KNOWLEDGE OVERVIEW GRID

	Subject: Computing			Year Group: 1		
	Autumn 1	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
	Hour of Code Block 1 Course A	**Theory Technology Around Us**	**Hour of Code Part 2 Course A**	**Microsoft Word**	**Digital Paint**	**Beebots.**
NC Objectives Covered **(Taken directly from the National Curriculum)**	Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	Recognise common uses of information technology beyond school Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies	Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	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..	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 what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions 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 settings	Online Relationships and Online bullying.	Health Well Being	Self-Image and Identity	Managing Online Information. Copywrite	Online reputation
Previous Knowledge **-What have children learnt previously that will support this next step?**	No previous Hour of Code knowledge. Some experience with Algorithms using Beebots	Some use of mouse in EYFS?	Some Hour of Code Autumn 1.	None in school.	New unit 2023-2024	Some use EYFS Summer 2.

Misconceptions **-What are the common misconceptions in knowledge for this unit?**	Sharing the work – driver navigator video worth showing – link below. Touching the screen instead of using keyboard. That computers can't read between lines – actually they just do what we ask of them. Not knowing what a password does.	Upper and lowercase letters and the impact these can have on logging in. Letters are not in alphabetical order. The letters are all capitals. Some of the keys have more than one thing on them .	Sharing the work – driver navigator. Touching the screen instead of using keyboard. That computers can read between lines – actually they just do what we ask of them Not understanding that all families have different rules and that it works best when there is a set of agreed family boundaries.	Upper and lowercase letters and the impact these can have on logging in. Letters are not in alphabetical order. The letters are all capitals. Some of the keys have more than one thing on them	New unit 2023-2024	That computers can read between lines – actually they just do what we ask of them.

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')	1. Acceptable Use Policy Lesson. Recap features of good programming – e.g good partner work (driver navigator), what good programming looks like, what to do if I'm stuck. Driver navigator video 2. Can I learn how to drag and drop? 3. Can I use Happy Maps - unplugged? 4. Can I sequence with Scratch 5. Can I programme with Scratch 6.Can I programme with Rey? E Safety Warm Up content: Know that Passwords protect information, accounts, devices. Detailed examples of what personal inforamtion is. Why it is important to ask an adult before giving information	1. Can I learn about technology in our classroom? 2 Can I understand how we use technology? 3. Can I develop mouse skills 4. Can I use a computer keyboard? 5. Can I develop keyboard skills? 6. Do I know how to use a computer responsibly? E Safety Warm Up content: I can describe how to behave online in ways that don't upset others. I can use internet with adult support. I can explain why it is important to be kind and considerate I can explain why somebody may find something funny that is not seen same way as others. I can given examples of why I should ask permission.	1Recap features of good programming – e.g good partner work (driver navigator), what good programming looks like, what to do if I'm stuck. Driver navigator video 2. Can I use loops with Scratch? 3. Can I do loops with Lauel? 4. Can I make an ocean scene using loops? 5. Can I learn about Event blocks (offline)? 6. Can I create a mini project? E Safety Warm Up content: I can explain rules sot keep myself safe when using technology in and out of home.	1What is the purpose of word – how do computers help us with writing? Can I explore the keyboard? 2. Can I add and remove text? 3. Can I explore the toolbar? 4. Can I make changes to the text? 5. Can I explain my choices? 6. Can I decide between pencil and keyboard? E Safety Warm Up content: I can recognise that there may be people online who could make someone feel sad, embarrassed or upset. If something makes me feel this way, I can give examples of when and how to speak to an adult I trust.	1. How can we paint using computers? 2. Can I use shapes and lines? 3. Can I make careful choices? 4. Can I explain why I used a tool? 5. Can I use my skills in an independent project? 6. Can I compare computer art and painting? E Safety Warm Up content: I can explain why work I create using technology belongs to me. I can say why it belongs to me I can save my work under title so people know it belong to me. I understand work created by others doesn't belong to me even if I make a copy. I can give e.g.s of how to find information using digital technologies e.g search engines I know that we encounter a range of things online that we like and don't like and which are reach or make believe. I know how to get help from a trusted adult.	Can I understand buttons on Beebots? Can I understand how to change direct? Can I go forward and backwards? Can I use 4 directions? Can I get there? Can I create different routes? E Safety Warm Up content: I can recognise that information can stay online and could be copied. I can describe what information I should not put online without asking a trusted adult first.

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?**	Course A Lessons 1-6 completed. Each lesson allows for completion of Hour of Code task to meet procedural knowledge.	Children have an understanding of technology that we use in society and have developed their keyboard skills.	Course A Lessons 6- 12 completed. Each lesson allows for completion of Hour of Code task to meet procedural knowledge.	Children create a poster using previously scaffolded content loaded onto pupil desktop.	Children complete piece of their own artwork using shapes/lines different brushes etc.	Children can control Beebot and create their own route and guide their Beebot to reach it.
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)**	I know that the features of good programming include: 1) thinking about the most efficient way to achieve an outcome. 2) be able to test that your code works effectively. To make my programme work I must: 1. Drag and drop	I know that a computer needs a screen, a keyboard and a mouse.	I know that the features of good programming include: 1) thinking about the most efficient way to achieve an outcome. 2) be able to test that your code works effectively. To make my programme work I must: 1. Drag and drop 2. Use loops	I know that Microsoft Word is a piece of software to create text documents. I can use Microsoft word to: 1. Add and remove the text.	I know that we can use paint to make our own design or alter another image by drawing shapes and lines.	Algorithms are a set of rules to be followed in order. Algorithms are used to control electronic devices such as an iPad. Algorithms must follow a set of clear instructions. To be safe online, I must: 1) Alert an adult if something worries me. 2) Always be with an adult when on a device. 3) Turn the off the device if something worries me. I know that acceptable behaviour when using technology is: 1) Look after the device. 2) Listen to the adult who will help me. 3) Not to talk to strangers online. 4) Use respectful language.
Key Vocabulary **(To share with children and add to working walls/knowledge mats)**	Event blocks Block coding Debug Algorithim	Mouse Keyboard Space bar etc.	Event blocks Block coding Debug Algorithim	Mouse Keyboard Space bar etc. Text. Delete/Backspace.	Shapes, lines, brushes.	Forwards, backwards, routes, Algorithm, debug.
What does this look like - **Enrichment Activities (trips, residentials, speakers, SMSC)**	Digital Leader assembly	Digital Leader assembly Parent Workshop linked to Parents evening.	Change One Thing Competition Digital Leader Parent Presentation ‘ Parenting in a digital world’. (SharePoint/Annual Events)	Digital Leader assembly	Digital Leader assembly	Digital Leader assembly
Physical Resources (artefacts)	Hour of Code Course A Digiduck	1 Techonology Around Us	Hour of Code Course A Digiduck	Teach Computing Digital Writing	Microsoft Painting KS1 Digiduck	KS1 Beebots Digiduck

			Digiduck Teach Computing Files on Theory Unit				.
	Cross Curricular learning (Include opportunities for writing and quality texts)	NA	NA	Change One Thing Competition Link	NA	Link to art - Kadinsky.	
	Local Learning including outdoor learning	NA					
	Opportunities for cultural Diversity	NA				PowerPoint linked to history/science/geography topic.	