



# Computing Overview

We follow the National Computing Curriculum to teach Computing at Spreyton.

We balance computer science, information technology and digital literacy through four main strands: Programming, creating content, data and computer systems.

We have a unique challenge at Spreyton to provide our children in KS2 with a curriculum that lets them build on previous knowledge and develop their skills sequentially while being taught in a class with 4 year groups.

We have a hybrid approach to teaching computing which allows the more challenging programming element to be taught sequentially to either y3/4 or y5/6 within the same lesson, with these units repeated in alternate years on a 2 year rolling programme, and other elements to be taught sequentially across an academic year, allowing all students to build on skills progressively.

Programming progression follows:

Sequence repetition selection variables.

We teach programming separately to 3/4 and 5/6 concurrently and we teach 2 units across a whole term because some of the skills build on each other directly.

Creating media progression is supported by teaching 2 units across a term every year so that they build on each other, this means that a year 3 or 4 child will have learnt a unit from their age group that will help them access the unit in the following term that may be from year 5 or 6 e.g. Spring Year C they learn desktop publishing before going on to look at web page creation.

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
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<p>Ks1 Year A (2024 – 25)</p>	<p>1. Computing systems and networks – Technology around us – From Year 1</p> <ul style="list-style-type: none"> <li>- Lesson 1 Technology in our classroom</li> <li>- Lesson 2 Using technology</li> <li>- Lesson 3 Developing mouse skills</li> <li>- Lesson 4 Using a computer keyboard</li> <li>- Lesson 5 Developing keyboard skills</li> <li>- Lesson 6 Using a computer responsibly</li> </ul>	<p>1. Computing systems and networks – IT around us – from Year 2</p> <ul style="list-style-type: none"> <li>- Lesson 1 What is IT?</li> <li>- Lesson 2 IT in school</li> <li>- Lesson 3 IT in the world</li> <li>- Lesson 4 The benefits of IT</li> <li>- Lesson 5 Using IT safely</li> <li>- Lesson 6 Using IT in different ways</li> </ul>	<p>2. Creating media – Digital painting – From year 1</p> <ul style="list-style-type: none"> <li>- Lesson 1 How can we paint using computers?</li> <li>- Lesson 2 Using shapes and lines</li> <li>- Lesson 3 Making careful choices</li> <li>- Lesson 4 Why did I choose that?</li> <li>- Lesson 5 Painting all by myself</li> <li>- Lesson 6 Comparing computer art and painting</li> </ul>	<p>2. Creating media – Digital photography – From Year 2</p> <ul style="list-style-type: none"> <li>• Lesson 1 Taking Photographs</li> <li>• Lesson 2 Landscape or portrait?</li> <li>• Lesson 3 What makes a good photograph?</li> <li>• Lesson 4 Lighting</li> <li>• Lesson 5 Effects</li> <li>• Lesson 6 Is it real?</li> </ul>	<p>3. Programming A – Moving a robot – From Year 1</p> <ul style="list-style-type: none"> <li>- Lesson 1 Buttons</li> <li>- Lesson 2 Directions</li> <li>- Lesson 3 Forwards and backwards</li> <li>- Lesson 4 Four directions</li> <li>- Lesson 5 Getting there</li> <li>- Lesson 6 Routes</li> </ul>	<p>3. Programming A – Robot algorithms – From Year 2</p> <ul style="list-style-type: none"> <li>- Lesson 1 Giving instructions</li> <li>- Lesson 2 Same but different</li> <li>- Lesson 3 Making predictions</li> <li>- Lesson 4 Mats and routes</li> <li>- Lesson 5 Algorithm design</li> <li>- Lesson 6 Debugging</li> </ul>
<p>KS1 Year B (2025-26)</p>	<p>4. Data and information – Grouping data – From Year 1</p> <ul style="list-style-type: none"> <li>- Lesson 1 Label and match</li> <li>- Lesson 2 Group and count</li> <li>- Lesson 3 Describe an object</li> <li>- Lesson 4 Making different groups</li> <li>- Lesson 5 Comparing groups</li> <li>- Lesson 6 Answering questions</li> </ul>	<p>4. Data and information – Pictograms – From Year 2</p> <ul style="list-style-type: none"> <li>- Lesson 1 Counting and comparing</li> <li>- Lesson 2 Enter the data</li> <li>- Lesson 3 Creating pictograms</li> <li>- Lesson 4 What is an attribute?</li> <li>- Lesson 5 Comparing people</li> <li>- Lesson 6 Presenting information</li> </ul>	<p>5. Creating media – Digital writing (from Year 1)</p> <ul style="list-style-type: none"> <li>- Lesson 1 Exploring the keyboard</li> <li>- Lesson 2 Adding and removing text</li> <li>- Lesson 3 Exploring the toolbar</li> <li>- Lesson 4 Making changes to text</li> <li>- Lesson 5 Explaining my choices</li> <li>• Lesson 6 Pencil or keyboard</li> </ul>	<p>5. Creating media - Digital music (from year 2)</p> <ul style="list-style-type: none"> <li>• Lesson 1 How music makes us feel</li> <li>• Lesson 2 Rhythms and patterns</li> <li>• Lesson 3 How music can be used</li> <li>• Lesson 4 Notes and tempo</li> <li>• Lesson 5 Creating digital music</li> <li>• Lesson 6 Reviewing and editing music</li> </ul>	<p>6. Programming B - Programming animations From Year 1</p> <ul style="list-style-type: none"> <li>- Lesson 1 Comparing tools</li> <li>Lesson 2 Joining blocks</li> <li>Lesson 3 Make a change</li> <li>Lesson 4 Adding sprites</li> <li>Lesson 5 Project design</li> <li>Lesson 6 Following my design</li> </ul>	<p>6. Programming B - Programming quizzes From Year 2</p> <ul style="list-style-type: none"> <li>- Lesson 1 ScratchJr recap</li> <li>- Lesson 2 Outcomes</li> <li>- Lesson 3 Using a design</li> <li>- Lesson 4 Changing a design</li> <li>- Lesson 5 Designing and creating a program</li> <li>- Lesson 6 Evaluating</li> </ul>

