	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
YEAR 1	**We are treasure hunters** Solving problems using programmable toys ● that a programmable robot can be controlled by inputting a sequence of instructions ● to develop and record sequences of instructions as an algorithm ● to program a robot to follow their algorithm ● to debug programs ●to predict how their programs will work..	**We are TV chefs** Filming the steps of a recipe • Break down a process into simple, clear steps, as in an algorithm. • Use different features of a video camera. • Use a video camera to capture moving images. • Develop collaboration skills. • Discuss their work and think about how it could be improved.	**We are digital artists** Creating work inspired by great artists • how to select and set brushes and colours ● to create artwork in a range of styles on iPad ● to use the undo function if they make mistakes, and to encourage experimentation ● to use multiple layers in their art ● to transform layers ● to paint on top of photographs	**We are publishers** Creating a multimedia eBook about our achievements ● plan a small multimedia eBook ● choose and import images ● record audio commentary ● add and format titles and other text ● think carefully about protecting their privacy ● respect other people's copyright ● revise and improve their work.	**We are rhythmic** Creating sound patterns in ScratchJr and GarageBand record audio on an iPad ● program sprites to playback recorded audio in ScratchJr ● program ScratchJr to create repeating rhythms using recorded audio ● explore different effects that can be applied to audio ● create a repeating percussion pattern using a virtual drum machine ● experiment with a range of virtual instruments.	**We are detectives** Using data to solve clues how data can be structured as records with fields for information ● how data can be organised into groups and subgroups ● how data can be structured as a tree ● how data can be organised into a table ● how data in a table can be filtered and searched.
YEAR 2	**We are astronauts** Programming on screen in ScratchJr ● 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.	**We are games testers** Working out the rules for games ● 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.	**We are photographers** Taking, selecting and editing digital images ● 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	**We are safe researchers** Researching a topic ● 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.	**We are animators** Creating a stop-motion animation ● 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.	**We are zoologists** Collecting data about bugs ● 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.

YEAR 3	**We are programmers** Programming an animation ● plan and create an algorithm for an animated scene in the form of a storyboard ● write a program in Scratch to create the animation, including characters, dialogue, costumes, backdrops and sound ● review their animation programs and correct mistakes	**We are bug fixers** Finding and correcting bugs ● develop a number of strategies for finding errors in programs ● build up resilience and strategies for problem solving ● increase their knowledge and understanding of Scratch ● recognise a number of common types of bugs in software	**We are presenters** Videoing a presentation against a green screen ● develop their web-based research skills ● structure, prepare and deliver a talk about a given topic or subtopic studied in another curriculum area ● record a piece to camera ● edit a movie using static images and green screen footage ● give constructive, critical feedback on recorded presentations.	**We are who we are** Creating presentations about ourselves ● create a number of structured presentations ● narrate presentations ● consider issues of trust and privacy when sharing information.	**We are co-author** Producing a wiki ● understand the conventions for collaborative online work, particularly in wikis ● be aware of their responsibilities when editing other people's work ● become familiar with Wikipedia, including potential problems associated with its use ● practise research skills ● write for a target audience using a wiki tool ● develop collaboration skills ● develop proofreading skills.	**We are opinion pollsters** Collecting and analysing data ● understand some elements of survey design ● understand some ethical and legal aspects of online data collection ● use the Internet to facilitate data collection ● use charts to analyse data ● interpret results.

