

### Categorising knowledge in computing

### Online safety aspects <u>underlined</u> throughout the document

	Computer science		Information technology					Digital Literacy	
	Coding and computational thinking	Spreadsheets	Internet and email	Art and design	Music	Databases and graphing	Writing and presentation	Communication and networks	Curriculum connections
EYFS	Mathematics Number Numerical patterns			Expressive arts and design  Creating with materials			Literacy  Comprehension/Word reading/writing	Understanding the world  Managing self	
				Being imaginative and expressive					
Milestone outcome									
Year 1	Grouping and sorting Lego builders Maze explorers Coding To understand that an	To collate, edit and store a range of simple content. To name, save and retrieve work and follow instructions to access online	Online safety and exploring Purple Mash  To know the importance of keeping personal information safe. To take ownership of work and save in a private space.	Animated story books  To collate, edit and store a range of simple content.		Pictograms  To collate, edit and store a range of simple content.		Online safety and exploring Purple Mash  Technology outside school  To know what is	
Voor 2	algorithm is a set of instructions used to solve a problem or achieve an objective.  To know an algorithm written for a computer is called a program.  To identify when the steps of an algorithm are out of order.  To write a simple algorithm.  To understand that codes can have unexpected outcomes due to errors.  To read code one line at a time and think about what the code will do.	resources.	Online safety	Creating pictures	Making music	Questioning	Procenting ideas	meant by technology and identify examples in and out of school. To explain when an object uses modern technology. To know the importance of keeping personal information safe. To take ownership of work and save in a private space.	
Year 2	To explain that an algorithm is a set of instructions to complete a task. To design a program being precise with algorithms so	Spreadsheets  To organise simple data using a database.	Online safety  Effective searching  To retrieve relevant content using a search engine.	To use a range of media in digital content including photos, text and sound.	To edit more complex digital data such as music compositions.	To organise simple data using a database.	Presenting ideas  To use a range of media in digital content including photos, text and sound.		



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	that they can be converted into code.  To create a simple program that achieves a purpose.  To identify and correct some errors in code.  To design programs that show awareness of logical steps.  To identify the parts of a program that respond to events and the actions that will occur.	To retrieve specific data for simple searches. To make links between technology, coding and multimedia. To know how things are shared electronically.	To apply effective searching beyond the classroom and share this knowledge. To know the implications of inappropriate online searching. To understand how to reply to email safely. To know how to report inappropriate behaviours and content.	To make links between technology, coding and multimedia. To know how things are shared electronically.	To make links between technology, coding and multimedia. To know how things are shared electronically.	To retrieve specific data for simple searches. To make links between technology, coding and multimedia. To know how things are shared electronically.	To make links between technology, coding and multimedia. To know how things are shared electronically.		
Milestone outcome	Children will know that an algorithm is a set of instructions used by a computer to complete a task. They will be able to create a simple program using algorithms and a logical set of steps.	Children will be able to organise simple databases and run searches on these and given models as well as understanding how these can be shared electronically.	Children will know how to keep personal information safe, how to search and respond to emails safely. They will know one way of reporting any inappropriate behaviours and content.	Children will have used a range of digital media to create pictures and stories and know how to share these electronically.	Children will have created simple music compositions using computers and know how to share these electronically.	Children will be able to organise simple databases and run searches on these and given models as well as understanding how these can be shared electronically.	Children will have used a range of digital media to present writing and know how to share this electronically.	Children will be able to identify a range of modern and older technology in school and in the wider world and explain its uses.	
Year 3	Coding  To turn a simple real-life situation into an algorithm for a program by deconstructing it into parts. To identify errors within code that prevent it from working properly and then fixing it.  To design and code a program that follows a simple sequence.  To understand the use of timer commands.  To understand how variables can store information.  To design a program that has logical, achievable steps To read programs with several steps and predict the outcome.	Spreadsheets  To collect, analyse, evaluate and present data.  To choose the most appropriate software for a given task.	Online safety  Email  To list a range of ways the internet can provide different methods of communication. To respond to emails, open and attach files and use appropriate email conventions. To carry out online searches to find simple digital content. To create purposeful content to attach to emails. To show the importance of having a secure password and the implications of not keeping it safe. To know more than one way of reporting unacceptable content and contact online.			Branching databases  Graphing  To collect, analyse, evaluate and present data. To choose the most appropriate software for a given task.	Touch typing  To show an understanding of effective typing in order to quickly edit and complete documents or enter data.	Simulations  To collect, analyse, evaluate and present data.  To choose the most appropriate software for a given task.	
