BESPOKE CURRICULUM
Order of Learning

{ JAM CODING } BESPOKE CURRICULUM

Make computing the most exciting subject at your school!

Pupils build on prior learning!

EDUTAINMENT Learn whilst having fun!

RECEPTION → YEAR 6

Half Term 1	Coding Cats & Dogs	Game Making	Solving Problems with Algorithms	Physical Systems Coding Recycled Musical Instruments	Arcade Gaming	Robotics
Half Term 2	Creative Computing	Animation	School Radio Show	Multimedia Quiz	Photo Editing Movie Posters	Video Editing Try not to laugh video
Half Term 3	Awesome Animations	Online Treasure Hunt	Gathering Data	Creating Game Show Characters	Computing History	Web Design
Half Term 4	Terrific Technology	Presenting Our School	Presenting Data	Analysing Data Game Competition	Analysing Data Questionnaire Results	Game Hacking Using Data Modelling to improve the outcome of games
Half Term 5	Coding Cats & Dogs 2	Coding A Story	Game Design Scratch	Quiz Game	Physical Computing Gaming	Arcade Gaming
Half Term 6	Digital Citizenship Stranger Danger Animation	Digital Citizenship eSafety Interactive Story Game	Digital Citizenship Online Wellbeing Podcast	Digital Citizenship Social Media Quiz Game	Digital Citizenship eSafety game to teach younger pupils	Digital Citizenship Creating a Digital Citizenship Website

BESPOKE CURRICULUM
Learning Journey

This order of learning forms a whole school learning journey for computing.

Each unit of work builds upon the skills and understanding from the previous unit to ensure progression across all year groups.

Topics and key words are revisited to consolidate understanding.

This is seen in the summary of each half terms' order of learning on the following slides.

HALF TERM 1
Programming and Physical Computing

Unit	Coding Cats & Dogs	Game Making	Solving Problems with Algorithms	Physical Systems Coding Recycled Musical Instruments	Arcade Gaming	Robotics
Summary	Pupils will learn about structuring basic algorithms and controlling floor robots using commands.	Pupils will learn how to control sprites and make them interact by making games using visual code.	Pupils will learn how to decompose problems and write more complex algorithms using more advanced visual code.	Pupils will apply their understanding of decomposition and algorithms to create a physical system using circuits to create a working musical instrument from recycled materials.	Pupils continue applying their understanding of visual code to create more complex games using a range of syntax. They will apply their understanding to a new coding environment.	Further application and development of coding skills and understanding of physical systems through controlling a robot using a range of programmable sensors and motors.
Key Words	Robot Command Algorithm Debug	Sequence Background Record Interact Trigger	Algorithm Decomposition Iteration Selection	Input Output Circuit Sensor	Pixels Sprites Controller Axis Variable Selection	Motor LED Infrared Sensor Ultrasonic Sensor Radio Signal Function

HALF TERM 2
Multimedia Computing

Unit	Creative Computing	Animation	School Radio Show	Multimedia Quiz	Video Editing Try not to laugh	Photo Editing Movie Stars
Summary	Pupils will develop skills in typing, mouse control, and file saving through game play.	Pupils will develop their understanding of different types of animation using 3 different animation software to create hand drawn, stop motion and image manipulation.	Pupils will develop understanding of sound editing through writing scripts and recording and editing their own school radio show.	Pupils will build on their understanding of multimedia so far by creating an interactive multi-media quiz with hyperlinks, audio, animation and images.	Consolidates learning so far and develops new skills in video editing through recording their own content and using video editing skills to bring together text, images, video and audio.	Consolidates learning so far and develops new skills in multimedia through editing photos using a range of photo editing techniques to manipulate photos of movie stars and movie posters.
Key Words	Mouse/Trackpad Keyboard Click and Drag Tools Type Text Edit	Animation Frame Onion Skin Stop frame Animation Motion Graphics	Script Import Pitch Tempo Reverb Export	Media Multimedia Hyperlink Master Slide Audio Transition Accessibility	Purpose Audience Storyboard Cut and Trim Video Title Effects Video Transition	Photo Editing Spot Healing Brush Clone Tool Gradient Tool Lasso Tool Warp Tool

HALF TERM 3
Computer Systems and Networks

Unit	Awesome Animations	Online Treasure Hunt	Gathering Data	Creating Game Characters	Computing History	Web Design
Summary	Pupils will build upon their creative computing skills by creating animations with graphics. They will learn how to save from an online source.	Pupils will learn how to search the internet effectively to gather data for a given purpose. They will develop understanding of the reliability of online information.	Pupils will build upon their web searching skills to gather data from primary and secondary sources, including online and through questionnaires. They will present it using their multimedia skills developed in half term 2.	Pupils will build upon their networking and multimedia skills by creating a range of computer game characters. They will gather online data then use it to create 2D and 3D modelling to match a brief.	Consolidates understanding of searching for information online & develops further by beginning to look at bias and inaccuracies online. Pupils will learn about famous figures in Computing and its origins.	Consolidates learning so far by gathering data online and creating their own website using images, animations, audio and video. Pupils will learn about networking and how the internet works.

HALF TERM 4
Data Information and Modelling

Unit	Terrific Technology	Presenting our School	Presenting Data	Analysing Data Game Completion	Analysing Data Questionnaire Results	Game Hacking Using data modelling to improve the outcome of games
Summary	Pupils will learn about the technology around them, from sensors, to QR codes.	Pupils will gather data from their peers and staff and developing multimedia skills by presenting information about their school for specific audiences.	Pupils will learn how to use presentation and spreadsheet software to present data and basic modelling of outcomes.	Pupils will build upon their presentation of data skills by collecting data, analysing it for patterns and predicting outcomes through collecting game data during gameplay.	Consolidates understanding of data collection, analysis and modelling by analysing questionnaire results to inform decisions using 'what if' scenarios.	Pupils will consolidate their understanding of data, information and modelling by improving gameplay outcomes through the use of spreadsheet skills.

HALF TERM 5
Programming and Physical Computing

Unit	Coding Cats and Dogs 2	Coding a Story	Game Design **Adventure Game**	Quiz Game	Physical Computing Gaming	Retro Arcade Gaming
Summary	Pupils will consolidate their understanding of floor robots through being set a series of challenges to encourage deeper thinking.	Pupils will consolidate their understanding and skills in visual programming through creating an interactive story game using sprites.	Pupils will consolidate their understanding and skills in advanced visual programming by creating an adventure game with different pathways depending on user input. This requires a good understanding of selection and begins to look at nested IFs.	Pupils will consolidate their understanding of programming through creating an interactive quiz game which keeps track of score, bonus points and the winner using a range of variables.	Pupils will consolidate their understanding of physical computing through creating a range of games which can be played on a physical device using a range of inputs, outputs and sensors.	Pupils will consolidate their understanding of advanced visual code through creating a series of 'retro games' which challenge their understanding of coding syntax.

HALF TERM 6
Digital Citizenship

Unit	Stranger Danger Animation	eSafety Interactive Game	Online Wellbeing Podcast	Social Media Quiz Game	eSafety Game	Creating A Digital Citizenship Website
Summary	During this half term, all pupils will develop understanding of age-appropriate digital citizenship with a focus on online safety. They will evidence their skills and understanding by creating a product which shows the skills they have learnt throughout the year, whether that be through multimedia, or programming.					