



Ropsley's Computing Curriculum

“If we teach today as we taught yesterday, we rob our children of tomorrow.” John Dewey (*philosopher, psychologist, and educational reformer*)

We flourish in Computing because:

We believe computing is an integral part of our everyday life and will play an immeasurable part in our children's futures. We aim to provide all of our children with the skills to remain safe, be creative and enthusiastic life-long learners who can live and flourish in a world increasingly dependent on computing.

‘Computational thinking is a skill ALL children must master if they are to be ready for the workplace and able to participate effectively in this digital world.

Our computing curriculum is split up into four sections: Digital literacy, Technology in the world, Technical understanding and online safety.

When designing our computing curriculum, we identified key concepts which run throughout our curriculum. These concepts help both teachers and children to group important knowledge into more manageable units which helps to draw out the links between ideas and processes as children progress through school.

Online Safety	Unit 1.1 Online Safety & Exploring Purple Mash Unit 2.2 Online Safety Unit 3.2 Online safety Unit 4.2 Online Safety Unit 5.2 Online safety Unit 6.2 Online safety
Digital Literacy	Unit 1.9 Technology outside school Unit 2.5 Effective Searching Unit 3.5 Email (Inc. email safety) Unit 4.7 Effective Search
Information technology	Unit 1.3 Pictograms Unit 1.6 Animated Story Books Unit 1.8 Spreadsheets Unit 2.3 Spreadsheets Unit 2.4 Questioning Unit 2.6 Creating Pictures

	Unit 2.7 Making Music Unit 2.8 Presenting Ideas Unit 3.3 Spreadsheets Unit 3.6 Branching Databases Unit 3.7 Simulations Unit 3.8 Graphing Unit 4.3 Spreadsheets Unit 4.4 Writing for Different Audiences Unit 4.6 Animation Unit 5.3 Spreadsheets Unit 5.4 Databases Unit 5.6 3D Modelling Unit 6.3 Spreadsheets Unit 6.7 Quizzing
Computer Science	Unit 1.4 Lego Builders Unit 1.2 Grouping & Sorting Unit 1.7 Coding Unit 2.1 Coding Unit 1.5 Maze Explorers Unit 3.1 Coding Unit 4.1 Coding Unit 4.5 Logo Unit 4.8 Hardware Investigators

Coding Breakdown YEAR 3 & 4 - CYCLE A

Using Flowcharts Unit 3.1, Lesson 1	Using Timers Unit 3.1, Lesson 2	'if' statements Unit 4.1, Lesson 2	Coordinates Unit 4.1, Lesson 3	Code, Test and Debug – Unit 3.1, Lesson 4	Design, Code, Test and Debug Unit 4.1, Lesson 1
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YEAR 3 & 4 - CYCLE B

Using Repeat Unit 3.1, Lesson 3	Repeat Until and 'if/else' Statements Unit 4.1, Lesson 4	Number Variables Unit 4.1, Lesson 5	Design and Make an Interactive scene Unit 3.1, Lesson 5-6	Making a Playable game – Unit 4.1, Lesson 6
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Coding Breakdown YEAR 5 & 6 - CYCLE A

Coding Efficiently Unit 5.1, Lesson 1	Simulating a physical system Unit 5.1, Lesson 2	Friction and Functions Unit 5.1, Lesson 4	Introducing Strings Unit 5.1, Lesson 5	Text Variable and Concatenation Unit 5.1, Lesson 6	User Input Unit 6.1, Lesson 5
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YEAR 5 & 6 - CYCLE B

Designing and writing a more complex program Unit 6.1, Lessons 1 & 2	Decomposition and Abstraction Unit 5.1, Lesson 3	Using Functions Unit 6.1, Lesson 3	Flowcharts and control simulations Unit 6.1, Lesson 4	Text Adventure Unit 6.1, Lesson 6
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Cycle A

