KNOWLEDGE OVERVIEW GRID

	Subject: Computing				Year Group: 56	
	Autumn 1	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
	Hour of Code Course F	**BBC Microbits**	**Microsoft Word**	**Theory – Systems and Searching.**	**Microsoft PowerPoint**	**Video Editing**
NC Objectives Covered **(Taken directly from the National Curriculum)**	Design, write and debug programs that accomplish specific goals. Use sequence, selection, work with variables and various forms of input and output. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	Design, write and debug programs that accomplish specific goals. Use sequence, selection, work with variables and various forms of input and output. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact	Use search technologies effectively Appreciate how results are selected and ranked, Be discerning in evaluating digital content. Select, use and combine a variety of software to design and create a range of programs, systems and content. Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	Use search technologies effectively Appreciate how results are selected and ranked, Be discerning in evaluating digital content Select, use and combine a variety of software to design and create a range of programs, systems and content. Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	Design, write and debug programs that accomplish specific goals. Use sequence, selection, work with variables and various forms of input and output. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.
Digital Literacy Strand	Privacy and Security AUP Password setting	Online Relationships and Online bullying.	Health Well Being Bramhope Change One thing competition	Self-Image and Identity	Managing Online Information. Copywrite	Online reputation
Previous Knowledge **-What have children learnt previously that will support this next step?**	Block coding – Year 3 Course D Event blocks, Loops, Debugging	Microbits: beginner projects in Year ¾. Closed projects involving loops	LKS2: Previous use of Microsoft word. Previous Office skills 3/4 Save/Save as, Embolden and other features, Bullets Spell check	Some knowledge on the internet and networks but no specific theory unit prior to 2022-2023.	LKS2: Previous use of Power Point. Previous Office skills 3/4 Save/Save as, Embolden and other features, Bullets Spell check	Photo editing in Year 34.
Misconceptions **-What are the common misconceptions in knowledge for this unit?**	Using incorrect blocks for selection. Using too many blocks – not as efficient as it should be. Failing to use -Step to break down into smaller steps. Creating passwords which are too difficult to remember. Sharing passwords with friends.	Not downloading the HEX file. How to deal with issues – how to report. CEOP	Post covid – some skills gaps including saving documents. Recaps built in to address this. Not understanding that all families have different rules and that it works best when there is a set of agreed family boundaries.	Limited understanding of the nature of networks in the internet. Children often unaware of the process of image manipulation we see in media and impact on their mental health	Over-loading slides with mang features without thinking of the audience and making it difficult to read. Writing all content on the slide rather than thinking about key messages to share. Some prior knowledge of copywrite but often unaware how to credit the original author/artist.	NA – unit first taught 2022-2023 The permanent nature of anything searched, written, posted online.

Learning Sequence **-Detail the learning sequence using key questions in an ordered sequence.** **-The questions should have a sequential build up to answer the overall learning challenge.** **Red= Declarative knowledge ('knowing that')** **Blue= procedural knowledge ('knowing how')**	**Course F** **Children must be kept together and taught same skill together each week.** **Lesson 1** **AUP Lesson** **Lesson 2** **Making Sprites (Hour Code Lesson 3) recap for 6s.** **Lesson 3 Sprites in Action (Hour of Code Lesson 4) Recap for 6s.** **Lesson 4 Texts and Prompts (Hour of Code Lesson 7)** **Lesson 5 Lots of Sprites (Hour of Code Lesson 9)** **Lesson 6 Counting with Varieables (Hour of Code lesson 10)** **ESafety Warm Up Content** **I can describe effective ways to manage passwords e.g storing in browser** **I can explain what to do if passsword is shared/lost/stolen.**	**1. Recap features of a Microbit and how do I programme and download my programme to the Microbit.** **2. Can I use loops and variables to make a light sensor?** **3. Can I use variables to make a step counter?** **4. Can I use radio function e.g. for project 'Share a secret'?** **5. Can I make an environment data logger?** **6. Can I use Microbit features to create my own program?** **ESafety Warm Up Content** **I can explain how sharing something online can have +ve or –ve impact.** **I can show to be kind online, respecting boundaries.** **I can describe how things shared privately online can have unintended consequences e.g screen grabs.** **I can explain sharing inappropriate images can have an impact an consequence and know what to do if this happens. (screen grab-URL, profile)** **I can explain how to report online bullying.**	**1. What is the purpose of a Microsoft Word document and how do I open, name and save my word document.** **2. Can I recap how to add bullet points?** **3. Can I add hyperlinks?** **4. Can I embed imagery?** **5. Can I edit and improve my Word document?** **6. Can I present my letter to an audience?** **ESafety Warm Up Content** **I can describe common systems that regulate age related content e.g PEGI and describe their purpose.** **I recognise nad can discuss pressure tech can place.** **I can recognise features of persuasive design and how they are used to keep users engaged.** **I can assess and action different strategies e.g regular breaks posture, sleep, diet, exercise**	**1. How do systems work?** **2. How do computer systems work?** **3. How do we search the web?** **4. How do we select search results?** **5. How are search results ranked?** **6. How are searches influenced?** **ESafety Warm Up Content** **I can identify online content relating to gender, race etc and explain why it is important to challenge and reject inappropriate representations online.** **I can describe issues that make people feel sad. I know how to get help**	**7. What is the purpose of a PowerPoint presentation and how do I open, name and save my PowerPoint presentation?** **8. Can I recap how to add bullet points?** **9. Can I add hyperlinks?** **10. Can I embed imagery?** **11. Can I edit and improve my PowerPoint?** **12. Can I present my PowerPoint to an audience?** **ESafety Warm Up Content** **I can demonstrate how to make references to sources I have used from the internet.** **I can demonstrate use of search tools to find and access online content which can be used by others e.g pixabay** **I can explain how and why soe people present opinions as facts.** **I can define the terms influence/manipulation and persuasion and how we might encounter these online e.g fake news, advertising.** **I understand concept of persuasive design.**	**1. What makes an effective video and how can I access video clips from pupil desktop and save my project.** **2. Can I trim my video?** **3. Can I add text?** **4. Can I add music?** **5. Can I add 3D effects** **6. Can I edit and improve my video?** **7. Can I present my video?** **ESafety Warm Up Content** **I can explain ways to develop positive online reputation.** **I can explain strategies people can use to protect digital personality including degrees of anonymity.**

