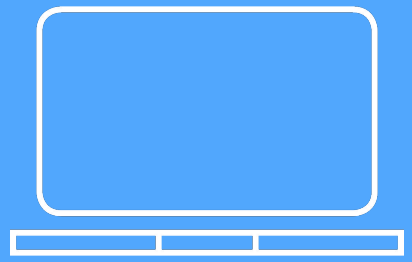
Computing



Kapow Primary™

National curriculum mapping

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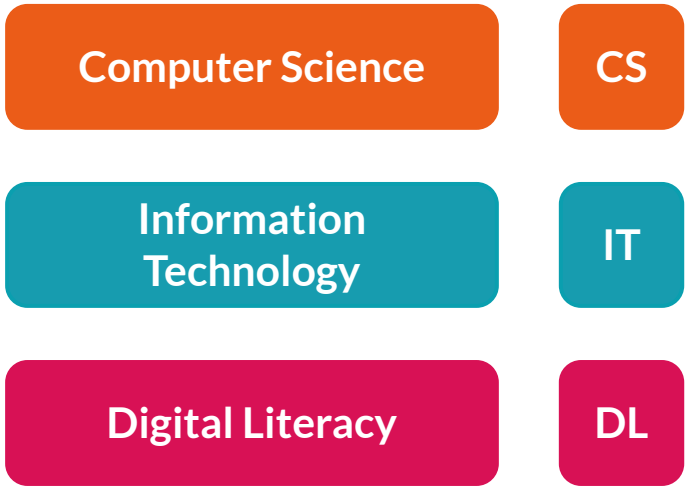
Introduction

Kapow Primary offers full coverage of the KS1 and KS2 Computing curriculum, including EYFS.
We have categorised our content into three strands:



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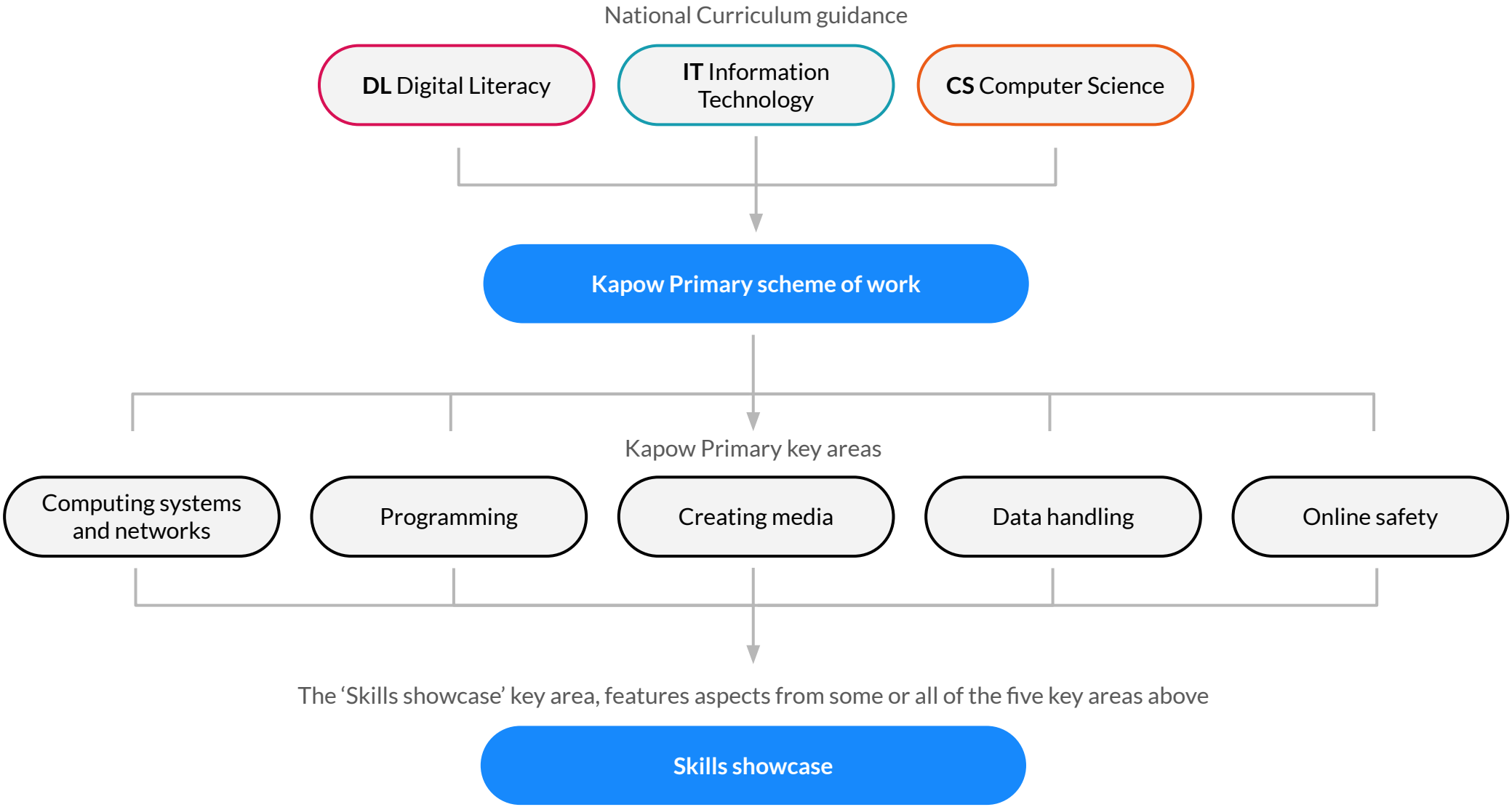
How is the Computing scheme of work organised?



