talk to help work out problems and organise thinking and activities explain how things work and why they might happen
ELG:	**Listening, attention & speaking**			**Speaking**		
	•Listen attentively and respond to what they hear with relevant questions, comments and actions when being read to and during whole class discussions and small group interactions. •Make comments about what they have heard and ask questions to clarify their understanding. •Hold conversation when engaged in back-and-forth exchanges with their teacher and peers.			•Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary. •Offer explanations for why things might happen, making use of recently introduced vocabulary from stories, non-fiction, rhymes and poems when appropriate. •Express their ideas and feelings about their experiences using full sentences, including use of past, present and future tenses and making use of conjunctions, with modelling and support from their teacher.		

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	Autumn 1 Digital Literacy Online Safety	Autumn 2 Information Technology Pictograms	Spring 1 Computer Science Coding	Spring 2 Computer Science Maze Explorers	Summer 1 Computer Science Grouping and Sorting Digital Literacy Technology Outside School	Summer 2 Information Technology Spreadsheets
Year 1	**Knowledge** To know the icons and types of resources available in the Topics section. To know their password and username. **Skills** To log in safely. To learn how to find saved work in the Online Work area and find teacher comments. To learn how to search Purple Mash to find resources. To start to add pictures and text to work. To explore the Tools and Games section of Purple Mash. To learn how to open, save and print. To understand the importance of logging out. **Vocabulary** Log In Log Out Avatar Username Notification My Work Password Topics Tools Save	**Knowledge** To know what data is and some the types of forms it takes. To know what a pictogram is. To know that data can be represented in picture format. **Skills** To contribute to a class pictogram. To use a pictogram to record the results of an experiment. **Vocabulary** Pictogram Data Collate	**Knowledge** To know what instructions are **Skills** To predict what might happen when they are followed. To use code to make a computer program. To understand what object and actions are. To understand what an event is. To use an event to control an object. To begin to understand how code executes when a program is run. To understand what backgrounds and objects are. To plan and make a computer program. **Vocabulary** Action, Algorithm Background, Code Command, Debugging Event , Execute Input, Instruction Object, Properties Output, Run Scale, Scene	**Knowledge** To know what an algorithm is. **Skills** To understand the functionality of the direction keys. To understand how to create and debug a set of instructions (algorithm). To use the additional direction keys as part of an algorithm. To understand how to change and extend the algorithm list. To create a longer algorithm for an activity. To set challenges for peers. To access peer challenges set by the teacher as 2Dos **Vocabulary** Direction Challenge Arrow Undo Rewind Forward Backwards Right Turn Left Turn Debug Instruction Algorithm	**Knowledge** To know that sorting means grouping. To know that we are surrounded by technology and it there to make **Skills** To sort items using a range of criteria. To sort items on the computer using the 'Grouping' activities in Purple Mash. **Vocabulary** Sort Criteria Technology	**Knowledge** To know what a spreadsheet program looks like and what it does **Skills** To locate 2Calculate in Purple Mash To enter data into spreadsheet cells. To use 2Calculate image tools to add clipart to cells. To use 2Calculate control tools: lock, move cell, speak and count **Vocabulary** Arrow Keys Backspace Cursor Column Cells Clipart Count Tool Rows Spreadsheet Image Toolbox

Computing Progression of Pitch (EYFS – KS2)