	Autumn Term		Spring Term		Summer Term	
EYFS (One year cycle)	The scheme for Early Years shows opportunities for using Mini Mash or Purple Mash as part of the Early Years classroom to support children in working towards early learning goals.					
Y1/2	Unit 1.1 Online Safety & Exploring Purple Mash Number of lessons – 4 Programs – Various Unit 2.5 Effective Searching Number of lessons – 3 Programs – Browser	Unit 1.4 Lego Builders Number of lessons – 3 Programs – 2DIY Unit 1.9 Technology outside school Number of lessons – 2 Programs – Various	Unit 1.2 Grouping & Sorting Number of lessons – 2 Programs – 2DIY Unit 2.6 Creating Pictures Number of lessons – 5 Programs – 2PaintAPicture	Unit 1.8 Spreadsheets Number of lessons – 3 Programs – 2Calculate	Unit 1.7 Coding Number of lessons – 6 Programs – 2Code	Unit 2.1 Coding Number of lessons – 5 Programs – 2Code
Y3/4	Unit 3.1 Coding Number of lessons – 6 Main Programs – 2Code See table below for breakdown.	Unit 3.2 Online safety Number of lessons – 3 Programs – Various Unit 3.3 Spreadsheets Number of lessons – 3 Programs – 2Calculate	Unit 3.5 Email (including email safety) Number of lessons – 6 Programs – 2Email, 2Connect, 2DIY	Unit 3.6 Branching Databases Number of lessons – 4 Programs – 2Question	Unit 3.7 Simulations Number of lessons – 3 Programs – 2Simulate, 2Publish	Unit 3.8 Graphing Number of lessons – 3 Programs – 2Graph
Y5/6	Unit 5.1 Coding Number of lessons – 6 Main Programs – 2Code See table below for breakdown.	Unit 5.3 Spreadsheets Number of lessons – 6 Programs – 2Calculate	Unit 5.2 Online safety Number of lessons – 3 Programs – Various Unit 5.7 Concept Maps Number of lessons – 4 Programs – 2Connect	Unit 5.4 Databases Number of lessons – 4 Programs – 2Question, 2Investigate	Unit 5.6 3D Modelling Number of lessons – 4 Programs – 2Design and Make	Unit 5.5 Game Creator Number of lessons – 5 Programs – 2DIY 3D

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1/2 Cycle A First Unit of the Term	Unit 1.1 Online Safety & Exploring Purple Mash Enquiry Question: How can I stay safe online?	Unit 1.4 Lego Builders Enquiry Question: What happens if you don't follow instructions?	Unit 1.2 Grouping and Sorting Enquiry Question: What happens if you don't follow instructions?	Unit 1.8 Spreadsheets Enquiry Question: What is a spreadsheet?	Unit 1.7 Coding Enquiry Question: Can I make a computer do what it's told?	Unit 2.1 Coding Enquiry Question: How do I get rid of a computer bug?
	Builds on: Learning in the EYFS.	Alongside: Unit 1.1 Coding Unit 1.5 Maze builders	Alongside: Unit 1.3 Pictograms	Alongside: Unit 1.3 Pictograms	Alongside: Unit 1.4 Lego Builders Unit 1.5 Maze builders	Alongside: Unit 1.1 Coding Unit 1.4 Lego Builders Unit 1.5 Maze builders
	Future Learning: Unit 2.2 Online Safety Unit 3.2 Online safety Unit 4.2 Online Safety Unit 5.2 Online safety Unit 6.2 Online safety	Future Learning: Unit 2.1 Coding Unit 2.4 Questioning Unit 3.1 Coding Unit 3.6 Branching Databases Unit 4.1 Coding Unit 4.5 Logo Unit 4.6 Animation	Future Learning: Unit 2.4 Questioning Unit 3.6 Branching Databases Unit 3.8 Graphing Unit 5.4 Databases	Future Learning: Unit 3.3 Spreadsheets Unit 3.8 Graphing Unit 4.3 Spreadsheets Unit 5.4 Databases Unit 6.3 Spreadsheets Unit 6.9 Spreadsheets	Future Learning: Unit 2.1 Coding Unit 2.4 Questioning Unit 3.1 Coding Unit 3.6 Branching Databases Unit 4.1 Coding Unit 4.5 Logo Unit 4.6 Animation Unit 5.1 Coding Unit 6.1 Coding Unit 6.5 Text Adventures Unit 6.8 Binary	Future Learning: Unit 2.4 Questioning Unit 3.1 Coding Unit 3.6 Branching Databases Unit 4.1 Coding Unit 4.5 Logo Unit 4.6 Animation Unit 5.1 Coding Unit 6.1 Coding Unit 6.5 Text Adventures Unit 6.8 Binary
Year 1/2 Cycle A Second Unit of the Term	Unit 2.5 Effective Searching Enquiry Question: What is a browser and how can I find what I need online?	Unit 1.9 Technology outside school Enquiry Question: Which colours can you make?	Unit 2.6 Creating Pictures Enquiry Question: How can we use a computer to make art?			
	Builds on: Unit 1.1 Online Safety and Exploring Purple Mash	Builds on: Learning in the EYFS.	Alongside: Unit 1.6 Animated Story Books			
	Future Learning: Unit 2.2 Online Safety Unit 3.2 Online safety Unit 4.7 Effective Searching Unit 5.2 Online Safety Unit 5.8 Word Processing Unit 6.2 Online Safety Unit 6.8 Networks	Future Learning: Unit 3.5 E-mail Unit 3.7 Simulations Unit 4.7 Effective Searching Unit 4.8 Hardware Investigators Unit 6.4 Blogging Unit 6.6 Networks	Future Learning: Unit 4.6 Animation Unit 5.5 Game Creator Unit 5.6 3D Modelling Unit 6.5 Text Adventures			

