Moss Side Primary Computing Year Group Expectations: Information Technology

Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Learn how to recognize and type letters using a keyboard. Begin to combine letters to make words on screen. Explore combining painting tools to make digital art. Complete a simple program on a computer.	Learn how to type words correctly using a keyboard. Develop keyboard skills to include space bar, backspace, caps lock & shift Use a computer to create and manipulate text. Become more familiar with using a keyboard and mouse to enter and remove text. Attempt to change the look of text and justify reasoning in making these changes. Consider the differences between using a computer to create text and writing text on paper. Understand some of the tools that can be used for 'digital painting' and then use these to create paintings. Compare painting with and without digital devices.	Recognise that different devices can be used to capture photographs. Be able to capture, edit, and improve photos. Understand that some images we see may not be real. Store, retrieve and make changes to digital content on different devices, the school network and / or the cloud. Be able to use a computer to create, store and retrieve music. Compare creating music digitally and non-digitally.	Use a range of techniques to create a stop frame animation. Add other types of media to an animation such as music and text. Become familiar with the terms 'text' and 'images' and understand that they can be used to communicate messages. Use desktop publishing software and consider careful choices of font size, colour and type to edit and improve existing documents. Combine text and images to create pieces of work using desktop publishing software.	Understand how digital images can be changed and edited, and how they can then be resaved and reused. Edit images using different techniques which apply to the whole image such as filters, effects, colour adjustments and small parts of the image. Evaluate the effectiveness of their choices. Record audio and be able to edit sound files and sequences, add tracks, and open and save the audio files. Evaluate and give feedback to peers.	Develop the skills of capturing, editing, and manipulating video. Create short videos. Understand that vector images are made up of shapes. Be able to use different drawing tools and know how images are created in layers. Explore the ways in which images can be grouped and duplicated to create more complex pieces of work.	Identify what makes a good web page and use this information to design and evaluate a website. Understand the concept of copyright and fair use of media, the aesthetics of the site, and navigation paths. Apply skills and understanding to create a website for a specific purpose.

Moss Side Primary Computing Year Group Expectations: Computer Science (skills & understanding)

Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Recognise that a range of technology is used in places such as homes and schools. Identify the main parts of a computer. Understand that a digital device can be programmed with one or more instructions. Follow simple algorithms to make things happen e.g. cleaning teeth.	Develop understanding of technology and how it can help us. Start to become familiar with the different components of a computer by developing keyboard and mouse skills. Write and share simple algorithms / instructions for others to follow away from a computer / robot. Control real and on-screen robots to move along routes using directional & numerical commands (e.g. forward 3). Understand that algorithms and programs execute by following clear instructions given in the correct sequence. Understand that algorithms and programs respond to inputs to do different things. Debug programs, with support, so they run correctly. Begin to be able to 'read code' to predict what a program will do.	Identify, name and explain the function of the main components of a computer. Look at information technology at school and beyond, in settings such as shops, hospitals, and libraries. Understand how information technology improves our world. Understand that programs and/or robots respond to different sorts of inputs. Make objects on screen perform different actions when keys are pressed on the keyboard, e.g. move, hide or show. Understand that algorithms are used to control computing technology (onscreen or programmable devices) and that mistakes might lead to errors that need debugging. Use different inputs to control what happens to an object onscreen (keyboard / mouse) or a programmable device (keypad / input sensors)	Develop understanding of digital devices, with an initial focus on inputs, processes, and outputs. Begin to understand computer networks, including devices that make up a network's infrastructure. Know some benefits of connecting devices in a network. Write a computer program where different pieces of code execute in a particular sequence. Use logical reasoning to explain the sequence commands should run in. Write code that includes selection (conditional events) e.g. run commands if objects hit. Debug programs independently so they run correctly.	Use logical reasoning to make predictions and create plans to show the sequence that commands should run in. Understand how computers use variables to count things and keep track of what is going on. Code games and apps which incorporate a variable. Use variables to keep track of a score in a game that uses conditional events, e.g. add points for catching healthy food. Understand that computers use repetition and loops to do things repeatedly or forever. Use repetition and loops to code an app or enter commands in LOGO to program an on-screen turtle to draw shapes and patterns. Test and debug independently. Improve programs following suggestions.	Understand how information is transferred between systems and devices. Be able to explain the input, output, and process aspects of a variety of different real-world systems. To set values in code to control the speed, coordinates and movement of objects. Apply principles of logical reasoning, sequence, repetition and selection to write code to program physical devices. To be able to generate and display random numbers, and use these within a program. Test, debug and improve programs independently.	Know how we find information on the World Wide Web, through learning how search engines work and what influences searching. Know about different methods of communication including internet-based communication. Be able to evaluate which methods of internet communication to use for particular purposes. Use variables in more complex ways, and to manipulate inputs to create useful outputs. Understand the basics of HTML coding and apply skills to create a web page using headings, paragraphs and images.