Year 4	Coding	Spreadsheets  To make improvements to digital solutions	Online safety  Effective search	Animation  To make improvements to	Making music (optional) To make		Writing for different audiences	Hardware investigators  To recognise the	
				digital solutions	improvements to			main component	



	To turn a real-life situation	based on	To know the function,	based on	digital solutions		To make improvements	parts of hardware	
	into an algorithm using	feedback.	features and layout of a	feedback.	based on		to digital solutions based	which allow	
	coding structures for	To make informed	search engine.	To make	feedback.		on feedback.	computers to join	
	selection and repetition.	software choices	To appraise websites for	informed	To make		To make informed	and form networks.	
	To identify errors within	when presenting	credibility and information	software choices	informed		software choices when	To understand that	
	code that prevent it from	information and	at a basic level.	when presenting	software choices		presenting information	the internet can	
	working properly and then	data.	To explore key concepts	information and	when presenting		and data.	provide different	
	fixing it whilst creating	To create and link	related to online safety.	data.	information and		To create and link	methods of	
	algorithms.	content using a	To help others understand	To create and	data.		content using a range of	communication that	
	To write logical uses of	range of software.	the importance of staying	link content using	To create and		software.	are constantly	
	timers in code.	To share content	safe online.	a range of	link content		To share content	improving.	
	To use 'if' statements and	digitally within the	To know a range of ways to	software.	using a range of		digitally within the	iiiipioviiig.	
	combine these with other	school community.	report inappropriate	To share content	software.		school community		
	aspects of code.	School community.	content and contact.	digitally within	To share content		scribbi community		
	To use the values of		content and contact.	the school	digitally within				
					- '				
	variables within code.			community	the school				
	To use inputs and outputs in				community				
	code.								
	To design a program that								
	has logical, achievable steps								
	and uses 'if' statements,								
	repetition and variables.								
	To use step through								
	methods to identify errors in								
	code and correct them.								
Milestone	Children will be able to turn	Children will be	Children will know that	Children will be	Children will	Children will be	Children will be able to	Children will be	
outcome	a real life situation into a	able to choose	there are safe ways of using	able to use a	have created	able to use	effectively touch type	able to choose from	
	simple set of steps that can	from a range of	search engines and emails	software	more complex	graphing	documents. They will	different software	
	be coded. They can use	spreadsheet	and will have shown that	package to	music	software in order	understand how the	packages in order	
	variables, if statements and	software to	they can follow them. They	create a simple	compositions	to input, analyse	internet offers a range	to present a	
	a selection of inputs and		will know several ways of					•	
	•	present their data.		animation. They	using computers	and present data.	of different audiences	simulation of a	
	outputs.	They will be able	reporting any inappropriate	will be able to	and know how		and how work will need	simulation of a problem. They will	
	•	They will be able to link this data		will be able to share this within	and know how to share these		and how work will need to be presented	simulation of a problem. They will know that	
	•	They will be able to link this data across multiple	reporting any inappropriate	will be able to share this within the school	and know how to share these electronically		and how work will need to be presented differently to effectively	simulation of a problem. They will know that computers can join	
	•	They will be able to link this data across multiple documents and	reporting any inappropriate	will be able to share this within	and know how to share these electronically within the		and how work will need to be presented	simulation of a problem. They will know that computers can join together to create	
	•	They will be able to link this data across multiple documents and share this within	reporting any inappropriate	will be able to share this within the school	and know how to share these electronically within the school		and how work will need to be presented differently to effectively	simulation of a problem. They will know that computers can join together to create networks and that	
	•	They will be able to link this data across multiple documents and share this within the school	reporting any inappropriate	will be able to share this within the school	and know how to share these electronically within the		and how work will need to be presented differently to effectively	simulation of a problem. They will know that computers can join together to create networks and that the internet offers	
	•	They will be able to link this data across multiple documents and share this within	reporting any inappropriate	will be able to share this within the school	and know how to share these electronically within the school		and how work will need to be presented differently to effectively	simulation of a problem. They will know that computers can join together to create networks and that the internet offers us a range of	
	•	They will be able to link this data across multiple documents and share this within the school	reporting any inappropriate	will be able to share this within the school	and know how to share these electronically within the school		and how work will need to be presented differently to effectively	simulation of a problem. They will know that computers can join together to create networks and that the internet offers us a range of communication	
	outputs.	They will be able to link this data across multiple documents and share this within the school community.	reporting any inappropriate behaviours and content.	will be able to share this within the school community.	and know how to share these electronically within the school	and present data.	and how work will need to be presented differently to effectively engage them.	simulation of a problem. They will know that computers can join together to create networks and that the internet offers us a range of	