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 3/4 Cycle A First Unit of the Term	Unit 3.1 Coding Enquiry Question: How can I make my computer wait?	Unit 3.2 Online Safety Enquiry Question: How do I keep my password safe?	Unit 3.5 E-mail (including e-mail safety) Enquiry Question: Can I write an E-mail?	Unit 3.6 Branching Databases Enquiry Question: Can I sort information faster than my teacher?	Unit 3.7 Simulations Enquiry Question: Let's try it out first!	Unit 3.8 Graphing Enquiry Question: Can a graph help me solve it?
	Builds on: Unit 1.1 Coding Unit 1.4 Lego Builders Unit 1.5 Maze builders Unit 2.1 Coding Unit 2.4 Questioning	Builds On: Unit 1.1 Online Safety and Exploring Purple Mash Unit 1.6 Technology outside School Unit 2.2 Online Safety Unit 2.5 Effective Searches	Builds On: Unit 3.5 E-mail Unit 4.2 Online Safety Unit 4.7 Effective Searching Unit 5.2 Online Safety	Builds On: Unit 1.2 Grouping & Sorting Unit 1.3 Pictograms Unit 2.3 Spreadsheets Unit 2.4 Questioning	Builds On: Unit 1.1 Coding Unit 1.6 Technology outside School Unit 2.1 Coding	Builds On: Unit 1.2 Grouping & Sorting Unit 1.3 Pictograms Unit 2.3 Spreadsheets Unit 2.4 Questioning Unit 3.6 Branching Databases
	Future Learning: Unit 3.6 Branching Databases Unit 4.1 Coding Unit 4.5 Logo Unit 4.6 Animation Unit 5.1 Coding Unit 6.1 Coding Adventures Unit 6.5 Text Unit 6.8 Binary	Future Learning: Unit 3.5 E-mail Unit 4.2 Online Safety Unit 4.7 Effective Searching Unit 5.2 Online Safety Unit 5.8 Word Processing Unit 6.2 Online Safety Unit 6.4 Blogging	Future Learning: Unit 4.2 Online Safety Unit 4.7 Effective Searching Unit 5.2 Online Safety Unit 6.2 Online Safety Unit 6.4 Blogging	Future Learning: Unit 3.8 Graphing Unit 4.3 Spreadsheets Unit 5.4 Databases Unit 6.7 Quizzing Unit 6.9 Spreadsheets	Future Learning: Unit 4.1 Coding Unit 5.1 Coding Unit 6.1 Coding	Future Learning: Unit 4.3 Spreadsheets Unit 5.3 Spreadsheets Unit 6.9 Spreadsheets
Year 3/4 Cycle A Second Unit of the Term		Unit 3.3 Spreadsheets Enquiry Question: What is > ?				
		Builds on: Unit 1.3 Pictograms Unit 1.8 Spreadsheets Unit 2.3 Spreadsheets Unit 2.4 Questioning				
		Future Learning: Unit 3.8 Graphing Unit 4.3 Spreadsheets Unit 5.3 Spreadsheets Unit 5.4 Databases Unit 6.3 Spreadsheets Unit 6.9 Spreadsheets				