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Early years outcomes in Kapow Primary's units

Early Years Foundation Stage Kapow Primary's units	Early years outcomes: Prime Areas Development Matters 2021 statements Early Learning Goals	Early years outcomes: Specific Areas Development Matters 2021 statements Early Learning Goals	Characteristics of effective learning
Computing systems and networks 1: Using a computer	**Physical Development** -Develop their small motor skills so that they can use a range of tools competently, safely and confidently.	**Literacy** -Spell words by identifying the sounds and then writing the sounds with letter/s. -Re-read what they have written to check that it makes sense. **Mathematics** -Link the number symbol (numeral) with its cardinal number value.	✓ Playing and Exploring ✓ Active Learning
Programming 1: All about instructions	**Communication and Language** -Understand how to listen carefully and why listening is important. -Describe events in some detail. -Use talk to help work our problems and organise thinking and activities, and to explain how things work and why they might happen. **Personal, Social and Emotional Development** **-ELG**: Self-Regulation> Give focused attention to what the teacher says, responding appropriately even when engaged in activity, and show an ability to follow instructions involving several ideas or actions. **-ELG**: Managing Self> Be confident to try new activities and show independence, resilience and perseverance in the face of challenge. **-ELG**: Building Relationships> Work and play cooperatively and take turns with others. **Physical Development** -Know and talk about the different factors that support their overall health and wellbeing. -Further develop the skills they need to manage the school day successfully.		✓ Active Learning ✓ Creating and Thinking Critically

Early years outcomes in Kapow Primary's units

Early Years Foundation Stage Kapow Primary's units	Early years outcomes: Prime Areas Development Matters 2021 statements Early Learning Goals	Early years outcomes: Specific Areas Development Matters 2021 statements Early Learning Goals	Characteristics of effective learning
Computing systems and networks 2: Exploring hardware	**Communication and Language** -Learn new vocabulary. -Use new vocabulary throughout the day. -Ask questions to find out more and to check they understand what has been said to them. -Articulate their thoughts and ideas in well-formed sentences. -Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen. **Personal, Social and Emotional Development** -See themselves as a valuable individual **Physical Development** -Develop their small motor skills so that they can use a range of tools competently, safely and confidently. -Confidently and safely use a range of large and small apparatus indoors and outside, alone and in a group.	**Literacy** -Spell words by identifying the sounds and then writing the sounds with letter/s. -Write short sentences with known letter-sound correspondences using a capital and full stop. **Understanding the World** -Describe what they see, hear and feel whilst outside.	✓ Playing and Exploring ✓ Active Learning
Programming 2: Programming Bee-Bots	**Personal, Social and Emotional Development** **-ELG**: Managing Self> Be confident to try new activities and show independence, resilience and perseverance in the face of challenge.	**Mathematics** -Count objects, actions and sounds. -Link the number symbol (numeral) with its cardinal number value. -Count beyond 10.	✓ Playing and Exploring ✓ Active Learning ✓ Creating and Thinking Critically