	Autumn 1 Digital Literacy Online Safety	Autumn 2 Information Technology Presenting Ideas	Spring 1 Information Technology Spreadsheets	Spring 2 Computer Science Coding	Summer 1 Information Technology Questioning	Summer 2 Digital Literacy Effective Searches
Year 2	**Knowledge** To know what the internet is. To know that information put online leaves a digital footprint or trail. To know how to keep personal data and hardware secure **Skills** To use digital technology to share work on Purple Mash to communicate and connect with others locally. To have some knowledge and understanding about sharing more globally on the Internet. To introduce Email as a communication tool using 2Respond simulations. To understand how we should talk to others in on online situation. To open and send simple online communications inthe form of email. **Vocabulary** Search, sharing, email, attachment, digital footprint Display board Internet	**Knowledge** To know what a quiz, fact file and presentation are. **Skills** To explore how a story can be presented in different ways. To make a quiz about a story or class topic. To make a fact file on a non-fiction topic. To make a presentation to the class **Vocabulary** Concept map, quiz, non-fiction, fiction, audience, node, animated, presentation	**Knowledge** What a spreadsheet is and who uses them. **Skills** To be able to lock, move cell, speak and count tools To copy and paste To use the totalling tools. To use the equals tool to check calculations. To useto collect data and produce a graph. **Vocabulary** Rows, columns, cells, total, copy and paste	**Knowledge** To know what an algorithm is. To know that algorithms follow a sequence. **Skills** To create a computer program using an algorithm. To create a program using a given design. 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. **Vocabulary** Action, algorithm, debug, background	**Knowledge** To know what a binary database is. **Skills** Know that 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 database to answer questions. To use a database to answer more complex search questions. To use the Search tool to find information **Vocabulary** Database, binary branching tree, collate, data, question, avatar	**Knowledge** To know what the internet is and how it works. To know what a search engine is. **Skills** To understand the terminology associated with searching. To gain a better understanding of searching on the Internet. To create a leaflet to help someone search for information on the Internet. **Vocabulary** Search, search engine and internet

Computing Progression of Pitch (EYFS – KS2)

	Autumn 1 Digital Literacy Online Safety	Autumn 2 Information Technology Writing For Different Audiences	Spring 1 Computer Science Coding	Spring 2 Computer Science Logo	Summer 1 Information Technology Spreadsheets	Summer 2 Information Technology animation
LKS2 Cycle 1	**Knowledge** Know how children can protect themselves from online identity theft. Know that information put online leaves a digital footprint or trail and that this can aid identity theft. Know the importance of balancing game and screen time with other parts of their lives. **Skills** To identify the risks and benefits of installing software including apps. To identify appropriate behaviour when participating or contributing to collaborative online projects for learning. To identify the positive and negative influences of technology on health and the environment. **Vocabulary** Digital footprint, Phishing, Plagiarism, Spam, Malware, Copyright, Identity theft, Cookies, Computer virus	**Knowledge** Know how font size and style can affect the impact of a text. **Skills** To use a simulated scenario to produce a news report. To use a simulated scenario to write for a community campaign. **Vocabulary**	**Knowledge** To begin to understand selection in computer programming. Know how an IF statement works. Know how to use co-ordinates in computer programming. Knowhow an IF/ELSE statement works. Know what a variable is in programming. **Skills** Be able to use the 'repeat until' command. Be able to use a number variable. **Vocabulary** Action, Alert, Background, Code Block, Debug/Debugging, Execute, If/Else, Nesting	**Knowledge** Know the structure of the coding language of Logo. **Skills** To input simple instructions in Logo. Using 2Logo to create letter shapes. To use the Repeat function in Logo to create shapes. To use and build procedures in Logo **Vocabulary** LOGO, BK, FD, RT, LT, REPEAT, SETPC, SETPS, PU, PD	**Knowledge** **Skills** 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. 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. **Vocabulary** Average Function, Advance mode, Copy and Paste, Columns, Cells, Charts, Equals tool, Formula	**Knowledge** Know what makes a good, animated film or cartoon. Know how animations are created by hand. Know how animation can be created in a similar way using the computer. **Skills** To learn about onion skinning in animation. To add backgrounds and sounds to animations. To be introduced to 'stop motion' animation. To share animation on the class display board and by blogging. **Vocabulary** Animation, Flipbook, Frame, Onion skinning, Background, Stop motion

Computing Progression of Pitch (EYFS – KS2)