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KS2 Year A	<p><b>Sequencing sounds (3.3)</b>  Lesson 1- Introduction to Scratch  Lesson 2- Programming sprites  Lesson 3- Sequences  Lesson 4- Ordering commands  Lesson 5- Looking good  Lesson 6- Making an instrument</p> <p><b>Video production (5.2)</b>  Lesson 1 What is video?  Lesson 2 Filming techniques  Lesson 3 Using a storyboard  Lesson 4 Planning a video  Lesson 5 Importing and editing video  Lesson 6 Video evaluation</p> <p><b>Selection in physical computing (5.3)</b>  Lesson 1 Connecting</p>	<p><b>Repetition in shapes (4.3)</b>  Lesson 1 Programming a screen turtle  Lesson 2 Programming letters  Lesson 3 Patterns and repeats  Lesson 4 Using loops to create shapes  Lesson 5 Breaking things down  Lesson 6 Creating a program</p> <p><b>Variables in games (6.3)</b>  Lesson 1 Introducing variables  Lesson 2 Variables in programming  Lesson 3 Improving a game  Lesson 4 Designing a game  Lesson 5 Design to code  Lesson 6 Improving and sharing</p>	<p><b>Stop-frame animation (3.2)</b>  Lesson 1 Can a picture move?  Lesson 2 Frame by frame  Lesson 3 What's the story?  Lesson 4 Picture perfect  Lesson 5 Evaluate and make it great  Lesson 6 Lights, camera, action!</p>	<p><b>Video production (5.2)</b>  Lesson 1 What is video?  Lesson 2 Filming techniques  Lesson 3 Using a storyboard  Lesson 4 Planning a video  Lesson 5 Importing and editing video  Lesson 6 Video evaluation</p>	<p><b>Connecting computers (3.1)*</b>  Lesson 1 How does a digital device work?  Lesson 2 What parts make up a digital device?  Lesson 3 How do digital devices help us?  Lesson 4 How am I connected?  Lesson 5 How are computers connected?  Lesson 6 What does our school network look like?</p>	
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	<p>Crumbles</p> <p>Lesson 2 Combining output components</p> <p>Lesson 3 Controlling with conditions</p> <p>Lesson 4 Starting with selection</p> <p>Lesson 5 Drawing designs</p> <p>Lesson 6 Writing and testing algorithms</p>					
Ks2 Year B	<p><b>Events and actions in programs (3.6)</b></p> <p>Lesson 1 Moving a sprite</p> <p>Lesson 2 Maze movement</p> <p>Lesson 3 Drawing lines</p> <p>Lesson 4 Adding features</p> <p>Lesson 5 Debugging movement</p> <p>Lesson 6 Making a project</p> <p><b>Selection in quizzes</b></p>	<p><b>Repetition in shapes (4.3)</b></p> <p>Lesson 1 Programming a screen turtle</p> <p>Lesson 2 Programming letters</p> <p>Lesson 3 Patterns and repeats</p> <p>Lesson 4 Using loops to create shapes</p> <p>Lesson 5 Breaking things down</p> <p>Lesson 6 Creating a program</p>	<p><b>Introduction to vector graphics (5.5)</b></p> <p>Lesson 1 The drawing tools</p> <p>Lesson 2 Creating images</p> <p>Lesson 3 Making effective drawings</p> <p>Lesson 4 Layers and objects</p> <p>Lesson 5 Manipulating objects</p> <p>Lesson 6 Becoming a graphic designer</p>	<p><b>3D modelling (6.5)</b></p> <p>Lesson 1 Introduction to 3D modelling</p> <p>Lesson 2 Modifying 3D objects</p> <p>Lesson 3 Make your own name badge</p> <p>Lesson 4 Making a desk tidy</p> <p>Lesson 5 Planning a 3D model</p> <p>Lesson 6 Make your own 3D model</p>	<p><b>Branching data-bases (3.4)</b></p> <p>Lesson 1 Yes or no questions</p> <p>Lesson 2 Making groups</p> <p>Lesson 3 Creating a branching data-base</p> <p>Lesson 4 Structuring a branching database</p> <p>Lesson 5 Using a branching data-base</p> <p>Lesson 6 Two ways of presenting infor-</p>	<p><b>Flat-file databases (5.4)</b></p> <p>Lesson 1. Creating a paper-based data-base</p> <p>Lesson 2. Computer databases</p> <p>Lesson 3. Using a database</p> <p>Lesson 4. Using search tools</p> <p>Lesson 5. Comparing data visually</p> <p>Lesson 6. Databases in real life</p>

