

Year 1 Computing Curriculum Overview

Unit	Focus	Hardware/Programs	Cross curricular links/Overview of unit content	Education for a connected world
1	Technology all around us	paintz.app	Utw (EYFS) Understanding of technological devices etc in the home and world around.	Online safety
2	Digital painting	Microsoft paint	Art - Mondrian, Matisse, Kandinsky.	
3	<i>Moving a robot</i>	Bee-bot, blue-bot or other fixed movement floor robot	English - instructions/sequencing Maths - ordinal numbers and positional and directional language (both with physical activity links - PE)	
4	Grouping data	Google slides or Microsoft PowerPoint	Maths - pictograms, counting, grouping objects, comparing numbers	My work belongs to me
5	Digital writing	Google docs or Microsoft Word	English - writing Use of keyboard, knowing upper and lower case letters and numerals.	Sharing information
6	<i>Programming animations</i>	ScratchJr	English and Maths - instructions, directions etc as above PE - Space race, practising movements.	

Programming units for each year are in italics

Year 2 Computing Curriculum Overview

Unit	Focus	Hardware/Programs	Cross curricular links/Overview of unit content	Education for a connected world
1	Information technology all around us	Google slides or Microsoft PowerPoint	Geography - the world around us - places that use technology (shops, hospitals, pelican crossing etc)	Safe rules for using technology
2	Digital photography	Digital camera	Art - Techniques to take a good image, colour, light etc.	Identify some images are not real (fake images)
3	<i>Robot algorithms</i>	Bee-bot, blue-bot or other fixed movement floor robot	English - Instructions, making predictions Maths - sequencing Art & Design - Designing a mat for the robot	
4	Pictograms	i2data pictogram	Maths - tally charts, more than, less than, ask and answer qs about data.	Data safety etc.
5	Making music	Chrome music lab	Music - The planets (Holst), Patterns, rhythm, pitch, emotion, composition PE - animal movements Science - animals	Work I create belongs to me.
6	<i>Programming quizzes</i>	ScratchJr	Maths - sequencing Understanding of 'quizzes' English - creating questions. Design - using artwork	

Programming units for each year are in italics

Year 3 Computing Curriculum Overview

Unit	Focus	Hardware/Programs	Cross curricular links/Overview of unit content	Education for a connected world
1	Connecting Computers	Painting program	Maths - Number and practical problems Art - Design digital device Understanding of devices, inputs, outputs, networks (could be done in a practical way in preparation e.g. a ball of wool passed around the classroom to model a network)	
2	Stop-frame animation	iMotion (app for iOS)	Art - drawing animation in a flip book English - storyboarding, characters, settings, events History - Roman Empire	Managing online information Copyright and ownership
3	<i>Sequencing sounds</i>	Scratch	English/maths- sequencing tasks, ordering instructions Music - background understanding in musical instruments and notes, sequences (CDAGG etc)	
4	Branching databases	i2data branch and pictogram	Experience of Questions and answers - flowchart of yes and no answers etc. Identifying similarities and differences Maths - pictograms and data handling	
5	Desktop publishing	Adobe Spark	English - Drafting and editing Art/Design - Designing magazine template Looking at magazine layouts	
6	<i>Events and actions in programs</i>	Scratch	Maths - position and direction language	

Programming units for each year are in italics

Year 4 Computing Curriculum Overview

Unit	Focus	Hardware/Programs	Cross curricular links/Overview of unit content	Education for a connected world
1	The internet	Various websites	Background on networks, routers, world wide web PSHE - Honesty (online safety etc) Art - Drawing Builds on Y3 'Connecting computers' unit.	Online safety
2	Audio editing	Audacity	Digital audio recording - microphone (input), headphones/speakers (output), understanding of podcasts. Science - sound, volume and vibrations etc English - planning and recording ideas, writing and editing drafts and performance of work Music - Improvise and compose	Copyright and ownership
3	<i>Repetition in shapes</i>	FMSLogo	Instructions and algorithms. Patterns in the world around and instructions in everyday life. Maths - shape and number patterns. Sequences English - Sequencing instructions in order. Music - repeat on a loop. Art/Design - designing a wallpaper.	
4	Data logging	Data logger	Using sensors and data loggers. Maths - data collection etc. Science - Observations, measurements and using data loggers. Collecting data... recording and analysing the data.	
5	Photo editing	Paint.NET (for Microsoft Windows)	Cropping, editing images and using editing tools. Art? Images could be linked to something in Art? Discussion about real/fake images.	Self image and identity Copyright and ownership.

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6	<i>Repetition in games</i>	Scratch	Creating loops, algorithms, fixing errors in the code. Creating a game.	

Programming units for each year are in italics

Year 5 Computing Curriculum Overview

Unit	Focus	Hardware/Programs	Cross curricular links/Overview of unit content	Education for a connected world
1	Sharing information	Google slides	Computer systems (both physical and electronic/digital aspects). Hardware. Networks and how data is transferred. Internet, working offline and online pros and cons.	Acceptable use of others' work.
2	Video editing	Microsoft photos (for Microsoft Windows 10)	Understanding of videos and YouTube/YouTubers. Art/design - Images, design, special effects. English - storyboards, script writing.	Internet safety
3	<i>Selection in physical computing</i>	Crumble controller + starter kit + motor	Science - electrical circuits (Y4) English - Instructions Maths - sequences Art/Design - design a carousel Algorithms, instructions and loops.	
4	Flat file databases	j2data database	Maths - Data handling, graphs and charts. asking and answering questions, comparing charts. Use of 'paper' data recording and a computer based database. Use of a real-life database to conduct a flight search.	
5	Vector drawing	Google drawings	Vector drawings are made up of simple shapes and lines. Use of drawing tools. Resizing, rotating, editing tools.	Copyright and ownership
6	<i>Selection in quizzes</i>	Scratch	An understanding of branching databases and 'conditions' in programming. Children to create a quiz.	

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			English - Storyboards Maths - sequences	
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Programming units for each year are in italics

Year 6 Computing Curriculum Overview

Unit	Focus	Hardware/Programs	Cross curricular links/Overview of unit content	Education for a connected world
1	Internet communication		Using search engines Opportunity to create a paper 'webpage' for a topic being studied in class. Exploring ways in which we communicate.	Online risks Effective and safe searching
2	Webpage creation	Google sites	English - writing for audience and purpose Could be linked to a topic being covered in other areas of curriculum.	Online relationships Managing information online Copyright and ownership
3	<i>Variables in games</i>	Scratch	English - Instructions Maths - sequences	
4	Introduction to spreadsheets	Google Sheets or Microsoft Excel	Maths - data, solving problems involving $+ - \times \div$ Charts and graphs and calculate the mean.	Managing information online
5	3d modelling	Tinkercad	Maths - 2d and 3d shapes, nets. Art/Design - Create a 3d model of a photo frame.	Privacy and security
6	<i>Sensing</i>	micro:bit and Microsoft MakeCode	Designing code, running codes.	

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