

# Computing - Whole-School Topic Overview

Year	Unit #	Unit Title	Unit Summary / Skills Focus	Resources	
<b>1</b>	<b>Autumn 1</b>	Getting On(line)	Getting to know the basic controls of a computer: using a mouse; navigating menus and remembering passwords.	Computing Suite login process Busy Things	
	<b>Autumn 2</b>	Getting Creative	Becoming content creators using Colour Magic: creating self-portraits and posters for the Christmas Show.	Colour Magic Google Santa Tracker	
	<b>Spring 1</b>	Getting About	Beginning to use directional language to discuss the motions of floor turtles. Thinking about sequencing and ordering instructions.	Big Trak	Beebots
	<b>Spring 2</b>	Getting There Quick	Using keyboard / mouse shortcuts to begin to be a more efficient computer user.	Woodcroft Site	Treehouse VLE
	Summer 1	Getting Busy	Consolidating mouse, keyboard and navigation skills using Busy Things.  Getting better at logging on to the Woodcroft site; being able to navigate to the Treehouse and join Woodcroft's online community.	Woodcroft Site Busy Things	Treehouse VLE Code.org
	Summer 2	Getting Thinking	Learning the language of computational thinking through unplugged activities and applying learnt process to solve problems independently.	Code.org	
<b>2</b>	<b>Autumn</b>	We Are Penguins  We Are Coders	Discover and present information about penguins.  Continue Course 1 Code.org - following progress from Year 1. Ensure all pupils know how to log onto Code.org to record progress.	Chrome Browser  Code.org	Google Slides
	<b>Spring</b>	Fire! Fire!	Present research online, collaborating on documents where possible. Use mapping software to locate sites of interest.	Google MyMaps  Google Docs	Google Slides
	<b>Summer</b>	Get the Picture	Use technology to communicate by adding images and video to presentations. Recognise that you can store and share information with others.	Digital Camera Phones  Google Photos	Google Drive  Treehouse (VLE)

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3	Autumn	We Are Programmers	In this unit, children solve problems of increasing complexity, becoming familiar with the language of computational thinking with the support of unplugged activities.	Code.org      Scratch Scratch Junior (awaiting availability)
	Spring 1	We Are Communicators	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	Gmail      Google Slides Google Hangouts (ask DG to enable Video)
	Spring 2	We Are Presenters	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.	Red Camera Phones      WeVideo
	Summer 1	We Are Opinion Pollsters	In this unit, the children create their own opinion poll, seek responses, and then analyse the results.	Google Forms      Google Sheets
	Summer 2	We Are Bug Fixers	In this unit, children solve problems of increasing complexity, becoming familiar with the language of computational thinking. 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.	Code.org      Scratch Scratch Junior (awaiting availability)
4	Autumn	Amphitheatre Antics	Research Romans using various search engines. Discussing reliability of various sources of information (linked with Roman myths and legends). Creating blogs / wiki on specific aspect of Roman Civilisation.	Search Engines: Google, Bing, Yahoo Treehouse      Red Camera Phones Google Photos / Drive / Pixlr Express
	Spring 1	We Are Software Developers	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. They create a working prototype, and then develop it further to add functionality and improve the user interface. They test their game and make any necessary changes.	Scratch
	Spring 2	We Are Meteorologists	This unit brings together data measurement, analysis and presentation, as the children take on the role of meteorologists and weather presenters.	Search Engines      Google Forms Google Sheets      Google Slides Various recording devices (such as cameras and thermometers). Treehouse (VLE)
	Summer 1	We Are Musicians	In this unit, the children produce music suitable for their games made in previous topics.	Soundation Isle of Tune
	Summer 2	We Are HTML / Java Editors	First pupils will look at the hidden code behind web pages, then use decomposition and pattern matching skills to detect how they can edit html. Using this knowledge, they will then learn how to draw and animate using Java.	X-Ray Goggles Khan Academy Coding (Java)

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5	Autumn 1	We Are Code Breakers	Discovering (and deciphering) a range of codes:  Semaphores (linked to Tudor nautical theme)  Ciphers  Morse Code	Code.org (Course 3)  Scratch (looking at morse code).
	Autumn 2	We Are Game Developers	Design and create Computer Game using block programming (Scratch)	Scratch
	Spring	Crypto	Code breaking - links to computational thinking in Code.org and History topic of Vikings.  Graphics - links to coding through repeating / tessellating patterns.  Creating blogs to showcase pupil created content.	Google Drawings      Scratch  Code.org      Treehouse
	Summer 1	We Are Architects	Explore a virtual environment through Google Cultural Institute / Expeditions.  Links to Science - design own home using CAD software.  Publish content through Treehouse blog.	Google Cultural Institute      3D Tin  4D Hall
	Summer 2	We Are Bloggers	Understand what a blog is; discuss intended audience.  Links to Science and 'We Are Architects' Computing topic - blogging as a resident of a futuristic space home.  Undertake research to support writing through searching the internet.	Treehouse      Search engines  Khan Academy (space topic)
6	Autumn	We Are Coders	Understanding computational thinking through close links to the history of Computing: Decomposition Pattern matching abstraction Functions Variables Sequencing debugging Logical process  Consider key figures in the development of computers, with a focus on coding machines of WW2.	Code.org (Course 3)      Khan Academy Coding  LGFL History of Computing      Brainpop
	Spring	We Are Market Researchers	Considering what makes a good app, and what the technical challenges in producing an app are: Inputs Outputs Audience (and how to appeal to them) User Interface (UI)	Code.org Google Slides Google Maps Google forms WeVideo  Scratch Google Drawings Mindmap Google sheets
	Summer	We Are App Developers	Build a mobile phone app using skills gained throughout the year. Test, gain feedback and evaluate app Build on the research from 'We Are Market Researchers': What kind of app is it possible for us to produce? What will attract users to use the app? What level of complexity are we able to code?	Scratch App Shed Slides Gmail