**Computing**

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| **Key Stage** | **Pathway** | **Topics** | **Description**  | **Key Stage End Point (KSEP)** |
| KS1&2 | 1 | - ICT Around Us ‘My Classroom’- Exploring Images- Using Technology for Fun- ICT Around Us ‘My School’- Control - Using Technology to Socialise- ICT Around Us ‘My Community’- Sounds and Audio - Using Technology to Learn | I can experience and explore ICT used in the classroom and around school. I will experience different uses of technology in the community. I can use ICT-related resources in role-play scenarios such as an office, home and shop. I can identify common technology used in the classroom and around school including a desktop computer, laptop and tablet. I can identify some common devices used in the community including traffic lights, automated doors and cash registers. I can swipe vertically and horizontally on a touch screen device. I can open an app on a tablet. I will view photographs of myself and my peers on a device and show an interest. I can watch and react to video recordings of myself and my peers on a device. I can use a digital device to take a photograph of a stationary object. I will use ICT to make a request or indicate a choice. I show an interest in toys with buttons and switches. I can explore cause and effect using electronic toys and other switch activated equipment. I can follow instructions to operate a programmable toy and make it move in one direction. I will experiment making sounds using microphones and electronic instruments. I can listen to music and audio from different devices. I can activate recordable sound buttons and recognise they make different sounds. I have an emerging awareness of how ICT can control my environment e.g., altering the volume on a device. I can indicate the need for help if a device or piece of equipment is not working. I show self-control when access to different technologies is controlled by an adult. | Age 11 |
| KS1&2 | 2 | - Exploring Images - ICT Around Us - Control - Programming - Sounds and Audio- Texts and Symbols  | I can use an iPad or touch screen device to create an image using various tools and colours which I select. I can save my work on a simple drawing app. I can identify different types of images created on a computer e.g. vector drawing, 2D animation. I can create an image using 2D and 3D shapes. I can use and engage with the interactive whiteboard. I can identify different sources of technology in school by naming, labelling or picture matching. I can identify technology that we use for fun, e.g. arcades, fairgrounds, PlayStation. I can use technology to communicate with another person, e.g. phone, and I can take photos and videos using more than one device, e.g. camera or iPad. I can control a laptop or computer by using the mouse or keypad and I know how to handle equipment, e.g. laptop, iPad safely. I can control an electronic toy using directions and turns. I can identify errors in a set of commands to control a simple programme. With support I can make amendments to control a simple programme. I can attempt to programme a bee bot or simple programming apps with at least 4 commands through trial and error. I can create a set of commands to move a character. I can use technology to make sounds. I can put sounds together using an app or simple program, e.g. composing app or keyboard with record function. I know that the internet can be used for different activities, e.g. shopping, you tube, and I can play educational games on websites. I can use software on a computer or iPad to select words or symbols to communicate simple requests or responses e.g. using an electronic menu to request a snack. I will not share my name and information about myself with people on the internet. I can ask an adult to help me to do a task or tell them if I have a concern or worry, e.g. ask for help to log on.   | Age 11 |
| KS1&2 | 3 | - Exploring Images- ICT Around Us- Input / Output Devices- Programming- Internet and Online Services- Texts and Symbols- Control | I can create my own picture using art software and I can take photos and videos and edit them. I can enter data and present a simple chart or graph. I can use a range of formulas to present data. I can talk about how computers control everyday things outside of school, e.g. supermarket, traffic lights and banking. I can name several ways to communicate using technology and demonstrate how to use 2 of them, e.g. phone or text. I can control an object with a sequence of commands. I can create a sequence of commands to control an object. I can enter a sequence of commands as an algorithm into an app or program to make something happen. I can debug a simple problem e.g. with prompting find which command I may have missed out. I can write a simple program using software such as Scratch. I can decompose a set of instruction to create an algorithm. I can identify errors within an algorithm. I can talk about things we can do on the internet for fun, work and to make life easier, e.g. shopping, home heating control. I can search on the internet for something I am interested in and evaluate the results. I can present my writing using technology. I am able to create a simple presentation using PowerPoint or similar. I can use a range of software to present information e.g. Word, PowerPoint, Excel. I can use technology respectfully, safely and responsibly. I can report any concerns I have in different ways, e.g. tell an adult. I can seek support if something has made me feel upset, concerned or uncomfortable, and I know that this is the correct thing to do.  | Age 11 |