Early years outcomes in Kapow Primary's units

Early Years Foundation Stage Kapow Primary's units	Early years outcomes: Prime Areas **Development Matters 2021 statements** Early Learning Goals	Early years outcomes: Specific Areas **Development Matters 2021 statements** Early Learning Goals	Characteristics of effective learning
Data handling: Introduction to data	**Communication and Language** -Articulate their thoughts and ideas in well-formed sentences. -Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen. **-ELG**: Listening, Attention and Understanding> Listen attentively and respond to what they hear with relevant questions, comments and actions when being read to and during whole class discussions and small group interactions. **-ELG**: Listening, Attention and Understanding> Make comments about what they have heard and ask questions to clarify their understanding. **-ELG**:Speaking> Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary.	**Mathematics** **-ELG**:Numerical Patterns> Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. -Count objects, actions and sounds. -Subitise. -Count beyond 10. -Compare numbers. -Understand the 'one more than/ one less than' relationship between consecutive numbers. -Continue, copy and create repeating patterns. -Compare length, weight and capacity.	✓ Playing and Exploring ✓ Active Learning ✓ Creating and Thinking Critically

National Curriculum by Kapow Primary's themes and units

Key stage 1 - National Curriculum computing subject content:	Kapow Primary's computing strands	Kapow Primary topics Key stage 1 - **Year 1**						
		*Programming 2: Bee-Bot	*Programming 1: Algorithms unplugged	Creating media: Digital imagery	*Data handling: Introduction to data	Skills showcase: Rocket to the moon	*Computing systems and networks: Improving mouse skills	Online safety: Year 1
Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions	CS	✔	✔					
Create and debug simple programs	CS	✔	✔					
Use logical reasoning to predict the behaviour of simple programs	CS	✔		✔				
Use technology purposefully to create, organise, store, manipulate and retrieve digital content	DL			✔	✔	✔	✔	
Recognise common uses of information technology beyond school	IT			✔	✔		✔	✔
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	DL			✔			✔	✔

*Units that are included in the condensed curriculum

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National Curriculum by Kapow Primary's themes and units

Key stage 1 - National Curriculum computing subject content:	Kapow Primary's computing strands	Kapow Primary topics Key stage 1 - **Year 2**						
		*Computing systems and networks 1: What is a computer?	Programming 2: ScratchJr	*Programming 1: Algorithms and debugging	*Data handling: International Space Station	*Online Safety: Year 2	Computing systems and networks 2: Word processing	Creating media: Stop motion using tablet devices
Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions	CS	✔	✔	✔	✔			
Create and debug simple programs	CS		✔	✔				
Use logical reasoning to predict the behaviour of simple programs	CS		✔	✔				
Use technology purposefully to create, organise, store, manipulate and retrieve digital content	DL		✔		✔	✔	✔	✔
Recognise common uses of information technology beyond school	IT	✔				✔		✔
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	DL					✔	✔	

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National Curriculum by Kapow Primary's themes and units

Key stage 2 - National Curriculum computing subject content:	Kapow Primary's computing strands	Kapow Primary topics Lower key stage 2 - Year 3						
		*Computing systems and networks 3: Journey inside a computer	*Programming: Scratch	Computing systems and networks 2: Emailing	*Computing systems and networks 1: Networks and the internet	Online safety: Year 3	*Creating media: Video trailers	Data handling: Comparison cards databases
Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts	CS	✔	✔					
Use sequence, selection, and repetition in programs; work with variables and various forms of input and output	CS		✔					
Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs	CS	✔	✔					
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	DL IT	✔		✔	✔	✔		

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National Curriculum by Kapow Primary's themes and units