	I can describe why and how apps should be kept up to date. **I can describe simple ways to increase privacy on apps and services with privacy settings.** **I can describe ways online content can gain money or information illegally.** **I know online services have terms and conditions for use.**					
Curriculum End Points **-What will children know and be able to do by the end of the unit?** **-What will the children produce to demonstrate this knowledge?**	End of unit task enables children to show case their understanding of variables and conditionals.	Can showcase a variety of skills to programme Microbit using loops, variables and conditionals.	Children will create a Word document based on a Change One Thing competition. They will be able to: -Use knowledge/skills from previous years. -Use new knowledge/skills: • Can I create and Present a Use bullets • Hyperlinks • Embed imagery	Children will understand internet searches	Children will create a PowerPoint based on a curriculum topic. They will be able to: -Use knowledge/skills from previous years. -Use new knowledge/skills: • Can I create and Present a Use bullets • Hyperlinks • Embed imagery	Children create a video about Bramhope Primary School.

Knowledge Sentences **-Using the end points, what are the key statements children need to remember by the end of the unit?** **(I know that…)** **(To share with children when it is taught during the unit)**		1. Connect a 'make a new sprite' block under the 'when run' block. 2. Choose a costume for your sprite. 3. Press the run button when your code is finished.	I know that a micro bit is a tiny, pocket-sized computer. A micro-bit can contain: • LEDs, which are individually programmable. • 2 programmable buttons. • Connection pins. • Temperature and light sensors. • Motion sensors. • Wireless communication. • USB interface. • Reset button.	I know that the purpose of Microsoft word is to: -make professional-quality documents, letters, reports, etc. -allow you to format and edit your files and documents to record your work.	I know that computer networks such as the internet provide multiple services, such as the world wide web. They provide opportunities for communication and collaboration.	I know that the purpose of a PowerPoint presentation is to: -Engage the audience and share information about a specific subject area. -Use text, video, photos to get across a key message. I know that I need to: -Focus on key words rather than cutting and pasting text onto slides. -Change the colour and size of my font so it can stand out. I know that I need to: -speak clearly and with expression. -add further information where necessary (rather than reading off the slides). -Answer questions after the presentation.	I know that an effective video includes: • Good script. • Straight to the point. • Visually appealing. • Light and entertaining. • Appropriate music. • Clear voiceover and font. I know to edit a video I need to trim, add text, add music add 3D effects and present it.
Key Vocabulary **(To share with children and add to working walls/knowledge mats)**		Variables Conditionals Debug Algorithim	Hex file, Download, Make code blocks, conditional, variable blocks	Bullet, Hyperlink, Embedding Imagery, animation	Searches, ranking, networks	Bullet, Hyperlink, Embedding Imagery, animation	Trim, story board
What does this look like at Bramhope?	**Enrichment Activities (trips, residentials, speakers, SMSC)**	Digital Leader assembly	Digital Leader assembly Parent Workshop linked to Parents evening.	Digital Leader assembly Change One Thing Competition Parent Workshop linked to Parents evening.	Digital Leader assembly	Digital Leader assembly	Digital leader assembly
	Physical Resources (artefacts)	Hour of Code Course E Remember to start at the point that 5/6 finished last academic year E Safety Warm Up Planning	Microbit website Microbits. 16 V1 16 V2. Also requested government Microbit as part of additional funding. Due to arrive September 2023 E Safety Warm Up Planning	Planning available from last academic year in Sharepoint Autumn 2 E Safety Warm Up Planning	Use Teach computing resources as below. Remember you need to sign up – it is free and all the resources can be found under link below or KS2 Curriculum Link in Sharepoint Year 56 Searching Teach Computing Theory Slides Internet E Safety Warm Up Planning	*Laptops* *Google search engine* E Safety Warm Up Planning *https://www.youtube.com/watch?v=7WaBqEvpLQ0* *https://www.commonsensemedia.org/videos/teaching-kids-about-copyright-piracy* *Fake News* *https://www.youtube.com/watch?v=icCdAI6TvNM* *Fake News Lesson Plan*	Summer 2 Link to last year's planning E Safety Warm Up Planning
	Cross Curricular learning (Include opportunities	NA	Science – data loggers, temperature, light sensors, electricity conductivity (all projects listed on BBC Microbit website and depending	Change One Thing Competition Link	NA	PowerPoint linked to history/science/geography topic.	

	for writing and quality texts)		on X curricular science topic.				
	Local Learning including outdoor learning						
	Opportunities for cultural Diversity					PowerPoint linked to history/science/geography topic.	