Year 5	•	They will be able to link this data across multiple documents and share this within the school	reporting any inappropriate	will be able to share this within the school	and know how to share these electronically within the school		and how work will need to be presented differently to effectively	simulation of a problem. They will know that computers can join together to create networks and that the internet offers us a range of communication	
Year 5	outputs.  Coding	They will be able to link this data across multiple documents and share this within the school community.	reporting any inappropriate behaviours and content.  Online safety	will be able to share this within the school community.	and know how to share these electronically within the school	and present data.  Databases	and how work will need to be presented differently to effectively engage them.	simulation of a problem. They will know that computers can join together to create networks and that the internet offers us a range of communication	
Year 5	Coding To turn more complex real-	They will be able to link this data across multiple documents and share this within the school community.  Spreadsheets To make	reporting any inappropriate behaviours and content.  Online safety  To understand the value of	will be able to share this within the school community.	and know how to share these electronically within the school	and present data.  Databases  To make	and how work will need to be presented differently to effectively engage them.  Concept maps  To make improvements	simulation of a problem. They will know that computers can join together to create networks and that the internet offers us a range of communication	
Year 5	Coding  To turn more complex real-life situations into	They will be able to link this data across multiple documents and share this within the school community.  Spreadsheets  To make improvements to	reporting any inappropriate behaviours and content.  Online safety  To understand the value of computer networks and are	will be able to share this within the school community.  Game creator  3D modelling	and know how to share these electronically within the school	Databases To make improvements to	and how work will need to be presented differently to effectively engage them.  Concept maps  To make improvements to digital solutions based	simulation of a problem. They will know that computers can join together to create networks and that the internet offers us a range of communication	
Year 5	Coding  To turn more complex reallife situations into algorithms by	They will be able to link this data across multiple documents and share this within the school community.  Spreadsheets  To make improvements to digital solutions	reporting any inappropriate behaviours and content.  Online safety  To understand the value of computer networks and are aware of the range of	will be able to share this within the school community.  Game creator  3D modelling  To make	and know how to share these electronically within the school	Databases  To make improvements to digital solutions	and how work will need to be presented differently to effectively engage them.  Concept maps  To make improvements to digital solutions based on feedback received	simulation of a problem. They will know that computers can join together to create networks and that the internet offers us a range of communication	
Year 5	Coding  To turn more complex reallife situations into algorithms by deconstructing it.	They will be able to link this data across multiple documents and share this within the school community.  Spreadsheets  To make improvements to digital solutions based on feedback	reporting any inappropriate behaviours and content.  Online safety  To understand the value of computer networks and are aware of the range of dangers.	will be able to share this within the school community.  Game creator  3D modelling  To make improvements to	and know how to share these electronically within the school	Databases  To make improvements to digital solutions based on	and how work will need to be presented differently to effectively engage them.  Concept maps  To make improvements to digital solutions based on feedback received and can comment on the	simulation of a problem. They will know that computers can join together to create networks and that the internet offers us a range of communication	
Year 5	Coding  To turn more complex reallife situations into algorithms by deconstructing it. To test and debug programs	They will be able to link this data across multiple documents and share this within the school community.  Spreadsheets  To make improvements to digital solutions based on feedback received and can	Computer networks and are aware of the range of dangers. To recognise personal	will be able to share this within the school community.  Game creator  3D modelling  To make improvements to digital solutions	and know how to share these electronically within the school	Databases  To make improvements to digital solutions based on feedback received	and how work will need to be presented differently to effectively engage them.  Concept maps  To make improvements to digital solutions based on feedback received and can comment on the success of the solution.	simulation of a problem. They will know that computers can join together to create networks and that the internet offers us a range of communication	
Year 5	Coding  To turn more complex reallife situations into algorithms by deconstructing it. To test and debug programs whilst creating them and to	They will be able to link this data across multiple documents and share this within the school community.  Spreadsheets  To make improvements to digital solutions based on feedback received and can comment on the	Online safety  To understand the value of computer networks and are aware of the range of dangers. To recognise personal information and explain	will be able to share this within the school community.  Game creator  3D modelling  To make improvements to digital solutions based on	and know how to share these electronically within the school	Databases  To make improvements to digital solutions based on feedback received and can comment	and how work will need to be presented differently to effectively engage them.  Concept maps  To make improvements to digital solutions based on feedback received and can comment on the success of the solution. To review solutions from	simulation of a problem. They will know that computers can join together to create networks and that the internet offers us a range of communication	