YEAR 4	**We are software developers** Developing a simple educational game • Develop an educational computer game using selection and repetition. • Understand and use variables. • Start to debug computer programs. • Recognise the importance of user interface design, including consideration of input and output.	**We are makers** Coding for micro:bit ● about the input – process – output model of computation ● about the inputs and outputs available on a BBC micro:bit ● to program using the MakeCode block- based environment ● to test and debug programs they write, using an on-screen simulator and the micro:bit ● how to convert and transfer a program written on screen to the micro:bit.	**We are musicians** Creating a piece of music in GarageBand ● create a repeating percussion rhythm ● play music using virtual instruments ● compose or edit tunes using the piano roll (pitch and duration) tool ● perform electronic music using pre-recorded loops, and create their own loops ● create a multi-track composition or performance using multiple instruments ● give feedback to others on their compositions and performances	**We are bloggers** Sharing experiences and opinions ● become familiar with blogs as a medium and a genre of writing ● create a sequence of blog posts on a theme ● incorporate additional media ● comment on the posts of others ● develop a critical, reflective view of a range of media, including text..	**We are artists** Fusing geometry and art ● develop an appreciation of the links between geometry and art ● become familiar with the tools and techniques of a vector graphics package ● develop an understanding of turtle graphics ● experiment with the tools available, refining and developing their work as they apply their own criteria to evaluate it and receive feedback from their peers ● develop some awareness of computer-generated art.	**We are meteorologists** Presenting the weather ● understand different measurement techniques for weather – both analogue and digital ● use computer-based data logging to automate the recording of some weather data ● use spreadsheets to create charts ● analyse data, explore inconsistencies in data and make predictions ● practise using presentation and video software.
YEAR 5	**We are game developers** Developing an interactive game • Create original artwork and sound for a game. • Design and create a computer program for a computer game, which uses sequence, selection, repetition and variables. • Detect and correct errors in their computer game. • Use iterative development techniques (making and testing a series of small changes) to improve their game.	**We are cryptographers** Cracking codes • Be familiar with semaphore and Morse code. • Understand the need for private information to be encrypted. • Encrypt and decrypt messages in simple ciphers. • Appreciate the need to use complex passwords and to keep them secure. • Have some understanding of how encryption works on the web.	**We are architects** Creating a virtual space ● understand the work of architects, designers and engineers working in 3-D ● develop familiarity with a simple CAD (computer-aided design) tool ● develop spatial awareness by exploring and experimenting with a 3-D virtual environment ● develop greater aesthetic awareness	**We are web developers** Making sense of the Internet and building a website ● the name and function of components making up the school's network ● how information is passed between the components that make up the Internet ● what the source code for a web page looks like, and how it can be edited ● how a website can be structured ● how to add content to a web page.	**We are adventure gamers** Creating an interactive adventure using presentation software ● how to plan a non-linear presentation ● to create text as part of a presentation ● to add and edit images in a presentation ● to use hyperlinks for navigation between the slides of a presentation ● to record and add audio narration to a presentation ● to use commenting tools to give feedback on a presentation.	**We are VR designers** Experimenting with virtual and augmented reality ● explore real-world and imagined locations in VR (if possible) ● create 360° photosphere images ● link physical objects to digital content using QR codes ● create their own VR scene ● program objects and interactions in VR

YEAR 6	**We are toy makers** Coding and physical computing ● how computers use stored programs to connect input to output ● how to generate and evaluate designs in response to a brief ● to plan a complex project by decomposing it into smaller parts ● to work with physical components of a system ● how to design and write a program for an embedded system ● to use criteria to provide others with feedback on their work.	**We are computational thinkers** Mastering algorithms for searching, sorting and mathematics ● develop the ability to reason logically about algorithms ● understand how some key algorithms can be expressed as programs ● understand that some algorithms are more efficient than others for the same problem ● understand common algorithms for searching and sorting a list.	**We are publishers** Creating a yearbook or magazine ● manage or contribute to large collaborative projects, facilitated using online tools ● write and review content ● source digital media while demonstrating safe, respectful and responsible use ● design and produce a high-quality print document.	**We are connected** Developing skills for social media ● about appropriate rules or guidelines for a civil online discussion ● how search results are selected and ranked ● how to argue their point effectively, supporting their views with sources ● how to counter someone else's argument while showing respect and tolerance ● how to judge the reliability of an online source ● some strategies for dealing with online bullying.	**We are advertisers** Creating a short television advert ● think critically about how video is used to promote a cause ● storyboard an effective advert for a cause ● work collaboratively to shoot original footage and source additional content ● acknowledge intellectual property rights ● work collaboratively to edit the assembled content to make an effective advert.	**We are AI developers** Learning about artificial intelligence and machine learning ● how decision trees can be trained automatically to classify data ● how speech recognition works ● how a neural net recognises images ● to train a neural net to classify images ● to train a machine learning system to identify sentiments ● to consider some ethical principles in designing AI systems.