Progression Map

Computing

	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Digital Literacy – e-safety	• I know what a password is. • I know that my name is personal information. • I can ask for permission to use a device	• I know why we need passwords. • I know my name, age, address and where i go to school is personal information. • I can tell an adult before I go online. • I can show an adult the websites I am using to check they are appropriate. • I know that games and files can be downloaded using the internet. • I know that everyone can put their information online. • I know that anyone can access information online.	• I can keep my password private. • I can tell you what personal information is. • I can tell an adult when I see something unexpected or worrying online. • I can recognise an age appropriate website. • I know that not all downloadable games and files on the internet are safe • I know that not everyone is who they say they are on the internet. • I know that anyone and everyone can post anything online	• I can explain why I need to keep my password private. • I can explain why it's important to keep my personal information private. • I know what to do when I see something inappropriate online e.g. use the report button • I can describe the things that happen online that I must tell an adult about. • I can explain why not all downloadable games and files are not safe. • I understand that people can pretend to be someone they are not online • I can explain how everyone can post anything online	• I can talk about what makes a secure password and why they are important. • I can protect my personal information when I do different things online. • I can use the safety features of websites as well as reporting concerns to an adult. • I can recognise websites and games appropriate for my age. • I can ask an adult before downloading files and games from the internet. • I understand how easy it is for people to make a fake profile • I know that anything I post online can be seen by others.	• I can choose a secure password for online tools/sites • I can talk about the ways I can protect myself and my friends from harm online. • I can use the safety features online (e.g. apps, games, devices) as well as reporting concerns to an adult. • I can choose websites and games that are appropriate for my age. • I can talk about why I need to ask a trusted adult before downloading files and games from the internet. • I can question the validity of profiles online. • I understand the consequences of posting something online	• I can protect my password and other personal information. • I can explain why I need to protect myself and my friends and the best ways to do this, including reporting concerns to an adult. • I can explain why I need to protect my computer or device from harm. • I can discuss the importance of choosing an age-appropriate website or game. • I know which resources on the internet I can download and use. • I know not to open messages and emails from unknown people/profiles • I know that anything I post online can be seen, used and may affect others.	• I can use my privacy settings to keep my personal information safe • I can explain the consequences of sharing too much information about myself online and support my friends to protect themselves • I can protect my computer or device from harm on the internet. • I can identify age appropriate websites, apps and games online. • I can explain why it is important to check resources found on the internet before downloading them. • I understand why it is important not open messages and emails from unknown people/profiles • I can explain the positive and negative impact of anything that is posted online.

Computer Science – Programming and Algorithms	• I can experiment with pushing buttons on toys and notice that pushing a button has an effect.	• I can understand that pushing a button on a toy will give it an instruction • I can predict what will happen when they push a button.	• I can understand that an algorithm is a set of instructions used to solve a problem or achieve an objective • I can work out what is wrong with a simple algorithm when the steps are out of order • I can read code one line at a time and make a good attempt to predict the overall effect of the program	• I can show an awareness of the need for algorithms to be precise • I can create a simple program that achieves a specific purpose • I can identify and correct some errors and show an awareness of the need for logical, programmable steps • I can identify the parts of a program that respond to specific events and initiate specific actions	• I can create an algorithm for a program by deconstructing it • I can create a design that shows the thinking of the desired task and how it translates into code • I can identify an error within created program and make an attempt to fix it. • I can use simple sequences to design and code a program • I can experiment with timers to achieve repetition effects in my program • I can understand how variables can be used to store information while a program is executing • I can begin to use and understand if statements, repetitions and variables • I can make good attempts to debug more complex code • I can read programs with several steps and predict the	• can create an algorithm by using coding structures for selection and repetition • I can make more intuitive attempts to debug their own programs • I can use timers to achieve repetition effects that are becoming more logical and are integrated into my program designs • I can attempt to combine different coding structures • I can read programs with several steps and predict the outcome accurately • I can recognise the main component parts of hardware which allow computers to join and form a network	• I can test and debug programs as I go and can use logical methods to identify the approximate cause of any bug and identifying the specific line of code • I can translate algorithms that include sequence, selection and repetition into code with increased ease to create my own programs • I can begin to think about code structure in terms of ability to debug and interpret the code later e.g. the use of tabs to organise code and the naming of variables • I can understand the value of computer networks but also be aware of the main dangers • I can select the most appropriate form of online communication based on audience and digital content	• I can identify the important aspects of a task (abstraction) and then decompose them in a logical way using my knowledge of possible coding structures. • I can test and debug my programs as I go and use logical methods to identify the cause of bugs to try and identify a particular line of code causing a program. • I can nest coding structures within each other; • I can demonstrate coding with an improving understanding of variables in coding, outputs such as sound and movement, inputs from the user of the program such as button clicks and the value of functions • I can interpret a program in parts and make logical attempts to put the separate parts of the complex algorithm together

	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
					outcome accurately. • I can list and use a range of ways that the internet can be used to provide different methods of communication			to explain the program as a whole
Information Technology Literacy - Software	• I can recognise and press letters on an interactive whiteboard.	• I can type in usernames and passwords to log on to a computer	• I can use a basic word processing package e.g. to write and illustrate a story. • I can type simple sentences on a computer.	• I can make simple presentations. • I can contribute to collaborative writing e.g. a class blog or story. • I can type sentences correctly using the spacebar.	• I can use software to create an ebook, brochure or poster on a given topic. • I can use simple software to communicate with others (e.g. email) • I can type sentences using the spacebar and shift key.	• I can write and deliver a presentation on a given subject. • I can write a blog on a given topic. • I can type paragraphs using the shift key and correct punctuation symbols.	• I can use software to create an ebook, brochure or poster incorporating a range of media. • I can use email to communicate with others using a variety of email functions e.g. attachments, CCing and signatures. • I can begin to touch-type when typing on a computer.	• I can write and deliver a presentation incorporating a range of media. • I can independently write and edit their own blog, commenting on other people's blogs. • I can touch-type and use shortcuts on the keyboard.