| KS3 | 1 | - Programming - Finding Information in Different Ways - Recording and Editing Information - Using ICT Purposefully - Using ICT Equipment Safely- Stop Motion Animation - Creating Videos and Using Editing Applications- Creative Software- ICT Enabled Equipment  | I can access a tablet and operate it. I will open apps relevant to me. I can close apps when finished. I can identify and start named programs. I use art software to create a picture using different marks and effects. I can contribute to creating a simple animation. I will use a digital device to take a photograph of an object or person. I can begin to edit a photograph and add effects. I can use technology to record a short video. I will watch a video recording and be able to play, pause and stop it. I will use ICT to support my communication and interaction. I can use text and/or symbols to communicate. I can identify common devices used to input information into a computer including a keyboard, mouse and touchpad. I can log into a laptop or computer with visual cues to follow. I can help to print my work and then collect it from the printer. I will input simple instructions into a programmable device. I can select appropriate ICT equipment for a specify activity e.g., choosing an iPad or digital camera to take a photograph. I will use and operate some common technology in the wider community. I can use technology for enjoyment and accept this is time-limited. I can demonstrate one way to use technology safely. | Age 14 |
| KS3 | 2 | - Stop Motion Animation - Education Programming- Using ICT to Find Information- Using ICT to Enter and Edit Text- Working with Binary Code and QR Codes- Using ICT Safely - Using ICT to Communicate- Programming - Understanding Coding- Creating and Editing a Video Diary  | I can access a computer and iPad and operate it. I can create a simple stop motion animation using Animation software. I can log onto a secure account using my personal school login and password details with minimal support. I can control a character to move in all directions. I can use interfaces to create objects in a software platform. I can take part in selecting information that can be found using ICT sources. I can use an ICT source to obtain information. I can take part in identifying different examples of ICT equipment. I can identify how computer understand information. I can identify what is binary code and denary code. I can identify equipment used to scan different types of codes. I can engage with different ICT enabled equipment. I can communicate with other people using information technology devices. I can produce and edit publications using information technology devices. I can use technology safely and responsibly. I can report any concerns I have in different ways, e.g. tell an adult. I can seek support if something has made me feel upset, and I know that this is the correct thing to do. I can use a voice-controlled device to obtain information. I can identify different types of webpages. I can identify software use to design and create web pages. | Age 14 |
| KS3 | 3 | - Collecting, Editing and Presenting Data- ICT Around Us- Control- Texts and Symbols- Coding - Exploring Images- Computational Thinking- Binary- Logic- Using Graphics Software to Create, Edit and Save Images- Programming | I can create my own stop motion animation using Animation software. I can use built in or standalone webcams to create animations in both 2D and 3D. I can add text and audio to my animation using readymade sound bites or music that I have created myself. I can log into an online account using my personal school login and password details and I can control the output of a sequence of instructions. I can use the internet to search effectively for information that helps me build and create things. I can collaborate with my peers in order to complete tasks. I can identify suitable ICT based sources and use interface features to find information. I can use appropriate ICT applications to enter text. I can review the text for accuracy and make required corrections. I can present information in both hard copy or on screen. I can identify different hardware components that make up a computer. I can identify how computer store information. I can talk about how instructions are stored and executed within a computers system. I can convert denary code to binary and binary code to denary code. I can code using Scratch, Python and Micro bit. I can talk about the early development of computers. I can create a presentation about the key people who helped to develop computers and technology. I can use technology respectfully, safely and responsibly. I can report any concerns I have in different ways, e.g. tell an adult. I can seek support if something has made me feel upset, concerned or uncomfortable, and I know that this is the correct thing to do.   | Age 14 |