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 5/6 Cycle A First Unit of the Term	Unit 5.1 Coding Enquiry Question: Red, amber, green.	Unit 5.3 Spreadsheets Enquiry Question: What are formulae?	Unit 5.2 Online Safety Enquiry Question: How do I protect my privacy?	Unit 5.4 Databases Enquiry Question: Can I make my own database?	Unit 5.6 3D Modelling Enquiry Question: How can I create a 3D Model?	Unit 5.5 Game Creator Enquiry Question: What sort of game will you make?
	Builds on: Unit 1.1 Coding Unit 1.4 Lego Builders Unit 1.5 Maze builders Unit 2.1 Coding Unit 2.4 Questioning Unit 3.1 Coding Unit 3.6 Branching Databases Unit 4.1 Coding Unit 4.5 Logo Unit 4.6 Animation	Builds On: Unit 1.3 Pictograms Unit 1.8 Spreadsheets Unit 2.3 Spreadsheets Unit 2.4 Questioning Unit 3.3 Spreadsheets Unit 3.8 Graphing Unit 4.3 Spreadsheets	Builds On: Unit 1.1 Coding Unit 1.6 Technology outside School Unit 2.2 Online Safety Unit 2.5 Effective Searches Unit 3.2 Online Safety Unit 3.5 E-mail Unit 4.2 Online Safety Unit 4.7 Effective Searching	Builds On: Unit 1.2 Grouping & Sorting Unit 1.3 Pictograms Unit 2.3 Spreadsheets Unit 2.4 Questioning Unit 3.3 Spreadsheets Unit 3.6 Branching Databases Unit 3.8 Graphing Unit 4.3 Spreadsheets	Builds On: Unit 1.1 Coding Unit 1.6 Technology outside School Unit 2.6 Creating Pictures Unit 4.6 Animation	Builds On: Unit 1.1 Coding Unit 1.6 Technology outside School Unit 2.6 Creating Pictures Unit 2.7 Making Music Unit 4.6 Animation Unit 4.9 Making Music
	Future Learning: Unit 6.1 Coding Unit 6.5 Text Adventures Unit 6.8 Binary	Future Learning: Unit 5.4 Databases Unit 6.3 Spreadsheets Unit 6.9 Spreadsheets	Future Learning: Unit 5.2 Online Safety Unit 5.8 Word Processing Unit 6.2 Online Safety Unit 6.4 Blogging	Future Learning: Unit 6.7 Quizzing Unit 6.9 Spreadsheets	Future Learning: Unit 5.5 Game Creator	Future Learning: Unit 6.5 Text Adventures
Year 5/6 Cycle A Second Unit of the Term			Unit 5.7 Concept Maps Enquiry Question: How and why should I use a concept map?			
			Builds On: Unit 1.6 Technology outside School Unit 2.6 Presenting Ideas			

			Unit 4.4 Writing for different audiences			
			Future Learning: Unit 5.8 Word Processing Unit 6.4 Blogging Unit 6.5 Text Adventures			