Year 5	Coding  To turn more complex reallife situations into algorithms by deconstructing it. To test and debug programs whilst creating them and to use logical methods to	They will be able to link this data across multiple documents and share this within the school community.  Spreadsheets  To make improvements to digital solutions based on feedback received and can comment on the success of the	Online safety  To understand the value of computer networks and are aware of the range of dangers. To recognise personal information and explain how it should be kept safe.	will be able to share this within the school community.  Game creator  3D modelling  To make improvements to digital solutions based on feedback	and know how to share these electronically within the school	Databases  To make improvements to digital solutions based on feedback received and can comment on the success of	and how work will need to be presented differently to effectively engage them.  Concept maps  To make improvements to digital solutions based on feedback received and can comment on the success of the solution. To review solutions from others.	simulation of a problem. They will know that computers can join together to create networks and that the internet offers us a range of communication	
Year 5	Coding  To turn more complex reallife situations into algorithms by deconstructing it. To test and debug programs whilst creating them and to use logical methods to identify bugs with some	They will be able to link this data across multiple documents and share this within the school community.  Spreadsheets  To make improvements to digital solutions based on feedback received and can comment on the success of the solution.	online safety  To understand the value of computer networks and are aware of the range of dangers. To recognise personal information and explain how it should be kept safe. To search with greater	will be able to share this within the school community.  Game creator  3D modelling  To make improvements to digital solutions based on feedback received and can	and know how to share these electronically within the school	Databases  To make improvements to digital solutions based on feedback received and can comment on the success of the solution.	and how work will need to be presented differently to effectively engage them.  Concept maps  To make improvements to digital solutions based on feedback received and can comment on the success of the solution. To review solutions from others. To collaboratively create	simulation of a problem. They will know that computers can join together to create networks and that the internet offers us a range of communication	
Year 5	Coding  To turn more complex reallife situations into algorithms by deconstructing it. To test and debug programs whilst creating them and to use logical methods to	They will be able to link this data across multiple documents and share this within the school community.  Spreadsheets  To make improvements to digital solutions based on feedback received and can comment on the success of the solution. To review	Online safety  To understand the value of computer networks and are aware of the range of dangers. To recognise personal information and explain how it should be kept safe. To search with greater complexity when using a	will be able to share this within the school community.  Game creator  3D modelling  To make improvements to digital solutions based on feedback received and can comment on the	and know how to share these electronically within the school	Databases  To make improvements to digital solutions based on feedback received and can comment on the success of the solution. To review	and how work will need to be presented differently to effectively engage them.  Concept maps  To make improvements to digital solutions based on feedback received and can comment on the success of the solution. To review solutions from others. To collaboratively create content and solutions	simulation of a problem. They will know that computers can join together to create networks and that the internet offers us a range of communication	
Year 5	Coding  To turn more complex reallife situations into algorithms by deconstructing it. To test and debug programs whilst creating them and to use logical methods to identify bugs with some	They will be able to link this data across multiple documents and share this within the school community.  Spreadsheets  To make improvements to digital solutions based on feedback received and can comment on the success of the solution.	online safety  To understand the value of computer networks and are aware of the range of dangers. To recognise personal information and explain how it should be kept safe. To search with greater	will be able to share this within the school community.  Game creator  3D modelling  To make improvements to digital solutions based on feedback received and can	and know how to share these electronically within the school	Databases  To make improvements to digital solutions based on feedback received and can comment on the success of the solution.	and how work will need to be presented differently to effectively engage them.  Concept maps  To make improvements to digital solutions based on feedback received and can comment on the success of the solution. To review solutions from others. To collaboratively create	simulation of a problem. They will know that computers can join together to create networks and that the internet offers us a range of communication	



	Computing Curriculum -	- Categorising Ki	lowledge					Primary School
	To write algorithms that use	To collaboratively	To have a secure knowledge	To review	To collaboratively	solutions when		
	sequence, selection and	create content and	of common online safety	solutions from	create content	completed.		
