Computing Spring Overview

Art	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Unit	Coding	Creating Pictures	Branching Databases Graphing	Animation Effective Searching	Databases	Quizzing
Outline	Read, create and use code to run a program	Explore different styles of paining using 2Paint	Understand, create and use branching databases. Understand, create and interpret graphs	Create simple and more complex animations using 2Animate Explore and assess Search Engines.	Use the database program 2Investigate to learn about the functions of databases	Create quizzes on different topics and for different audiences and will have the opportunity to share them with other
Learning objectives	• To understand what instructions are and predict what might happen when they are followed. • To use code to make a computer program. • To understand what object and actions are. • To understand what an event is. • To use an event to control an object. • To begin to understand how code executes when a program is run. • To understand what backgrounds and objects are. • To plan and make a computer program.	• To learn the functions of the 2Paint a Picture tool. • To learn about and recreate the Impressionist style of art (Monet, Degas, Renoir). • To recreate Pointillist art and look at the work of pointillist artists such as Seurat. • To learn about the work of Piet Mondrian and recreate the style using the lines template. • To learn about the work of William Morris and recreate the style using the patterns template. • To explore surrealism and eCollage	• To sort objects using just 'yes' or 'no' questions. • To complete a branching database using 2Question. • To create a branching database of the children's choice. • To enter data into a graph and answer questions. • To solve an investigation and present the results in graphic form.	• To discuss what makes a good animated film or cartoon. • To learn how animations are created by hand. • To find out how animation can be created in a similar way using the computer. • To learn about onion skinning in animation. • To add backgrounds and sounds to animations. • To be introduced to 'stop motion' animation. • To share animation on the class display board and by blogging. • To locate information on the search results page. • To use search effectively to find out information.	• To learn how to search for information in a database. • To contribute to a class database. • To create a database around a chosen topic	• To create a picture-based quiz for young children. To learn how to use the question types within 2Quiz. •To explore the grammar quizzes. •To make a quiz that requires the player to search a database. •To make a survey and analyse the responses.

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				• To assess whether an information source is true and reliable		
Key Skills	• To use short, sharp instructions. • Recall - drawing upon cross-curricular knowledge – instructions need to be chronological. • Input their instructions into a Purple Mash program. • Using the appropriate blocks. • Decision-making to order the instructions chronologically. • Recall - drawing upon prior knowledge to create a simple program. • Working in groups – understanding definition of event. • Using iPad skills to execute their program.	• To explore 2Paint A Picture. • To look at the work of Impressionist artists and recreate them using the Impressionism template. • To look at the work of pointillist artists such as Seurat. • To recreate pointillist art using the Pointillism template. • To look at the work of Piet Mondrian and recreate it using the Lines template. • To look at the work of William Morris and recreate it using the Patterns template. • To combine 2 effects in 2paint. • To create repeating patterns. • To look at some surrealist art. • To create artwork using the eCollage function. •	• Understand that there are different types of data. • Understand the need to structure information properly in a database. • Understand that effective yes / no questions are key to organising data efficiently in a branching database • Begin to identify what data should be collected to answer a specific question. • Collect data and enter it into a database under appropriate field headings. • Recognise similarities and differences between ICT and paper-based systems. • Understand that effective yes / no questions are key to organising data efficiently in a branching database. • Create and use a branching database to	• Understand animation frames. • Children have made a simple animation using 2Animate • Know what the Onion Skin tool does in animation. • Can use the Onion Skin tool to create an animated image. • Can use backgrounds and sounds to make more complex and imaginative animations • Know what 'stop motion' animation is and how it is created. • have used ideas from existing 'stop motion' films to recreate their own animation. • have shared their animations and commented on each other's work using display boards and blogs in Purple Mash • Can structure search queries to locate specific information.	• Collect and record information using spreadsheets and databases • Carry out complex searches (e.g. using and/or; ≤ / ≥) • Solve problems and present answers using data tools • Analyse information and question data • Identify poor quality data. • Select appropriate use of a data logger for an investigation and interpret the findings	• Used the 2DIY activities to create a picture-based quiz. • Considered the audience's ability level and interests when setting the quiz. • Shared their quiz and responded to feedback. • Have ideas about what sort of questions are best suited to the different question types. • Used 2Quiz to make and share a science quiz (or another subject). • Considered audience when setting the quiz. • Tried out the different types of grammar games. • Chosen an appropriate tool to make their own grammar game(s). • Used a 2Investigate quiz to answer quiz questions.

			organise and analyse information to answer questions. • Based on the data collected, children should raise their own questions and translate them into search criteria that can be used to find answers to specific questions. • Recognise similarities and differences between ICT and paper-based systems. • Begin to make choices about how to present data to solve a specific problem. • Create frequency diagrams and graphs to answer questions. • Based on the data collected, children should raise their own questions and translate them into search criteria that can be used to find answers to specific questions. • Compare different charts and graphs, e.g., in tables, frequency diagrams, pictograms, bar charts, databases or spreadsheets and	• Have used search to answer a series of questions. • Written search questions for a friend to solve. • Analyse the contents of a web page for clues about the credibility of the information		• Designed their own quiz based on one of the 2Investigate example databases. • Used questioning to gain information or understanding. • Interpreted survey data

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			understand that different ones are used for different purposes. • Select and use the most appropriate method to organise and present data.			
Key Vocab	Action Algorithm Background Code Command De-bug/De-bugging Event Execute Input	Art Palette Style Fill Pointillism Impressionism Surrealism	Binary Tree Database Branching Database Debugging Axis Chart Column Data Graph Investigation Row Sorting Tally Chart	Animation Onion Skinning FPS (Frames Per Second) Frames Pause Stop Motion Balanced View Easter Eggs Internet Key Words Reliability Results Page Search Engines	Arrange Avatar Chart Collaborative Data Database Field Group Record Database Report Sort Statistics	Audience Audio Case Sensitive Cloze Participants Preview Quiz Survey
Key Questions	What is coding? Why is it useful to design before coding? How can you make characters move in a 2Code program?	What are the main features of Impressionism? What are the main features of Pointillism? What are the main features of Surrealism?	What is meant by data? What is a database? What is a branching database? What is a graph? What are the frame lines on the graph called? What different types of graph are there?	What is meant by animation? What is meant by onion skinning? What is meant by stop motion animation? What is a search engine?	What is a database? Why is the collaborative feature important? In what ways can I sort information in a database?	What factors do you need to consider when creating a quiz? Name three question types in 2Quiz. Apart from the questions, what else does a quiz need to contain?