Computing – Knowledge and Skills Progression Grids Years 4,5,6

Computing	Year 4	Year 5	Year 6
Vocabulary	**logical reasoning, script,query,copyright, pop ups, cookies, creditable, reliability, bias**	**variables, object, pixel, spreadsheet, field entry, cell row, column, advertise, webpage, Search engine**	**sensors, results, conclusions, encrypt, re-post, tagging, plagiarism, referencing, cyber attack, reliable, credible**
(Digital Literacy) **E-Safety**	• Can recognise what appropriate online behaviour looks like when collaborating with others online. • Beginning to understand what a digital footprint is. • Knows and recognises the CEOP button. • Understands that online collaborating can relate to gaming etc.	• Understands what a digital footprint is and can explain what a positive digital footprint looks like. • Identifying possible dangers online and identifies rules for staying safe. • Can use an online community safely. • Recognising that information on the Internet might not be true or correct and that some sources are more trustworthy thanothers	• Is aware of and has ways of identifying 'fake news' / websites. • Understanding the importance of secure passwords and how to create them. • Using search engines safely and effectively. • Recognising that updated software can help to prevent data corruption and hacking
(Information Technology) **Research**	• Is able to access information and websites by clicking on hyperlinks set up by their teacher. • Children to choose and use a variety of devices to access search engines. • Children understand the functions, features and layout of a search engine.	• Uses search engines to find a range of information and resources on a specific topic. • Make use of copy and paste and begins to understand the purpose of copyright regulations.	• Independently searches the internet using a variety of methods to find a range of information and resources on a specific topic. • Uses a range of search filters e.g. +, - , or, info: advanced searching, file type. • Uses a variety of sources and methods to check for bias and accuracy.
(Information Technology) **Electronic Communication**	• Share work they have completed electronically • To begin to understand how to email people using using their @ address.	. Upload work they have completed to appropriate space • Share work they have completed electronically by emailing it to their teacher (using Microsoft Office 365 outlook explorer).	• Uses methods of online communication, such as emails, collaborative documents and comment sections on work, to communicate in a safe and appropriate manner.
(Information Technology) **Data handling**	• Uses a simple database (the structure of which has been set up for them) to enter and save information. • Can propose a question which can be answered through logged data. • Can interpret data that has been collected using a data logger.	• Can create data collection sheet on paper and can compare with computer-based database. • Can explain what a 'field' and a 'record' is in a database. • Can choose which field to sort data by ,to answer a given question.	• Understand what a spreadsheet is and explain the importance of the headings. • Can ask and answer questions from an existing set of data. • Can explain what an item of data is. • Chooses suitable ways to present data.
(Information Technology) **Text and Multimedia**	• Is beginning to use advanced tools in word processing such as tabs, text formatting, word art, line spacing, inserting images, to make a piece of work presentable and fit for purpose.	• Is able to integrate multimedia into a piece of work / project.	• Multimedia work shows restrained use of effects that help convey meaning and impact rather than impress.
(Information Technology) **Digital Images**	• Is able to manipulate images, using a range if tools in appropriate software to convey a specific mood or idea.	• Is able to create a short film/animation from images (still and/ or moving). That hey have sourced, captured or created.	• Can Integrate images they have sourced/ captured / manipulated into a project e.g. presentation, video or document.
(Information Technology) **Sounds/ Communication**	• Is able to import existing audio, sound effects or music into a piece of digital work. • e.g. on a PPT Presentation / J2E5 / Imovie / Scratch	• Is able to record their own audio / music which can then be incorporated into a piece of digital work. • e.g. PPT Presentation/ J2E5/ Imovie / Scratch	• Can create and share podcasts/ work containing audio that has content that demonstrats they have considered the audience and purpose.
(Computer Science) **Programming**	• Can create a short sequence of instructions, based on own ideas, predicting what will happen. • Use logical reasoning to explain how simple alogorithms work, detecting and correcting errors. • Turns real life situation into an algorithms, thinking of the required task and how to use coding structure and language.	• Is able to predict, test and modify procedures in a sequence of instructions they have created, when programming devices on and off screen. • Begin to use 'if' statements to demonstrate their logic of structure.	• Independently create sequences of commands to control devices/ sprites involving response to sensing. • Design, build, test and evaluate their system, ensuring it is fit for purpose.
(Computer Science) **Understanding Technology in our Lives: network**	• Understands that their password is the key to accessing personal resources and files.	• Shows an understanding of the school network and how it links computers to resources in school and beyond. Compare WAN LAN and CLOUD.	• Shows an understanding of how filtering and monitoring tools effect their use of the school network and internet and compare this wth their experience of access outside of school.
(Computer Science) **Understanding Technology in our Lives: the Internet**	• Begin to understand what a URL / hyperlink is. • Is able to access websites by clicking on a website link.	• Performs search using different search engines. • Is able to access websites by typing in a URL.	• Uses collaborative tools and email safely, demonstrating a sensitivity to remote collaboration and communication.