	Autumn 1 Digital Literacy Online Safety	Autumn 2 Information Technology Touch Typing	Spring 1 Computer Science Coding	Spring 2 Information Technology Branching Databases	Summer 1 Information Technology Spreadsheets	Summer 2 Digital Literacy Email
LKS2 Cycle 2	**Knowledge** To know what makes a safe password To know how the Internet can be used in effective communication. To know 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. **Skills** To learn methods for keeping passwords safe. To consider the truth of the content of websites. **Vocabulary** password, blog, concept map, username, website, webpage, spoof website, PEGI rating	**Knowledge** To know what touch typing is. To know the correct way to sit at the keyboard and why **Skills** To learn how to use the home, top and bottom row keys. To practise typing with the left and right hand **Vocabulary** posture, top row keys, home row keys, bottom row keys, space bar	**Knowledge** To know what a flowchart is and how flowcharts are used in computer programming. To know that there are different types of timers and select the right type for purpose. **Skills** To understand how to use the repeat command. To understand the importance of nesting. To design and create an interactive scene. **Vocabulary**	**Knowledge** To know what a branching database is. **Skills** To sort objects using just 'yes' or 'no' questions. To complete a branching database. To create a branching database **Vocabulary** Branching database, Database, Question, Data	**Knowledge** Know that a spreadsheet is a computer program that represents information in a grid of rows and columns. Any cell in the grid may contain either data or a formula that describes the value to be inserted based on the values in other cells. **Skills** To use the symbols more than, less than and equal to, to compare values. To use 2Calculate to collect data and produce a variety of graphs. To use the advanced mode of 2Calculate to learn about cell references. **Vocabulary** < > = , Advance mode, Copy and Paste, Columns, Cells, Delete key, Equals tool, Move cell tool, Rows, Spin Tool,	**Knowledge** Know that email is a method of sending electronic communication from one device to another. Know what you should do if you receive an email that makes you upset or scared? Know what information can I send in an email? **Skills** **Vocabulary** Communication, Compose, Attachment, Save to draft, CC, Formatting

Computing Progression of Pitch (EYFS – KS2)

	Autumn 1 Digital Literacy Online Safety	Autumn 2 Information Technology Databases	Spring 1 Computer Science Coding	Spring 2 Computer Science Game Creator	Summer 1 Information Technology Word Processing	Summer 2 Information Technology Spreadsheets
Year 5	**Knowledge** To know the impact that sharing digital content can have. To know of sources of support when using technology and children's responsibility to one another in their online behaviour. To know how to maintain secure passwords. To know the advantages, disadvantages, permissions and purposes of altering an image digitally and the reasons for this **Skills** Tosearch the Internet with a consideration for the reliability of the results of sources to check validity and understand the impact of incorrect information **Vocabulary** Encryption, Shared image, Password, Reputable, Smart rules, Plagiarism, Citations, Identity theft	**Knowledge** Know that a database is a collection of data organised in such a way that it can be searched, and information found easily. Database usually refers to data stored on computers. **Skills** To learn how to search for information in a database. To contribute to a class database. To create a database around a chosen topic. **Vocabulary** Avatar, Charts, Collaborative, Data, Database, Find, Table, Statistics and reports, Sort, Group and Arrange, Record	**Knowledge** To know how to use friction in code. To know what a function is and how functions work in code. To know what the different variables types are and how they are used differently. To know how to create a string. To know what concatenation is and how it works. To know what decomposition and abstraction are in computer science. **Skills** To begin to simplify code. To create a playable game. To understand what a simulation is. To program a simulation using 2Code. To a take a real-life situation, decompose it and think about the level of abstraction. **Vocabulary** Action, Abstraction, Algorithm, Called, Decomposition, Event, Function, Variable, Sequence	**Knowledge** Know a good game designer gives the player continuous challenges in a visually stimulating environment, each of which leads to another challenge, to keep the game challenging and fun. **Skills** To plan a game. To design and create the game environment. To design and create the game quest. To finish and share the game. To self and peer evaluate. **Vocabulary** Animation, Image, Texture, Perspective, Playability, Interactive, Screenshot, Evaluation.	**Knowledge** To know a word processing tool is used to create, edit and print off a document. This can contain text, images, tables or charts. Documents are a type of file that portray information. **Skills** To know how to use word wrap with images and text. To change the look of text within a document. To add features to a document to enhance its look and usability. To use the sharing capabilities in Google Docs. To use tables within to present information. To introduce children to templates. **Vocabulary** Font, Cursor, Text wrapping, Merge cells, Text formatting, Text wrapping, Document	**Knowledge** Know a spreadsheet represents the data of a situation for example: Budgeting for a party; working out how big a field needs to be for a certain number of animals; working out how to spend your pocket money over time. **Skills** To use formulae within a spreadsheet to convert measurements of length and distance. To use the count tool to answer hypotheses about common letters in use. To use a spreadsheet to model a real-life problem. To use formulae to calculate area and perimeter of shapes. To create formulae that use text variables. To use a spreadsheet to help plan a school cake sale. **Vocabulary** Average Function, Copy and Past, Columns, Cells, Charts, Equals tool, Formula, Formula Wizard

