Overview of units

Unit	Learning outcomes	Computing programme of study	Software	Hardware
2.1 **We are astronauts** Programming on screen in ScratchJr	Pupils learn to: • plan a sequence of instructions to move sprites in ScratchJr • create, test and debug programs for sprites in ScratchJr • work with input and output in ScratchJr • use repetition in their programs • design costumes for sprites.	• Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute them by following precise and unambiguous instructions. • Create and debug simple programs. • Use logical reasoning to predict the behaviour of simple programs.	*Main:* • ScratchJr *Alternatives:* • Scratch	*Main:* • iPads *Alternatives:* • Android tablets • Laptop/desktop/ Chromebook computers • Bee-Bots • Blue-Bots
2.2 **We are games testers** Working out the rules for games	Pupils learn to: • observe and describe carefully what happens in computer games • use logical reasoning to make predictions of what a program will do and test these predictions • think critically about computer games and their use • create sequences of instructions for a virtual robot to solve a problem • work out strategies for playing a game well • be aware of how to use games safely and in balance with other activities.	• Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute them by following precise and unambiguous instructions. • Use logical reasoning to predict the behaviour of simple programs. • Recognise common uses of information technology beyond school. • Use technology safely and respectfully, keeping personal information private.	*Main:* • Scratch • FixTheFactory *Alternatives:* • Blockly Games	*Main:* • iPads • Laptop/desktop/ Chromebook computers *Alternatives:* • Android tablets
2.3 **We are photographers** Taking, selecting and editing digital images	Pupils learn to: • consider the technical and artistic merits of photographs • use the iPad camera app • take digital photographs • review, reject or pick the images they take • edit and enhance their photographs	• Use technology purposefully to create, organise, store, manipulate and retrieve digital content. • Recognise common uses of information technology beyond school. • Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the Internet or other online technologies.	*Main:* • Camera app • Photo app • Snapseed *Alternatives:* • Pixlr • Windows Photos	*Main:* • iPads *Alternatives:* • Android tablets • Laptop/desktop/ Chromebook computers and digital cameras

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2.4 **We are safe researchers** Researching a topic	Pupils learn to: • develop collaboration skills through working as part of a group • develop research skills through searching for information on the Internet • think through privacy implications of their use of search engines • be more discerning in evaluating online information • improve note-taking skills through the use of mind mapping • develop presentation skills through creating and delivering a short multimedia presentation.	• Use technology purposefully to create, organise, store, manipulate and retrieve digital content. • Recognise common uses of information technology beyond school. • Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the Internet or other online technologies.	*Main:* • Popplet • Google Slides • Google custom search *Alternatives:* • FreeMind • Microsoft PowerPoint • Keynote	*Main:* • iPads *Alternatives:* • Android tablets • Laptop/desktop/ Chromebook computers
2.5 **We are animators** Creating a stop-motion animation	Pupils learn to: • understand how animation works • use storyboards to plan an animation • create their own original characters, props and backgrounds for an animation • film, review and edit a stop-motion animation • record audio to accompany their animation • provide constructively critical feedback to their peers.	• Use technology purposefully to create, organise, store, manipulate and retrieve digital content. • Recognise common uses of information technology beyond school. • Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the Internet or other online technologies.	*Main:* • Stop Motion Studio *Alternatives:* • iStopMotion • Zu3D • Stop Motion Animator	*Main:* • iPads *Alternatives:* • Android tablets • Laptop/desktop/ Chromebook computers and digital cameras
2.6 **We are zoologists** Collecting data about bugs	Pupils learn to: • sort and classify a group of items by answering questions • collect data using tick charts or tally charts • take, edit and enhance photographs • use Google Sheets or Microsoft Excel to produce basic charts • record information on a digital map • summarise what they have learned in a presentation.	• Use technology purposefully to create, organise, store, manipulate and retrieve digital content. • Recognise common uses of information technology beyond school. • Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the Internet or other online technologies.	*Main:* • Google Sheets • Google Docs • Google My Maps • Google Slides • Camera app • Photos app *Alternatives:* • Windows Maps • Microsoft suite	*Main:* • iPads *Alternatives:* • Laptop/desktop/ Chromebook computers and digital cameras

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