	repetition.	solutions and	rules.	others.	and solutions and	-		
	To combine these	share these	To demonstrate this	To collaboratively	share these			
	algorithms with other	solutions when	knowledge by using	create content	solutions when			
	aspects of code.	completed.	different technologies and	and solutions and	completed.			
	To design code that is	completed.	online services.	share these	completed.			
	_		To implicitly relate					
	structured so debugging and			solutions when				
	interpreting are easier.		appropriate online	completed.				
			behaviour to personal					
			privacy and the wellbeing of					
			<u>others.</u>					
Year 6	Coding	Spreadsheets	Online safety			Quizzing	Networks	
	Text adventures	To make clear	To apply filters when			Blogging	To explain in depth	
		connections to the	searching for digital				the difference	
	To turn more complex real-	audience when	content.			To make clear	between the	
	life situations into	creating and	To explain how credible a			connections to the	internet and the	
	algorithms by identifying	designing digital	webpage is and the			audience when creating	World Wide Web.	
	important aspects of the		information it contains.			and designing digital	To know what a	
	1 7	content.						
	task and decomposing them	To use criteria to	To compare a range of			content.	WAN and a LAN are	
	into possible coding	evaluate the	digital content sources and			To design and create a	and can explain how	
	structures.	quality of a digital	rate them.			blog to become a	the internet is	
	To test and debug programs	solution and	To use critical thinking skills			content creator.	accessed in school.	
	whilst creating them and to	identify	in use of online			To use criteria to		
	use logical methods to	improvements and	communication.			evaluate the quality of a		
	identify bugs without	make refinements.				digital solution and		
	support.					identify improvements		
	To create designs that					and make refinements.		
	include sequence, selection							
	and repetition into code.							
	To use nesting structures							
	within code.							
	To use a variety of variables,							
	outputs such as sound and							
	movement and use inputs							
	from the user.							
	To interpret programs in							
	parts and make logical							
	attempts to separate them							
	to explain a complex							
	algorithm.							
Milestone	Children will be able to turn	Children will be	Children will know that	Children will be	Children will be	Children will be able to	Children will	
Outcome	a real life situation into a	able to create	webpages do not have the	able to create a	able to create a	create a concept map,	understand the	
	complicated algorithm by	complex	same level of credibility	game and a 3D	complex database	quiz and a blog entry.	difference between	
	decomposing the problem	databases. They	and this can vary. They will	model using a	using a software	They will be able to	a LAN and a WAN	
		-		_	~			
	into a coding structure.	will be able to	understand how they can	software	package. They	evaluate how effective	and explain how	
	They will be able to create	evaluate how	check this credibility as well	package. They	will be able to	this solution was as well	the internet is	
	designs that follow these	effective this	as ranking these webpages	will be able to	evaluate how	as the solutions of	accessed in school.	
	steps including nesting	solution was as	by their trustworthiness.	evaluate how	effective this	others. They will		
	structures, variables and a	well as the	Children will know that	effective this	solution was as	understand how they		
	wide selection of inputs and	solutions of	there are a variety of ways	solution was as	well as the	can make		
	outputs.	others. They will	to report inappropriate	well as the	solutions of	improvements and		
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Ī		understand how	content and behaviour and	solutions of	others. They will	refinements to this	
		they can make	that they should use their	others. They will	understand how	solution	
		improvements	critical thinking skills to	understand how	they can make		
		and refinements	avoid putting themselves in	they can make	improvements		
		to this solution.	danger.	improvements	and refinements		
				and refinements	to this solution		
				to this solution			

This overview organises the curriculum into our main categorises to support the children with making important learning connections and support with building subject schema. If you would like further detail regarding this curriculum area please e-mail your enquiry to:

<u>admin@rivermead.wokingham.sch.uk</u> with the subject "Computing Curriculum enquiry FAO Curriculum and Computing leader"