| 14-19 | 1 | - Identifying and using ICT Equipment- Using ICT to Record and Edit Information- Responding to ICT Enabled Equipment- Obtaining Information from an ICT-Based Source- Interacting Purposefully with ICT- Using Creative Software  | I can identify a range of ICT equipment. I can turn a tablet on and off. I can navigate around a touch screen device and open a desired app. I will use ICT to search for information with cues to follow and adult assistance. I can access and use a high-tech AAC device to support my communication. I will experience therapeutic content via ICT enabled devices. I can use technology to support my emotional regulation. I will access safe and appropriate content on a social media platform such as YouTube. I can press command keys and buttons on a game console. I can engage with Virtual Reality hardware and software. I can use a high-tech AAC device to give a command to a virtual assistant i.e., Alexa or Siri. I can use a touch screen device to order food and drink in a café or restaurant. I can scan items at a self-checkout in a shop or supermarket. I can borrow and return a book at a library using a self-loan station. I can make a contactless card payment whilst being supervised. I will use a digital device to photograph both static and moving subjects. I can use a device to record a video to evidence a project. I can create artwork using appropriate software. I can use electronic devices to make and listen to music. I can use software to manipulate sound to create different effects.  | Age 18 |
| 14-19 | 2 | - Using ICT to Communicate - Using ICT to Find information- Stop Motion Animation - Microsoft Programming - Using ICT to Change a Creative Composition - Using ICT in My Community - Coding and Video Editing - Know How to Use ICT Safely - Using ICT to Enter and Edit Text - Digital Photography  | I can create my own stop motion animation using Animation software, e.g. Pivot. I can create animations using more than one stick figure. I can use a camera to create stop motion animation using small objects. I can use stop motion animation software to create my animation. I can add text to my animation. I can log into a software account using my personal school login and password details. I can use interfaces to enable me to locate and choose resources that help me build and create things. I can use software to store information in a sequential order. I can use simple formulas and functions to change a document. I can use a range of formatting techniques to create range of documents e.g. poster.I can work with my peers in order to complete tasks. I can identify and use suitable ICT based sources to use to find information. I can use interface features to find information. I can use appropriate ICT applications to enter and review text for accuracy, and I can make required corrections. I can select and use appropriate ICT communication resources to send and receive information. I can use technology respectfully, safely and responsibly. I can identify a range of devices used to communicate. I can use communication devices safely. I can report any concerns I have in different ways, e.g. tell an adult. I can seek support if something has made me feel upset, concerned or uncomfortable, and I know that this is the correct thing to do.   | Age 18 |
| 14-19 | 3 | - Using Devices and Handling Information- Using ICT to Create and Edit Information- Using ICT to Communicate- Coding - Using ICT to Work With Data- Using Digital Technologies to Manage Transactions- Using Digital Technologies to Create Documents - Memory and Storage Devices- Computational Thinking - Using Digital Technologies to Work With Graphics / Coding  | I can save files in appropriate formats. I can manage files and folders to complete routine tasks. I know how to use the internet at home and school, and to navigate the internet for a given purpose. I know how to work safely and securely when using IT. I can use refine tools and techniques to search and find specific information. I can identify the main features of an email. I can open and send an email. I know the hardware, software and interfaces available to me. I know how computers work and the networks available to me. I can enter given information into documents. I can follow instructions to edit documents. I can present documents to complete routine tasks. I can manage spreadsheet files to complete routine tasks. I can enter given data into worksheets. I can follow instructions to develop numerical data. I can present numerical information to complete routine tasks. I can use a range of formulas to model a scenario in a spreadsheet. I can use a range of functions within a spreadsheet. I am able to prepare given text and images for use in graphics. I can use iteration in Python coding.   | Age 16-18 |