Co-op Academy North Manchester - Year 7 Business & Computing Curriculum

Year 7	HT1	HT2	HT3	HT4	HT5	HT6
Topic(s)	Cyber Security	Hardware/Software	App Development	IT and the world of work	Flowol	Programming (Small basic)
Substantive Knowledge (Know That…)	• Know that computer accounts must be kept secure to prevent unauthorised access. • Know that measures must be taken to secure sensitive information stored on computers. • Know that the sharing of personal information can make us vulnerable to both online and real-life dangers. • Know that there are dangers involved with online communication, particularly with unknown contacts. • Know that there are consequences for the misuse of personal information. • To know that the law protects against the misuse of computers.	• Know that a computer is any device which can follow instructions stored in its memory. • Know that a computer has different inputs and outputs. • Know that an input device sends data / instructions into the computer. • Know that an output device receives information from the computer. • Know that a computer has devices inside. • Know that all the devices in a computer work together to make it function. • Know that the CPU is the brain of the computer. • Know that the devices inside a computer are hardware and the devices on the computer are software. • Know that there are different types of hardware. • Know that there are different types of software.	• Know that apps can be created either visually or using a programming language. • Know that apps should have a consistent house style. • Know that audience needs should be considered when developing an app. • Know that programmers must work collaboratively when creating apps.	Know that: Microsoft Word and Google Docs are used to create and format text-based documents: • The name of the document will appear in the top row of the document. • The line of words in the second row at the top of the page that include "File", "Edit", "View", "Insert", "Help" are called TABS. • The line of pictures and words in the third row that can be clicked on to change (format) the way things look on the page are shortcuts called BUTTONS. • If you need help on a feature, and nobody is immediately available to help, the Help tab can be of assistance. • You can add images and tables to word documents. • Microsoft Excel and Google Sheets are used to create and format spreadsheet documents: • A spreadsheet is made	• Know that an algorithm is a set of instructions followed to complete a task • Know that a flowchart can be used as an algorithm to resolve a computing problem • Know that abstraction is the removal of unnecessary data when programming. • Know that sequencing is important for the planning of an algorithm. • Know that computer programs may have a series of loops (iteration). • Know that a computer program may need to use selection in order to perform one of a group of tasks based on a decision by the user.	

				up of rows, columns, and cells.		
				• Columns are labelled alphabetically starting at A.		
				• Rows are labelled numerically starting at 1.		
				• Each cell has a unique cell reference using the column label followed by row label number. I.e., The first cell in a spreadsheet is A1. A2 is below A1, and B1 is to the right of A1.		
				• A cell can contain data, labels, and formulae.		
				• Many formatting options such as changing font type, size, colour, bold, italics, underline, are all in spreadsheet processors too.		
				• All formulas start with a = sign.		
				• Formulas can be used to calculate a total of sums, multiplication, division, subtraction and many more.		
				• Spreadsheets can be used to automatically create charts and graphs to give a visual representation of data.		
				• You can also add images and borders to selected cells on a spreadsheet.		
				• A collection of information organised in a way for the user to understand is called a		

				database. ● Microsoft PowerPoint and Google Slides are used to create and format presentation documents: ● Presentation software is used to create slides. This is what teachers use in lessons. ● A slide show is a series of slides in a particular order. ● A slide can contain text, images, animations, sound, and video. ● Slides can be set to automatic setting where the slides will change to the next one themselves, or the presenter can show the next slide manually using keyboard buttons or the mouse or clicker. ● Slideshows are used toe present information about a topic whilst the presenter speaks using the slides to remember what to talk about, or they can be used on their own without a presenter speaking. ● Presenttion software features include: ○ Slide Master – controls presentations appearance and keeps all the slides in the same style. ○ Animations – special		

