

	COMPUTING SYSTEMS & NETWORKS	CREATING MEDIA	DATA & INFORMATION	PROGRAMMING
YEAR 1	Technology around us To identify technology To identify a computer and its main parts To use a mouse in different ways To use a keyboard to type To use the keyboard to edit text To create rules for using technology responsibly	Digital painting To describe what different freehand tools do To use the shape tool and the line tools To make careful choices when painting a digital picture To explain why I chose the tools I used To use a computer on my own to paint a picture To compare painting a picture on a computer and on paper Digital writing To use a computer to write To add and remove text on a computer To identify that the look of text can be changed on a computer To make careful choices when changing text To explain why I used the tools that I chose To compare writing on a computer with writing on paper	Grouping data To label objects To identify that objects can be counted To describe objects in different ways To count objects with the same properties To compare groups of objects To answer questions about groups of objects	Moving a robot To explain what a given command will do To act out a given word To combine forwards and backwards commands to make a sequence To combine four direction commands to make sequences To plan a simple program To find more than one solution to a problem Introduction to animation To choose a command for a given purpose To show that a series of commands can be joined together To identify the effect of changing a value To explain that each sprite has its own instructions To design the parts of a project To use my algorithm to create a program
YEAR 2	Information technology around us To recognise the uses and features of information technology To identify information technology in the home To identify information technology beyond school To explain how information technology benefits us To show how to use information technology safely To recognise that choices are made when using information technology	Digital photography To know what devices can be used to take photographs To use a digital device to take a photograph To describe what makes a good photograph To decide how photographs can be improved To use tools to change an image To recognise that images can be changed Making music To say how music can make us feel To identify that there are patterns in music To describe how music can be used in different ways To show how music is made from a series of notes To create music for a purpose To review and refine our computer work	Pictograms To recognise that we can count and compare objects using tally charts To recognise that objects can be represented as pictures To create a pictogram To select objects by attribute and make comparisons To recognise that people can be described by attributes To explain that we can present information using a computer	Robot algorithms To describe a series of instructions as a sequence To explain what happens when we change the order of instructions To use logical reasoning to predict the outcome of a program (series of commands) To explain that programming projects can have code and artwork To design an algorithm To create and debug a program that I have written Introduction to quizzes To explain that a sequence of commands has a start To explain that a sequence of commands has an outcome To create a program using a given design To change a given design To create a program using my own design To decide how my project can be improved

	COMPUTING SYSTEMS & NETWORKS	CREATING MEDIA	DATA & INFORMATION	PROGRAMMING
YEAR 3	Connecting computers To explain how digital devices function To identify input and output devices To recognise how digital devices can change the way we work To explain how a computer network can be used to share information To explore how digital devices can be connected To recognise the physical components of a network	Stop-frame animation To explain that animation is a sequence of drawings or photographs To relate animated movement with a sequence of images To plan an animation To identify the need to work consistently and carefully To review and improve an animation To evaluate the impact of adding other media to an animation Desktop publishing To recognise how text and images convey information To recognise that text and layout can be edited To choose appropriate page settings To add content to a desktop publishing publication To consider how different layouts can suit different purposes To consider the benefits of desktop publishing	Branching databases To create questions with yes/no answers To identify the object attributes needed to collect relevant data To create a branching database To identify objects using a branching database To explain why it is helpful for a database to be well structured To compare the information shown in a pictogram with a branching database	Sequence in music To explore a new programming environment I can identify that each sprite is controlled by the commands I choose To explain that a program has a start To recognise that a sequence of commands can have an order To change the appearance of my project To create a project from a task description Events and actions To explain how a sprite moves in an existing project To create a program to move a sprite in four directions To adapt a program to a new context To develop my program by adding features To identify and fix bugs in a program To design and create a maze-based challenge
YEAR 4	The internet To describe how networks physically connect to other networks To recognise how networked devices make up the internet To outline how websites can be shared via the World Wide Web To describe how content can be added and accessed on the World Wide Web To recognise how the content of the WWW is created by people To evaluate the consequences of unreliable content	Audio editing To identify that sound can be digitally recorded To use a digital device to record sound To explain that a digital recording is stored as a file To explain that audio can be changed through editing To show that different types of audio can be combined and played together To evaluate editing choices made Photo editing To explain that digital images can be changed To change the composition of an image To describe how images can be changed for different uses To make good choices when selecting different tools To recognise that not all images are real To evaluate how changes can improve an image	Data logging To explain that data gathered over time can be used to answer questions To use a digital device to collect data automatically To explain that a data logger collects 'data points' from sensors over time To use data collected over a long duration to find information To identify the data needed to answer questions To use collected data to answer questions	Repetition in shapes To identify that accuracy in programming is important To create a program in a text-based language To explain what 'repeat' means To modify a count-controlled loop to produce a given outcome To decompose a program into parts To create a program that uses count-controlled loops to produce a given outcome Repetition in games To develop the use of count-controlled loops in a different programming environment To explain that in programming there are infinite loops and count controlled loops To develop a design which includes two or more loops which run at the same time To modify an infinite loop in a given program To design a project that includes repetition To create a project that includes repetition
YEAR 5	Shapes information	Video editing	File file database	Selection in physical computing