Cycle B

	Autumn Term	Spring Term		Summer Term		
EYFS (One year cycle)	The scheme for Early Years shows opportunities for using Mini Mash or Purple Mash as part of the Early Years classroom to support children in working towards early learning goals.					
Y1/2	Unit 1.1 Online Safety & Exploring Purple Mash Number of lessons – 4 Programs – Various Unit 1.5 Maze Explorers Number of lessons – 3 Programs – 2Go	Unit 2.4 Questioning Number of lessons – 5 Programs – 2Question, 2Investigate	Unit 2.2 Online Safety Number of lessons – 3 Programs – Various Unit 2.7 Making Music Number of lessons – 3 Programs – 2Sequence	Unit 1.6 Animated Story Books Number of lessons – 5 Programs – 2Create A Story	Unit 1.3 Pictograms Number of lessons – 3 Programs – 2Count Unit 2.8 Presenting Ideas Number of lessons – 4 Programs – Various	Unit 2.3 Spreadsheets Number of lessons – 4 Programs – 2Calculate
Y3/4	Unit 4.1 Coding Number of lessons – 6 Main Programs – 2Code See table below for breakdown.	Unit 4.2 Online safety Number of lessons – 4 Programs – Various Unit 4.7 Effective Search Number of lessons – 3 Programs – Browser	Unit 4.3 Spreadsheets Number of lessons – 6 Programs – 2Calculate	Unit 4.4 Writing for different audiences Number of lessons – 5 Programs – 2Email, 2Connect, 2DIY	Unit 4.5 Logo Number of lessons – 4 Programs – Logo Unit 4.8 Hardware Investigators Number of lessons – 2	Unit 4.6 Animation Number of lessons – 3 Programs – 2Animate
Y5/6	Unit 6.1 Coding Number of lessons – 6 Main Programs – 2Code See table below for breakdown.	Unit 6.2 Online safety Number of lessons – 2 Programs – Various Unit 6.4 Blogging Number of lessons – 4 Programs – 2Blog	Unit 6.3 Spreadsheets Number of lessons – 5 Programs – 2Calculate	Unit 6.5 Text Adventures Number of lessons – 5 Programs – 2Code, 2Connect	Unit 6.6 Networks Number of lessons – 3	Unit 6.7 Quizzing Number of lessons – 6 Programs – 2Quiz, 2DIY, Text Toolkit, 2Investigate

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1/2 Cycle B First Unit of the Term	Unit 1.1 Online Safety & Exploring Purple Mash Enquiry Question: How can I stay safe online?	Unit 2.4 Questioning Enquiry Question: What is a binary tree?	Unit 2.2 Online Safety Enquiry Question: How can I search safely?	Unit 1.6 Animated Story Books Enquiry Question: What makes a great story?	Unit 1.3 Pictograms Enquiry Question: What does your pictogram show you?	Unit 2.3 Spreadsheets Enquiry Question: Can I use a spreadsheet to add up my money?
	Builds on: Learning in the EYFS.	Builds on: Unit 1.2 Grouping & Sorting Unit 1.3 Pictograms Unit 2.3 Spreadsheets	Builds on: Unit 1.1 Online Safety and PM Unit 1.6 Technology out of school Alongside: Unit 2.5 Effective Searching	Builds on: Unit 1.1 Online Safety and PM	Builds on: Unit 1.2 Grouping & Sorting	Builds on: Unit 1.3 Pictograms Unit 1.8 Spreasheets
	Future Learning: Unit 2.2 Online Safety Unit 3.2 Online safety Unit 4.2 Online Safety Unit 5.2 Online safety Unit 6.2 Online safety	Future Learning: Unit 3.3 Spreadsheets Unit 3.6 Branching Databases Unit 3.8 Graphing Unit 4.3 Spreadsheets Unit 5.4 Databases Unit 6.7 Quizzing Unit 6.9 Spreadsheets	Future Learning: Unit 3.2 Online safety Unit 3.5 E-mail Unit 4.2 Online Safety Unit 4.7 Effective Searches Unit 5.2 Online safety Unit 5.8 Word Processing Unit 6.4 Blogging	Future Learning: Unit 2.6 Creating Pictures Unit 2.7 Making Music Unit 2.8 Presenting Ideas	Future Learning: Unit 2.3 Spreadsheets Unit 2.4 Questioning Unit 3.3 Spreadsheets Unit 3.6 Branching Databases Unit 3.8 Graphing Unit 4.3 Spreadsheets Unit 5.4 Databases Unit 6.9 Spreadsheets	Future Learning: Unit 2.4 Questioning Unit 3.3 Spreadsheets Unit 3.8 Graphing Unit 4.3 Spreadsheets Unit 5.3 Spreadsheets Unit 5.4 Databases Unit 6.3 Spreadsheets Unit 6.9 Spreadsheets
Year 1/2 Cycle B Second Unit of the Term	Unit 1.5 Maze Explorers Enquiry Question: Which way will the arrows take me?		Unit 2.7 Making Music Enquiry Question: How can we use a computer to make music?		Unit 2.8 Presenting Enquiry Question: Ideas Can you make a quiz?	
	Alongside: Unit 1.4 Lego Builders Unit 1.7 Coding		Builds on: Unit 1.6 Animated Story Books		Builds on: Unit 1.6 Animated Story Books Alongside: Unit 2.6 Creating Pictures	