				effects to keep audience interested. ○ Transitions – different ways to change from slide to slide. ○ Speaker notes – present can add notes to remind them what to say when each slide is shown, these notes appear on presenters' screens only. ● Formatting text is the same as word/ spreadsheet processors.		
Disciplinary Knowledge (Know How…)	● Know how to create a password that is secure and robust . ● Know how to store documents securely and in an organised manner. ● Know how to keep personal information safe online and in person. ● Know how to avoid online dangers when using social media platforms. ● To know how to identify the signs of online danger when using social media platforms. ● Know how to avoid the dangers of communicating with strangers online. ● Know how to identify the signs of scam emails. ● To know how to report and prevent computer misuse.	● Know how to identify an input. ● Know how to identify an output. ● Know how to identify a computer. ● Know how to identify different types of hardware. ● Know how to distinguish between hardware and software. ● Know how the motherboard, CPU, ROM, RAM and the fan work in a computer. ● Know how to select appropriate computer hardware for a scenario. ● Know how to select appropriate computer software for a scenario.	● Know how to use visual programming to create an app. ● Know how to use code to develop an app. ● Know how to select appropriate fonts to meet the needs of an audience. ● Know how to select appropriate images to meet the purpose of an app. ● Know how to design an appropriate house style for an app. ● Know how to evaluate the appropriateness of an app and its features in meeting the requirements of a brief.	● Know how to: **Word documents:** ● Open and create word document in Google and Microsoft Office Applications. ● Add title and subheading. ● Change the font type, size, colour. ● Change title to bold with underline. ● Add reference or quote as italics. ● Align text to left, middle, and right. ● Change line and paragraph spacing. ● Add bullet points. ● Add numbers. ● Add checklist. ● Undo and redo. ● Change background colour. ● Insert a chart. ● Add an emoji.	● Know how to construct a set of specific instructions to meet a given goal ● Know how flowcharts are constructed using the correct symbols to represent an action or process ● Know how to follow the sequence of an algorithm so that steps are logical ● How how to represent a loop within a flowchart ● Know how to identify a loop (iteration) ● Know how to represent selection on a structure diagram	

	• To know how legislation is used to protect against and punish computer misuse.			• Add a page break. • Check spelling and grammar. • Count words in the whole document, or selected paragraphs. • Save the document with selected name. • Quick save using button. • Open a document. • Share the created document. • Spreadsheet documents: • Open and create new spreadsheet in Google and Microsoft Office. • Insert date (text or number) in a cell. • Format text in the cell – change font colour, size, type, underline, bold, italics. • Add image or drawing. • Format image or drawing. • Add borders of different style, thickness and colour to cells and selected cells, rows, and columns, to make a table. • Change colour of cell/ row/ column. • Insert and delete cells/ rows/ columns below, above, to the right, and to the left. • Use data in spreadsheet to create bar chart, pie chart, line graph. • Add function to cell.		

				- Add calculation formula to cell. - Add link to spreadsheet. - Make rows and columns bigger. - Make rows and columns equal in width/ height. - Merge cells, columns, rows, and unmerge. - Align text in cells to left, middle, right, top, middle, bottom. - Wrap text in cell. - Tilt text in cell. - Sort sheet alphabetically. - Format cell date to currency. - Insert comment on a cell. - Presentation documents: - Open and create new slideshow in Google Slides and PowerPoint. - Add a slide (with and without layout). - Delete a slide. - Duplicate a slide. - Start and end slideshow. - Save a theme. - Use existing theme. - Add, edit (resize and crop), and delete images. - Add, edit, and delete textbox. - Add, edit, and delete audio. - Add, edit, and delete video. - Add, edit, and delete		

				shape. ● Add, edit, and delete table. ● Add, edit, and delete chart. ● Add, edit, and delete WordArt. ● Add, edit, and delete line. ● Add and delete comment. ● Change slide background. ● Add and delete transition effect to changing slides. ● Add and delete animation to objects, i.e.. Textbox, images etc.		
Key Concepts	Network security. Social media dangers. Computer Misuse Act.	Hardware. Components within a computer. The difference between hardware and software.	App design, house-style, layout, target audience, and testing.	Software, word processing, presentations, spreadsheets, report writing.		
Assessment			Completed app, planning and review documents.	End of topic test, production of documents.		
Homework	-		To research climate change and app design.	Design and preparation of documents, and knowledge quizzes.		
Wider reading			https://www.bbc.co.uk/bitesize/levels/z4kw2hv Computer Science and ICT sections.	https://www.bbc.co.uk/bitesize/levels/z4kw2hv Computer Science and ICT sections.		
How to help at home	Discussion of topics being covered, support with knowledge quizzes and accessing revision materials for these. All work and homework can be accessed through Google Classroom.					