

Subject	Computing	Year Group	7	
	Unit 1	Unit 2	Unit 3	Unit 4
Scheme title	Introduction to Computing	Flowol	Binary and data	Programming Concepts in Scratch
Purpose of scheme	To understand a range of ways to use the school system safely. To explore what a digital system look like.	To introduce to students to the concepts of algorithms. To introduce the programming concepts of sequence, selection, looping and subroutines with real world examples. This will build a foundation in which all computaional thinking units are based.	To explore how computers store information in binary, including text and images. To be introduced to binary including units of measurement.	To consolidate student's understanding of sequence, selection and looping while introducing programming using a block based language.
Knowledge in sequence	What does the our school system look and how do we use it? What is a computer? What are the origins of programming and computer hardware? What is a digital system?	What is an algorithm and how can we represent them using flowcharts? How do you build a sequence of instructions and how to do we loop them? How is selection used to form algorithms that 'make decisions'? Why are subroutines used and how can they be used to make effecient solutions to problems?	How do computers count and how do we convert binary in denary? How do you represent integer values in binary? How do we measure binary values? How is text stored using binary numbers? How are images stored using binary numbers?	How do you program a sequence? How do you implement loops? What is a condition controlled loop? What does selection look like when programming? How do you create and implement subroutines in Scratch?
Skills	To be able to use the school system safely and effeciently including Google Classroom and student user areas. To be able to organise work in file directories with suitable file name conventions. To be able to identify some of the origins of computers.	To be able to conctruct flow charts to solve a variety of real world problems. To be able to implement sequence, selection and looping when solving problems. To be able to build a subroutine.	To be able to convert between binary and denary number bases. To be able to convert text into binary using an ASCII table. To be able to calculate the filesize of an image.	To be able to implement sequence, selection and looping in a block based programming language. To be able to use subroutines to make programs more effecient.
Key words	User Area, File, Folder, Directory, Application, Digital, Binary	Flow chart, algorithm, sequence, selection, looping, subroutine, call.	Binary, denary, integer,number base, bit, byte (including kilo, mega, giga prefixes), ASCII, pixel, resolution, colour depth.	Sprite, stage, algorithm, sequence, selection, looping, subroutine, call.
End point	Student will feel confident using school systems. Students will have some understanding of what a computer is	Students will be able to conctruct flowcharts in Flowol calling upon appropriate programming	Students will be able to perform conversions between the binary and denary	Students will be able to create programs/games that include sequence selection iteration and
Assessment Methods	Baseline Assessment online test	Skills are teacher assessed.	Knowledge checks each lesson. End of unit assessment online.	Skills are teacher assessed.