Computing Progression of Pitch (EYFS – KS2)

	Autumn 1 Digital Literacy Online Safety	Autumn 2 Information Technology Spreadsheets	Spring 1 Computer Science Coding	Spring 2 Computer Science Text Adventures	Summer 1 Computer Science Understanding Binary	Summer 2 Information Technology Blogging
Year 6	**Knowledge** To identify benefits and risks of mobile devices broadcasting the location of the user/device To identify the benefits and risks of giving personal information To have a clear idea of appropriate online behaviour. 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 **Skills** To identify secure sites by looking for privacy seals of approval **Vocabulary** Digital footprint, Password, PEGI rating, Phishing, Screen time, Spoof website	**Knowledge** **Skills** To use a spreadsheet to investigate the probability of the results of throwing many dice. To use a spreadsheet to calculate the discount and final prices in a sale. 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. **Vocabulary** Average Function, Advance mode, Copy and Paste, Columns, Cells, Charts	**Knowledge** To understand how functions are created and called. To understand how the launch command works To understand how user input can be used in a program. To understand how 2Code can be used to make a text-adventure game **Skills** To design a playable game with a timer and a score. To plan and use selection and variables. To use functions and understand why they are useful. To use flowcharts to create and debug code. To create a simulation of a room in which devices can be controlled **Vocabulary** Action, Alert, Algorithm, Background, Button, Called, Command, Co-ordinates, Debug/Debugging, Decomposition, Developer	**Knowledge** To know that a Text-based adventure computer game that uses text instead of graphics. **Skills** To find out what a text adventure is. To use 2Connect to plan a story adventure. 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. **Vocabulary** Text-based adventure, Concept map, Debug, Sprite, Function	**Knowledge** To understand that binary represents numbers using 1s and 0s and these represent the on and off electrical states respectively in hardware and robotic **Skills** To examine how whole numbers are used as the basis for representing all types of data in digital systems. To recognise that digital systems represent all types of data using number codes that ultimately are patterns of 1s and 0s (called binary digits, which is why they are called digital systems) **Vocabulary** Base 10, Base 2, Binary, Bit, Byte, Decimal, Denary, Digit, Gigabyte (GB), Integer, Kilobyte (KB)	**Knowledge** A blog is a website or webpage that is regularly updated by the author. A blog also allows the reader to post comments or opinion based on what is written. A blog can be written about any subject. You could write a blog about school such as information about the subject you are studying. Alternatively, you could write a blog about your favourite team or movie **Skills** 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. 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 **Vocabulary** Audience, Blog, Blog page, Blog post, Collaborative, Icon