	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Information Technology Literacy - Multimedia	• I can move objects on a screen. • I can use an interactive whiteboard for mark making • I am aware that it is possible to interact with multimedia software to make something happen on screen.	• I can create shapes and edit objects on a screen. • I can use a paint package to create a picture • I can use a digital device to record images • I can develop mouse control through simple activities on-screen including click-and-drag, drag-and-drop. • I can begin to use a keyboard and develop familiarity with • letters, numbers, backspace (to delete), arrow keys and • space bar.	• I can be creative with different technology tools. • I can use technology to create and present ideas. • I can use the keyboard or a word bank on my device to enter text. • I can save and open work	• I can use technology to organise and present ideas in different ways. • I can use the keyboard on a device to add, delete and space text for others to read. • I can talk about a technology they are using to create digital content • I can save and open files on different devices	• I can select software to accomplish a given goal. • I can combine a mixture of text, graphics and sound to share their ideas and learning. • I can use appropriate keyboard commands to amend text on a device, including making use of a spellchecker • I can recognise and use different forms of input and output devices (e.g. webcam, camera microphone)	• I can select and use a variety of software on a range of different devices to accomplish a given goal • I can use photos, video and sound to present their ideas • I can change the appearance of text to increase its effectiveness. • I can use a keyboard confidently and make use of a spellchecker to write and review my work. • I can evaluate the software they choose to use, explaining the benefits for their intended audience	• I can consistently select and use a variety of software to design and create content for a given audience • I can use text, photo, sound and video editing tools to edit and improve their work • I can use the skills already developed to create content using unfamiliar technology. • I can review and improve my own work, considering the impact on their intended audience • I can support others to improve their work.	• I can consistently select, use and combine a variety of software to design, create and evaluate content for a given audience • I can explain why I have selected a particular software/digital device and how it helps accomplish a given goal • I can talk about audience, atmosphere and structure when planning a particular outcome. • I can combine a range of media, recognising the contribution of each to achieve a particular outcome. • I can evaluate the effectiveness of my own and other's work, considering the impact on the intended audience • I can make improvements to my work and support others to improve theirs

	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Information Technology Literacy - Data Handling	• I can collect information e.g. by taking photographs or collecting objects.	• I can begin to sort, classify or group various objects progressing from practical activities to the use of ICT e.g. sorting fruit into colours, types or shapes, and then on screen. • In can use ICT to sort and sequence objects on a screen or interactive board • I can create simple pictograms with support.	• I can use technology to collect information including photos, videos and sound. • I can talk about different ways in which information can be shown. • I can sort different kinds of information and present it to others. • I can add information to a pictogram, using digital software, and talk about what I have found out.	• I can talk about the different ways to use technology e.g. a camera, microphone or sound recorder. • I can make and save a chart or graph using the data collected. • I can talk about the data in my chart or graph. • I can create a simple branching database e.g. j2e on lgfl from given questions.	• I can talk about the different ways data can be organised. • I can search a ready-made database to answer questions. • I can collect data to help answer a question. • I can add to a database e.g. j2data on LGfL • I can make a branching database e.g. j2e on lgfl or 2question. • I can use a data logger to monitor changes and can talk about the information collected	• I can organise data in different ways. • I can collect data and identify where it could be inaccurate. • I can plan, create and search a database to answer questions. • I can choose the best way to present data to others. • I can use a data logger to record and share their readings with others.	• I can organise data in different ways. • I can collect data and identify where it could be inaccurate. • I can plan, create and search a database to answer questions. • I can choose the best way to present data to others. • I can use a data logger to record and share their readings with others.	• I can select the most effective tool to collect data for investigation. • I can check the data collected for accuracy and plausibility. • I can interpret the data collected. • I can present the data collected in an appropriate way. • I can use the skills I have developed to interrogate a database.

	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Information Technology Literacy - Using the Internet	• I know that some devices are connected to the internet	• I can identify which devices access the internet e.g. TV, mobile phones, tablets, PC, laptop, gaming devices.	• I can make a distinction between modern technology that uses the internet and technology that does not. • I can show an awareness of how IT is used for communication beyond school	• I can retrieve relevant information using a search engine • I can make links between technology I see around me and the learning I do in school	• I can retrieve digital content using a search engine • I understand that search engines select pages according to keywords found in the content • I can search for information within a single site	• I can understand that search engines rank pages according to relevance • I can decide whether digital content is relevant for a given purpose or question • I understand that the internet transmits information as packets of data	• I can use advanced search options to make more effective use of a search engine • I understand and can explain in some depth the difference between the Internet and the World Wide Web • I know what a WAN and a LAN are and can describe how they access internet in school • I understand that search engines use a cached copy of the crawled web to select and rank results	• I can apply filters when searching for digital content • I can explain in detail how credible a webpage is and the information it contains. • I can compare content sources and rate them in terms of quality and accuracy. • I can appreciate that search engines rank pages based on the number and quality of in-bound links