Moss Side Primary Computing Skills Progression: Digital Literacy & Online Safety

Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Navigate around websites and programs / apps with guidance. Know where to go for help or support when online. Understand the importance of asking for help from an adult when online. Begin to understand that some online content is inappropriate. Be aware that information can be private or public and recognize some information that should be kept private. Understand digital content can be shared online. Begin to understand the risks of talking to strangers online. Listen and respond to stories, songs and presentations with an online safety theme.	Begin to understand how to use a web browser to navigate a website when undertaking Internet research. Search for sensible, suitable images online. Know some rules for staying safe online. Understand that some information is special because it makes us unique. Know that personal details should never be given out online without an adult's permission. Understand that not everyone we meet is trustworthy. Begin to identify the characteristics of people that are worthy of their trust and who can help them make positive choices to stay safe. Identify situations in which it is wise to turn to a trusted adult for help. Begin to understand the feelings of someone who is teased or bullied.	Know how to use a web browser to navigate websites effectively when undertaking research. Search for suitable images online and insert them into a document. Know rules for staying safe online and why they should be followed. Begin to understand that passwords can help protect computer files and information. Begin to understand that a file called a virus can make a computer stop working but trusted adults can help prevent this. Understand what personal information is and how to identify trusted adults who can help. Understand what personal information should not be shared and that we have the right to say 'No'. Understand what behaviour others value both online and offline.	Understand what personal information is and can give examples of what could / should not be shared online. Be able to explain why 'friends' made online are still strangers. Know what to do if sent something online containing an attachment. Know how to check if the information read / seen online is reliable. Define online bullying and recognise examples of it. Understand the SMART rules for staying safe online and why they should be followed.	Explore the World Wide Web to learn about who owns content and what they can access, add, and create. Evaluate online content to decide how honest, accurate, or reliable it is, and understand some of the consequences of false information. Identify signs of manipulative, pressurising or threatening behaviour online and know how to respond safely. Understand their rights online, and respect those of others. Take measures to control their privacy and digital footprint. Know how /where to seek help from an appropriate source if they need it. Give examples of content which may be appropriate or inappropriate to share online. Explain the possible consequences of sharing without consent.	Be able to take part in a collaborative online project with other class members and develop skills in working together online. Understand what it means to have a positive digital footprint, what can be done to develop one & why it is important. Know how to be a critical consumer while online. Know about different online scams, including what 'phishing' means. Know how to develop safe habits online, including the importance of protecting personal information. Learn how to respect online privacy boundaries for themselves and others. Understand ways to seek or ask for help if they or others feel unsafe online. Know ways to manage and respond to hurtful online behaviour.	Understand the concept of good and bad attention. Identify examples of different types of attention. Share examples about when they have demonstrated good attention behaviours. Learn about self-esteem and confidence in terms other than appearance. Understand what flattery might look like . Recognise characteristics they like about themselves. Understand that not everything online is trustworthy. Recognise ways that people may try to persuade others online.