

Year 1

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<p><i>We are treasure hunters.</i></p> <p>In this unit, the children will program a toy to move around a map to find buried treasure. They will start by thinking of algorithms for their routes, then input these as stored programs for the robot. They predict how the robot will move and will debug their programs.</p>	<p><i>We are painters.</i></p> <p>This unit will particularly engage children who love the illustrations in the books they read. It is a great opportunity for the children to work creatively.</p>	<p><i>We are storytellers.</i></p> <p>In this unit, the children create a talking book that they can share with others.</p>	<p><i>We are collectors.</i></p> <p>In this unit, the pupils will use web search engines to collect pictures of different types of animals and then explore ways in which those pictures can be organised</p>	<p><i>We are celebrating.</i></p> <p>In this unit, pupils will have the opportunity to create a digital greetings card, which could be used for a religious festival such as Diwali or Christmas, pupils' birthdays, or simply to say thank you or good luck.</p>	<p><i>We are TV chefs.</i></p> <p>In this unit, pupils produce short videos of themselves making a healthy meal or snack. They also decompose a complex problem into smaller parts – an important idea from computer science</p>

Year 2

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<p><i>We are astronauts.</i></p> <p>In this unit, the children will build on work from Unit 1.1 – We are treasure hunters to program a sprite (such as a spaceship) to move around the screen. This unit acts as a springboard for programming in Year 3.</p>	<p><i>We are game testers.</i></p> <p>In this unit, the pupils will try to work out how some simple Scratch games work. They also look at free online or open source games and share their favourite games with the class.</p>	<p><i>We are photographers.</i></p> <p>In this unit, the children review photos online, practise using a digital camera, take photos to fit a given theme, edit their photos, and then select their best images to include in a shared portfolio.</p>	<p><i>We are researchers.</i></p> <p>The children research a topic – safely, effectively and efficiently – using a structured approach (mind mapping). They share their findings with others through a short multimedia presentation.</p>	<p><i>We are detectives.</i></p> <p>In this unit, the children are challenged to solve a mystery by reading, sending and replying to emails, and by listening to a witness statement. They use a fact file sheet to create a table and identify the culprit</p>	<p><i>We are zoologists.</i></p> <p>In this unit, the children go on a bug hunt, recording and identifying the small animals they find. They then organise the data they have collected, record it using a graphing package, and interpret the graph to answer questions about the animals.</p>

Year 3

<p>We are programmers.</p> <p>In this unit, the children create an animated cartoon using characters they design. They use a paint tool to create characters and backgrounds. They then create an animation by translating a storyboard into a series of scripted instructions (program) for graphic objects.</p>	<p>We are bug fixers.</p> <p>In this unit, the children work with six example Scratch projects. They explain how the scripts work, finding and correcting errors in them, and explore creative ways of improving them. The children learn to recognise some common types of programming error, and practise solving problems through logical thinking.</p>	<p>We are presenters.</p> <p>Do your children love watching sport or other performances on TV? This unit gives them a chance to make a short narrated video of themselves practising a sport or other skill, and to use this to help improve their performance.</p>	<p>We are vloggers.</p> <p>In this unit, the pupils choose a topic to teach to others. They research this using web-based sources, plan a presentation, source and create visual content and record a spoken commentary.</p>	<p>We are communicators.</p> <p>This unit allows the children to learn about a number of online safety matters in a positive way. They will work with a partner in another class, learning how to use email and video conferencing safely.</p>	<p>We are opinion pollsters.</p> <p>In this unit, the children create their own opinion poll, seek responses, and then analyse the results.</p>
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Year 4

<p>We are software developers.</p> <p>The pupils start by playing and analysing educational computer games, identifying those features that make a game successful. They then plan and design a game, with a clear target audience in mind.</p>	<p>We are toy designers.</p> <p>In this unit, the children work together to design a simple toy that incorporates sensors and outputs and then create an on-screen prototype of their toy in Scratch. Finally, they pitch their toy idea to a Dragons' Den-style panel.</p>	<p>We are musicians.</p> <p>How many children in your class play an instrument? How many of them like singing, or simply enjoy listening to music? In this unit, the children produce music suitable for any purpose they choose.</p>	<p>We are HTML editors.</p> <p>In this unit the children learn about the history of the web, before studying HTML (hypertext mark-up language), the language in which web pages are written. They learn to edit and write HTML, and then use this knowledge to create a web page.</p>	<p>We are co-authors.</p> <p>Wikipedia is a free online encyclopaedia that anyone can view and edit. In this unit, the pupils collaborate to create a 'mini Wikipedia'. They then go on to add or amend content on the real Wikipedia.</p>	<p>We are meteorologists.</p> <p>This unit brings together data measurement, analysis and presentation, as the children take on the role of meteorologists and weather presenters.</p>
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Year 5

<p>We are game developers.</p> <p>The pupils plan their own simple computer game. They design characters and backgrounds, and create a working prototype, which they develop further based on feedback they receive.</p>	<p>We are cryptographers (Barefoot unit)</p> <p>The pupils learn more about communicating information securely through an introduction to cryptography. They investigate early methods of communicating over distances, learn about two early ciphers, and consider what makes a secure password.</p>	<p>We are artists</p> <p>The pupils use vector and turtle graphics to explore geometric art, taking inspiration from the work of Escher, Riley and traditional Islamic artists, as well as experimenting with complex 'fractal' landscapes.</p>	<p>We are web developers.</p> <p>In this unit, the pupils work together to create a website explaining online safety and responsible online behaviour.</p>	<p>We are bloggers.</p> <p>Blogging provides a worldwide audience for pupils' work. Commenting on others' work extends pupils' sense of membership of a learning community beyond school. In this unit, pupils create a media-rich blog, comment on blogs and respond to comments.</p>	<p>Barefoot unit (Edexcel focus)</p> <p>Covering the collection, analysis and evaluation of data. With Italy as the core theme, pupils will develop their practical computational skills in online research and modelling using spreadsheets.</p>
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Year 6

<p>We are app planners.</p> <p>The Year 6 units form a sequence, beginning with this one in which the pupils learn about the capabilities of smartphones, think of a problem that a smartphone or tablet app could solve, and then pitch the idea for their app.</p>	<p>We are project managers.</p> <p>This is the second in a sequence of six Year 6 units in which pupils work collaboratively to develop a smartphone or tablet app. Pupils apply computational thinking to the task of managing a complex project.</p>	<p>We are market researchers.</p> <p>The pupils conduct research into the potential market for their app, using an online survey together with interviews or focus groups. They analyse the data and information they obtain and create a presentation summarising their findings.</p>	<p>We are interface designers.</p> <p>In this unit, the children will start to design the look/ feel of their app's interface. They begin by sketching ideas, planning the different screen layouts for their app and developing these using a wireframing tool.</p>	<p>We are app developers.</p> <p>In this unit, the pupils draw on their work from the previous Year 6 units to create a working app. They write down their algorithms, and use a programming toolkit to code them.</p>	<p>We are marketers.</p> <p>The pupils work collaboratively to produce marketing materials for the app they have been developing in the Year 6 units. They create a poster or flyer, develop a simple website, and shoot a short video.</p>
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