	Future Learning: Unit 2.1 Coding Unit 2.4 Questioning Unit 3.1 Coding Unit 3.6 Branching Databases Unit 4.1 Coding Unit 4.5 Logo Unit 4.6 Animation Unit 5.1 Coding Unit 5.5 Game Creator Unit 5.6 3D Modelling		Future Learning: Unit 4.6 Animation Unit 4.9 Making Music Unit 5.5 Game Creator Unit 6.5 Text Adventures		Future Learning: Unit 3.9 Presenting in PowerPoint Unit 4.4 Writing for different audiences Unit 5.7 Concept Maps Unit 5.8 Word Processing Unit 6.4 Blogging Unit 6.5 Text Adventures Unit 6.7 Quizzing	
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	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 3/4 Cycle B First Unit of the Term	Unit 4.1 Coding Enquiry Question: How can I make my computer wait?	Unit 3.2 Online Safety Enquiry Question: How do I keep my password safe?	Unit 3.5 E-mail (including e-mail safety) Enquiry Question: Can I write an E-mail?	Unit 3.6 Branching Databases Enquiry Question: Can I sort information faster than my teacher?	Unit 3.7 Simulations Enquiry Question: Let's try it out first!	Unit 3.8 Graphing Enquiry Question: Can a graph help me solve it?
	Builds on: Unit 1.1 Coding Unit 1.4 Lego Builders Unit 1.5 Maze builders Unit 2.1 Coding Unit 2.4 Questioning	Builds On: Unit 1.1 Online Safety and Exploring Purple Mash Unit 1.6 Technology outside School Unit 2.2 Online Safety Unit 2.5 Effective Searches	Builds On: Unit 3.5 E-mail Unit 4.2 Online Safety Unit 4.7 Effective Searching Unit 5.2 Online Safety	Builds On: Unit 1.2 Grouping & Sorting Unit 1.3 Pictograms Unit 2.3 Spreadsheets Unit 2.4 Questioning	Builds On: Unit 1.1 Coding Unit 1.6 Technology outside School Unit 2.1 Coding	Builds On: Unit 1.2 Grouping & Sorting Unit 1.3 Pictograms Unit 2.3 Spreadsheets Unit 2.4 Questioning Unit 3.6 Branching Databases

	Future Learning: Unit 3.6 Branching Databases Unit 4.1 Coding Unit 4.5 Logo Unit 4.6 Animation Unit 5.1 Coding Unit 6.1 Coding Unit 6.5 Text Adventures Unit 6.8 Binary	Future Learning: Unit 3.5 E-mail Unit 4.2 Online Safety Unit 4.7 Effective Searching Unit 5.2 Online Safety Unit 5.8 Word Processing Unit 6.2 Online Safety Unit 6.4 Blogging	Future Learning: Unit 4.2 Online Safety Unit 4.7 Effective Searching Unit 5.2 Online Safety Unit 6.2 Online Safety Unit 6.4 Blogging	Future Learning: Unit 3.8 Graphing Unit 4.3 Spreadsheets Unit 5.4 Databases Unit 6.7 Quizzing Unit 6.9 Spreadsheets	Future Learning: Unit 4.1 Coding Unit 5.1 Coding Unit 6.1 Coding	Future Learning: Unit 4.3 Spreadsheets Unit 5.3 Spreadsheets Unit 6.9 Spreadsheets
Year 3/4 Cycle B Second Unit of the Term		Unit 3.3 Spreadsheets Inquiry Question: What is > ?				
		Builds on: Unit 1.3 Pictograms Unit 1.8 Spreadsheets Unit 2.3 Spreadsheets Unit 2.4 Questioning				
		Future Learning: Unit 3.8 Graphing Unit 4.3 Spreadsheets Unit 5.3 Spreadsheets Unit 5.4 Databases Unit 6.3 Spreadsheets Unit 6.9 Spreadsheets				