

Key skills and knowledge that link to Computational Thinking in the Early Years

Nursery	PSED	PD	CL	LD	Maths	EAD	UW
	Play with one or more other children, extending and elaborating play ideas Online Safety: Develop their sense of responsibility and membership of a community Increasingly follow rules, understanding why they are important	Development of Fine and Gross Motor skills	Understand a question or instruction that has 2 parts eg, get your coat and wait at the door Use a wider range of vocabulary	Understand that print has meaning Engage in extended conversations about stories, learning new vocabulary	Begin to describe a sequence of events Discuss routes and locations using words like 'in front of' and 'behind' Talk about and identify patterns around them	Joining materials and exploring textures Develop their own ideas and decide which materials to use to express them	Explore and talk about different forces they can feel Begin to make sense of their own life story and family history Talk about members of their immediate family and community Explore how things work. Talk about the differences between materials and changes they notice. Begin to understand the need to respect and care for the natural environment and all living things Use all their senses in exploration of natural materials Plant seeds and care for growing plants. Begin to understand the need to respect and care for the natural environment and all living things Online Safety: Continue developing positive attitudes about the differences between people

Reception	PSED	PD	CL	LD	Maths	EAD	UW
	Continue to play with one or more other children, extending and elaborating play ideas Online Safety: Develop their sense of responsibility and membership of a community Increasingly follow rules, understanding why they are important	Development of Fine and Gross Motor skills	Listen to and talk about selected non fiction to develop a deep familiarity with new knowledge and vocabulary Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen Describe events in some detail	Understand that print has meaning To continue to engage in extended conversations about stories, learning new vocabulary	Continue, copy and create repeating patterns Select, rotate and manipulate shapes to develop spatial reasoning skills Count objects, actions and sounds Compare numbers	Creating collaboratively, sharing ideas, resources and skills. Return to and build on their previous learning, refine ideas and develop ability to represent them. Explore and engage in music making and dance, performing solo or in groups Develop storylines in their pretend play	Show interest in different occupations Comment on images of familiar situations in the past Understand the effects of changing seasons on the natural world around them. Explore the natural world around them Recognise some environments that are different to the one in which they live Online Safety: Continue developing positive attitudes about the differences between people

Key Concepts and Approaches to Computational Thinking in the Early Years

Concepts		Approaches	
Logical Reasoning	anticipating and explaining	Tinkering	playing and exploring
Abstraction	working out what is important and ignoring what is not	Creating	making things, checking things and fixing things
Pattern	comparing and spotting similarities and differences	Collaboration	playing and working cooperatively
Algorithms	instructions and sequencing	Persevering	not giving up
Decomposition	breaking problems down into steps		

Computing Curriculum and Key Vocabulary Overview KS1 needs changing

	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
Year 1	ONLINE SAFETY - Wheatfields Online Safety Rules - Trusted Adults (hand picture) - What to do if you see/hear anything that makes you upset - Keeping personal information private - Photograph permission	Online safety: Online Bullying (PSHE link)	CREATING MEDIA Digital writing VOCAB: Word processor, keyboard, keys, space, backspace, text cursor, toolbar, tools, bold, italic, underline, undo, font, toolbar Online Safety: Privacy & Security from Computing plans Safer Internet Day	PROGRAMMING SCRATCH JR VOCAB: command, sprite, programming, block, program, delete, reset, algorithm, value, debug Online Safety: Self Image and Identity from Computing plans	PROGRAMMING KUBO VOCAB: Forwards, backwards, turn, clear, go, commands , instructions, directions, plan, algorithm , route, program , debug Online safety: Privacy & Security (PSHE link)	CREATING MEDIA Digital Painting VOCAB: Program (App), tools , paintbrush, erase, fill, undo , Online Safety: Online Relationships, Privacy and Security and Managing online Information (PSHE link)
Year 2	PROGRAMMING KUBO Instruction , sequence, algorithm , program , order, commands , route , debugging Online Safety: Wheatfields Online Safety Rules	PROGRAMMING KUBO and Online Safety Online Safety: - Trusted Adults (hand picture) - What to do if you see/hear anything that makes you upset - Keeping personal information private - Photograph permission	COMPUTING SYSTEMS AND NETWORKS Information technology around us Information technology (IT), computer, barcode, scanner/scan Online Safety: Safer Internet Day Health, Wellbeing and lifestyle (Computing link)	DATA AND INFORMATION Pictograms organise, data, object, tally chart, pictogram, attribute, group Online Safety: Privacy and Security computing link)	PROGRAMMING Scratch JR Sequence , command , program , blocks , actions, sprite , modify, match, debug , features Online Safety: Privacy and Security (PSHE link) Online relationships (Recap of trusted adults)	

Chromebooks and iPads are available for the children to use during Continuous Provision and for cross curricular purposes within KS1.