**Sequence of knowledge over time to meet curriculum end points**

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| Digital Literacy | **Knowledge** | **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| Using technology safely | Internet safety rules and keeping safe. | Avatar and profile safety online. | To understand how different activities and responses online affect our feelings | Know the implications of when we post anything online. | To understand how Pop ups work. | To understand Password safety and how complexity keeps your accounts safe. | To understand cyberbullying and how to respond. |
| Keeping Personal information private | Understanding what information should and should not be online. | Knowing how to respond to personal questions online and having the right to say no! | To understand what could happen if photos/pictures are shared. | Investigating different levels of privacy. What information should we protect?  Public or private? | To understand about catfishing and scams online | To understand how much you share online exposes your safety | To understand Password safety and different layers of security such as 2 factor authentication.  To understand email scams. |
| Identify where to go for help and support if they have concerns over content. | Understanding who our trusted adults are. | Children know what to do if something is concerning them – trusted adults at home and in school. | Identifying 4 trusted adults.  Looking at what is and what is not acceptable to post online. | To know there are different ways to take actions. To know they don’t have to deal with concerns alone. | To recognise if online information is credible.  Fake news and disinformation. | To understand what to do if your personal information is leaked. | To understand how to report cyberbullying. |
| Using IT beyond school | Understanding of only talking online to people we know | Putting media stories into context and look at sites that help us like Childline and CEOP  Using technology outside of school. | Understand that not everyone online is telling the truth. | To understand what a positive online presence looks like. | Google Interland – putting learning into practice – e-Safety class assembly | To introduce the CV and what it is used for. | To understand why social media sites don’t charge to be used.  To understand bias and fake news.  To code an app that is useful outside of school |
| Using devices effectively – mechanics  **Automaticity** | **Using a mouse** and starting to learn key letters on a keyboard. | **Log in** practice  Developing keyboard and mouse skills.  **To understand what cut, copy and paste does.** | Developing **touch typing skills.**  To understand how the internet works and how computers help us learn. | Topic related word processing and presentation skills.  **Saving and retrieval**. | To use keyboard shortcuts for **Cut, copy and paste**  **Ctrl C, V** | To use **copy, paste in spreadsheet** to automate formula. | To use different types of mouse and keyboard combination such as **drag and drop and two finger scrolling.** |
| Searching and selecting | Selecting the correct app | Using safe search and understanding why. | Identifying websites that are appropriate to my age.  Using search engines and rating favourite websites | Selecting credible sources for digital artefacts.  Saving to a folder for easy access. | To understand how search engines display information.  How to get better search results. | Searching for templates to build your own work on. | Learn about advanced search algorithms such as linear, binary and hashing, using a battleship game. |
| Information Technology | **Knowledge** | **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| Use technology purposefully to organise, store and retrieve digital content. |  | Learn how to find, save, show, and send images on iPad devices. | Using a computer to edit saved images. | Create and save documents to do with topic. | To use Word and PowerPoint to display work/projects | Create a website using SharePoint to advertise a business. Understand the use of copyright. | How to save video/picture files to cloud storage (iCloud, OneDrive) for later use. |
| Use technology purposefully to create and manipulate digital content. | Using PicCollage to manipulate photos (Shrink, expand, turn) |  | To use photo editing software to discover different layers in images. | To import images into documents and manipulate size and wrapping. | To use more advanced photo editing functions | Create and understand animation principles and use software to create animations | Use Computer Aided Design (CAD) software to create and manipulate 3D shapes |
| Select, use and combine a variety of software (including internet services) on a range of digital devices. KS2 |  |  | Use book creation apps to create eBooks. | Use browsers and apps/programs to import and display work | To use different apps/programs to photo edit to see how skills are transferable. | To use different software and platforms to create animations. | To use video creation tools and programs t created layers and effects for a video project. Use Apple and Windows devices to sync and transfer content. |
| Design and create a range of programs, systems and content that accomplish given goals. |  |  | To use a range of applications to save and edit work to produce a newly created image. | To collect and organise topic work digitally to produce a display piece. | Use different programs to create videos using a range of techniques such as green screen and stop motion animation. | Using spreadsheets, we create formula that automatically completes the tasks at hand. | Video creation and effects.  3D modelling. |
| Computer  Science | **Knowledge** | **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| Understand what algorithms are | Introduction to the word Algorithm and what it means | Using a list of instructions to complete coding tasks. | Using instructions in the right order to achieve desired results | To understand how different platforms have different but similar instructions | To use algorithms to make aspects of a game work. | To use a list of instructions to create a 3D game world. | To use algorithms to create an app that links to the pupils secondary schools website |
| Create and debug simple programs (that accomplish specific goals – KS2) | Following instructions and looking at order. | Learning that debugging is fixing wrong code – Tynker Jnr – directional problem solving. Up/down/left/right  Getting code in the right order | Fixing the wrong code – Scratch Jnr  Getting the right amount of code to solve the problem. | Presented with code problems and children must detect the error and debug the programme. | Create a maze game that others will play. Debug the ways others will try and cheat. | Create own controllable game that includes score, timer and lives. The game will need debugging in order to word correctly. | Developing an app to share with others – pupils must debug problems for app to work successfully. |
| Use logical reasoning to predict the behaviour of simple programs (and to detect and correct errors – KS2) |  |  | introduce the idea of how to predict the behaviour of code before it has run. | Predicting code using questions and showing errors to allow pupils to correct the code. | Use prediction to plan how someone might cheat in a maze game and patch any issues. | Predict the path of sprites that have been coded. | Predict how functions will act when coding an app. |
| Use sequence, selection and repetition in programs; work with variables. |  | To introduce the term REPEAT and how programs can loop an action | To repeat a sequence of events and predict the behaviour. | To use repeat blocks to code a looped solution to problems. | To code forever a sequence that helps our maze game run without errors or cheating. | Introducing Variables and how they are used to code a scoreboard, timer and life counter. | Using Logic to code loops of code when needed. |
| Controlling or simulating physical systems | Using simple commands to control a sprite’s direction | Using simple commands to reach a specified destination. | Using commands to create a range of motion.  Using 1 sprite to control another. | Using commands to create a simple game. | Creating a simple game from scratch using a variety of control methods. | Advancing from 2D to 3D control within a game building environment. | Designing an app - control hyperlink and website destination. |
| Solve problems by decomposing them into smaller parts | One direction at a time. | Phrase “What do I need to do next?” to be used to draw out the next step. | Code one aspect at a time. | Code one solution at a time. | Code one sprite until it works, then move onto the next. | Code the game until It works, add variables and other decorations after. | Code one app button at a time. Copy and edit code later. |
| Work with various forms of input and output | Taping the screen. Using 2 fingers to zoom and twist. | Using the screen keyboard. | Drag and drop. | Using a keyboard and mouse | Using multiple keys at the same time. | Using cloud sync to output to different devices. | Using QR codes to output app updates.  To use different platforms for coding. |
| Understand how networks can provide multiple services, such as the world wide web. |  |  |  |  | To understand how a network used physical infrastructure to connect devices.  How local devices communicate  What an IP address it and how it is used on the world wide web | Now networks search internally to return results.  Using cloud networks to share documents. |  |
| Collecting, analysing, evaluating, and presenting data and information. |  | Create an eBook | Using Word to collect and save topic work. | Using PowerPoint to present work. | Using a website/Microsoft Sway to present information. | To understand spreadsheet formula. Data is collected, entered and presented in spreadsheets shared via Teams. | Creating at mobile device app to display information |