Key stage 2 - National Curriculum computing subject content:	Kapow Primary's computing strands	Kapow Primary topics Lower key stage 2 - **Year 3**						
		*Computing systems and networks 3: Journey inside a computer	*Programming: Scratch	*Computing systems and networks 1: Networks and the internet	Online safety: Year 3	*Creating media: Video trailers	Computing systems and networks 2: Emailing	Data handling: Comparison cards databases
Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content	DL IT		✔	✔	✔	✔		
Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information	CS IT		✔	✔		✔	✔	✔
Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact	DL				✔		✔	

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National Curriculum by Kapow Primary's themes and units

Key stage 2 - National Curriculum computing subject content:	Kapow Primary's computing strands	Kapow Primary topics Lower key stage 2 - Year 4						
		*Skills showcase: HTML	*Programming 2: Computational thinking	*Programming 1: Further coding with Scratch	Data handling: Investigating weather	*Computing systems and networks: Collaborative learning	Creating media: Website design	Online safety: Year 4
Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts	CS	✔	✔	✔				
Use sequence, selection, and repetition in programs; work with variables and various forms of input and output	CS	✔	✔	✔	✔			
Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs	CS	✔	✔	✔				
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	DL IT					✔		

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National Curriculum by Kapow Primary's themes and units

Key stage 2 - National Curriculum computing subject content:	Kapow Primary's computing strands	Kapow Primary topics Lower key stage 2 - **Year 4**						
		*Skills showcase: HTML	*Programming 2: Computational thinking	*Programming 1: Further coding with Scratch	Data handling: Investigating weather	*Computing systems and networks: Collaborative learning	Creating media: Website design	Online safety: Year 4
Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content	DL IT						✔	✔
Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information	CS IT	✔	✔	✔	✔	✔	✔	
Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact	DL	✔			✔		✔	✔

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National Curriculum by Kapow Primary's themes and units

Key stage 2 - National Curriculum computing subject content:	Kapow Primary's computing strands	Kapow Primary topics Upper key stage 2 - **Year 5**						
		Programming 2: Micro:bit	*Programming 1: Music - Sonic Pi	Creating media: Stop motion animation - Stop Motion Studio	*Computing systems and networks: Search engines	*Data handling: Mars Rover 1	*Online safety 5	Skills showcase: Mars Rover 2
Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts	CS	✔	✔	✔				
Use sequence, selection, and repetition in programs; work with variables and various forms of input and output	CS	✔	✔	✔				
Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs	CS	✔	✔					
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	DL IT	✔			✔	✔		

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National Curriculum by Kapow Primary's themes and units

Key stage 2 - National Curriculum computing subject content:	Kapow Primary's computing strands	Kapow Primary topics Upper key stage 2 - **Year 5**						
		Programming 2: Micro:bit	*Programming 1: Music - Sonic Pi	Creating media: Stop motion animation - Stop Motion Studio	*Computing systems and networks: Search engines	*Data handling: Mars Rover 1	*Online safety 5	Skills showcase: Mars Rover 2
Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content	DL IT				✔		✔	
Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information	CS IT	✔	✔			✔	✔	✔
Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact	DL				✔		✔	

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National Curriculum by Kapow Primary's themes and units

Key stage 2 - National Curriculum computing subject content:	Kapow Primary's computing strands	Kapow Primary topics Upper key stage 2 - **Year 6**						
		*Programming: Intro to Python	Skills showcase: Inventing a product	*Computing systems and networks: Bletchley Park	*Data handling: Big Data 1	Online safety: Year 6	*Creating media: History of computers	Data handling 1: Big data 2
Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts	CS	✔	✔					
Use sequence, selection, and repetition in programs; work with variables and various forms of input and output	CS	✔	✔					
Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs	CS	✔	✔					
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	DL IT		✔	✔	✔	✔	✔	

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National Curriculum by Kapow Primary's themes and units

Key stage 2 - National Curriculum computing subject content:	Kapow Primary's computing strands	Kapow Primary topics Upper key stage 2 - Year 6						
		*Programming: Intro to Python	Skills showcase: Inventing a product	*Computing systems and networks: Bletchley Park	*Data handling: Big Data 1	Online safety: Year 6	*Creating media: History of computers	Data handling 1: Big data 2
Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content	DL IT		✔	✔		✔		
Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information	CS IT	✔	✔	✔	✔		✔	
Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact	DL		✔	✔	✔	✔		

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