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	<b>(5.6)</b> Lesson 1 Exploring conditions Lesson 2 Selecting outcomes Lesson 3 Asking questions Lesson 4 Planning a quiz Lesson 5 Testing a quiz Lesson 6 Evaluating a quiz	<b>Variables in games (6.3)</b> Lesson 1 Introducing variables Lesson 2 Variables in programming Lesson 3 Improving a game Lesson 4 Designing a game Lesson 5 Design to code Lesson 6 Improving and sharing			mation	
KS2 Year C	<b>Sequencing sounds (3.3)</b> Lesson 1- Introduction to Scratch Lesson 2- Programming sprites Lesson 3- Sequences Lesson 4- Ordering commands Lesson 5- Looking good Lesson 6- Making an instrument  <b>Selection in physi-</b>	<b>Repetition in shapes (4.3)</b> Lesson 1 Programming a screen turtle Lesson 2 Programming letters Lesson 3 Patterns and repeats Lesson 4 Using loops to create shapes Lesson 5 Breaking things down Lesson 6 Creating a program	<b>Desktop publishing (3.5)</b> Lesson 1 Words and pictures Lesson 2 Can you edit it? Lesson 3 Great template! Lesson 4 Can you add content? Lesson 5 Lay it out Lesson 6 Why desktop publishing?	<b>Web page creation (6.2)</b> Lesson 1 What makes a good website? Lesson 2 How would you layout your web page? Lesson 3 Copyright or CopyWRONG? Lesson 4 How does it look? Lesson 5 Follow the breadcrumbs Lesson 6 Think before you link!	<b>The Internet (4.1)</b> Lesson 1 Connecting networks Lesson 2 What is the internet made of? Lesson 3 Sharing information Lesson 4 What is a website? Lesson 5 Who owns the web? Lesson 6 Can I believe what I read? <ul style="list-style-type: none"> <li>•</li> </ul>	<b>Publishing project</b> <b>Link to curriculum</b>

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	<b>cal computing (5.3)</b> Lesson 1 Connecting Crumbles Lesson 2 Combining output components Lesson 3 Controlling with conditions Lesson 4 Starting with selection Lesson 5 Drawing designs Lesson 6 Writing and testing algorithms	<b>Variables in games (6.3)</b> Lesson 1 Introducing variables Lesson 2 Variables in programming Lesson 3 Improving a game Lesson 4 Designing a game Lesson 5 Design to code Lesson 6 Improving and sharing				
KS2 Year D	<b>Events and actions in programs (3.6)</b> Lesson 1 Moving a sprite Lesson 2 Maze movement Lesson 3 Drawing lines Lesson 4 Adding features Lesson 5 Debugging movement Lesson 6 Making a project	<b>Repetition in games (4.6)</b> Lesson 1 Using loops to create shapes Lesson 2 Different loops Lesson 3 Animate your name Lesson 4 Modifying a game Lesson 5 Designing a game Lesson 6 Creating our games	<b>Audio production (4.2)</b> Lesson 1 Digital recording Lesson 2 Recording sounds Lesson 3 Creating a podcast Lesson 4 Editing digital recordings Lesson 5 Combining audio Lesson 6 Evaluating podcasts	<b>Photo editing (4.5)</b> Lesson 1 Changing digital images Lesson 2 Changing the composition of images Lesson 3 Changing images for different uses Lesson 4 Retouching images Lesson 5 Fake images Lesson 6 Making and evaluating a publication	<b>Data logging (4.4)</b> Lesson 1 Answering questions Lesson 2 Data collection Lesson 3 Logging Lesson 4 Analysing data Lesson 5 Data for answers Lesson 6 Answering my question	<b>Introduction to Spreadsheets (6.4)</b> Lesson 1 Collecting data Lesson 2 Formatting a spreadsheet Lesson 3 What's the formula? Lesson 4 Calculate and duplicate Lesson 5 Event planning Lesson 6 Presenting data

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	<b>Selection in quizzes (5.6)</b> Lesson 1 Exploring conditions Lesson 2 Selecting outcomes Lesson 3 Asking questions Lesson 4 Planning a quiz Lesson 5 Testing a quiz Lesson 6 Evaluating a quiz	<b>Sensing movement (6.6)</b> Lesson 1 The micro:bit Lesson 2 Go with the flow Lesson 3 Sensing inputs Lesson 4 Finding your way Lesson 5 Designing a step counter Lesson 6 Making a step counter				
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