COMPUTING SYSTEMS & NETWORKS**CREATING MEDIA****DATA & INFORMATION****PROGRAMMING****YEAR 5****Sharing information**

To explain that computers can be connected together to form systems
To recognise the role of computer systems in our lives
To recognise how information is transferred over the internet
To explain how sharing information online lets people in different places work together
To contribute to a shared project online
To evaluate different ways of working together online

Video editing

To recognise video as moving pictures, which can include audio
To identify digital devices that can record video
To capture video using a digital device
To recognise the features of an effective video
To identify that video can be improved through reshooting and editing
To consider the impact of the choices made when making and sharing a video

Vector drawing

To identify that drawing tools can be used to produce different outcomes
To create a vector drawing by combining shapes
To use tools to achieve a desired effect
To recognise that vector drawings consist of layers
To group objects to make them easier to work with
To evaluate my vector drawing

Flat-file databases

To use a form to record information
To compare paper and computer-based databases
To outline how grouping and then sorting data allows us to answer questions
To explain that tools can be used to select specific data
To explain that computer programs can be used to compare data visually
To apply my knowledge of a database to ask and answer real-world questions

Selection in physical computing

To control a simple circuit connected to a computer
To write a program that includes count-controlled loops
To explain that a loop can stop when a condition is met, eg number of times
To conclude that a loop can be used to repeatedly check whether a condition has been met
To design a physical project that includes selection
To create a controllable system that includes selection

Selection in games

To explain how selection is used in computer programs
To relate that a conditional statement connects a condition to an outcome
To explain how selection directs the flow of a program
To design a program which uses selection
To create a program which uses selection
To evaluate my program

YEAR 6**Communication**

To identify how to use a search engine
To describe how search engines select results
To describe how search engines select results
To explain how search results are ranked
To recognise why the order of results is important, and to whom
To recognise how we communicate using technology
To evaluate different methods of online communication

Web page creation

To review an existing website and consider its structure
To plan the features of a web page
To consider the ownership and use of images (copyright)
To recognise the need to preview pages
To outline the need for a navigation path
To recognise the implications of linking to content owned by other people

3D modelling

To use a computer to create and manipulate three-dimensional (3D) digital objects
To compare working digitally with 2D and 3D graphics
To construct a digital 3D model of a physical object
To identify that physical objects can be broken down into a collection of 3D shapes
To design a digital model by combining 3D objects
To develop and improve a digital 3D model

Spreadsheets

To identify questions which can be answered using data
To explain that objects can be described using data
To explain that formula can be used to produce calculated data
To apply formulas to data, including duplicating
To create a spreadsheet to plan an event
To choose suitable ways to present data

Variables in games

To define a 'variable' as something that is changeable
To explain why a variable is used in a program
To choose how to improve a game by using variables
To design a project that builds on a given example
To use my design to create a project
To evaluate my project

Sensing

To create a program to run on a controllable device
To explain that selection can control the flow of a program
To update a variable with a user input
To use an conditional statement to compare a variable to a value
To design a project that uses inputs and outputs on a controllable device
To develop a program to use inputs and outputs on a controllable device