

Ickford School Computing Map for Teachers

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Class 1	<p>Creating media – digital painting. To describe what different freehand tools do</p> <p>To use the shape and line tools</p> <p>Make careful choices when painting a digital picture</p> <p>To explain why different tools were chosen</p> <p>To use a computer on my own to paint a picture</p> <p>To compare painting a picture on the computer and on paper</p>	<p>Computer Systems and networks – Technology around us. To identify technology</p> <p>To identify a computer and its main parts</p> <p>To use a mouse</p> <p>To use a keyboard to type and edit text</p> <p>To create rules for using technology responsibly</p>	<p>Programming – moving a robot. To explain a command, to act out a given word</p> <p>To combine forwards and backwards commands to make a sequence</p> <p>To combine four directions to make a sequence</p> <p>To plan a program</p> <p>To find more than one solution to a problem</p>	<p>Creating media - Digital writing. To use a computer to write</p> <p>To add and remove text on a computer</p> <p>To identify that the look of text can be changed</p> <p>To make careful choices when changing text</p> <p>To explain why tools were chosen</p> <p>To compare typing on a computer to writing on paper</p>	<p>Programming – programming animations To choose a command for a given purpose</p> <p>To show that a series of commands can be joined together</p> <p>To identify the effect of changing a value</p> <p>To explain that each sprite has its own instructions</p> <p>To design the parts of a project</p> <p>To use the algorithm to create a program</p>	<p>Data and information – Grouping data. To label objects, to identify objects that can be counted</p> <p>To describe objects in different ways</p> <p>To count objects with the same properties</p> <p>To compare groups of objects</p> <p>To answer questions about groups of objects</p>
Class 2	<p>Programming – Robot algorithms. To describe a series of instructions as a sequence</p>	<p>Computing systems and networks – IT around us. To recognise the uses/features of Information Technology (IT) and</p>	<p>PowerPoint Presentations To understand what the programme is used for</p>	<p>Data and information – Pictograms. To recognise that we can count and compare objects using tally charts</p>	<p>Creating media – Digital music. To say how music can make people feel, identify patterns in music, experiment with sound using a</p>	<p>Programming – programming quizzes. To explain that a sequence of commands has a</p>

	<p>To explain what happens when the order of instructions is changed</p> <p>To use logical reasoning to predict the outcome of a program</p> <p>To explain that programming projects can have code and artwork</p> <p>To design an algorithm</p> <p>To create and debug a program</p>	<p>identify the uses of IT in school</p> <p>To identify IT beyond school</p> <p>Explain how IT helps us</p> <p>To explain how to use IT safely</p> <p>To recognise that choices are made when using IT</p>	<p>To understand how to add new slides</p> <p>To be able to add and delete text</p> <p>To be able to change text font, size and colour</p> <p>To be able to add information from a chosen topic</p>	<p>Objects can be presented using pictures</p> <p>To create a pictogram</p> <p>To select objects by attribute to make comparisons</p> <p>To recognise that people can be described by attribute</p> <p>To present information using a computer</p>	<p>computer, to use a computer to make a musical pattern, to create music for a purpose, to review and refine work on the computer.</p>	<p>start and an outcome</p> <p>To create a program using a given design and change that design</p> <p>To create a program using own design</p> <p>To decide how a program can be improved</p>
Class 3	<p>Programming - Sequencing Sounds</p> <p>To create a program following a design</p> <p>To predict coding blocks used to move a sprite</p> <p>To program in different ways</p> <p>To create a sequence of connected commands</p>	<p>Data and Information - Branching Databases</p> <p>To investigate questions with yes/no answers</p> <p>To select an attribute to separate objects into similarly sized groups</p> <p>To repeatedly create subgroups of objects</p> <p>To recognise that a data set can be structured</p>	<p>Creating Media – Desktop publishing</p> <p>To recognise how text and images can be used together to convey information</p> <p>To consider how different layouts can suit different purposes</p> <p>To recognise that DTP pages can be structured with placeholders</p>	<p>PowerPoint Presentations</p> <p>To understand what the programme is used for</p> <p>To understand how to add new slides</p> <p>To be able to add and delete text</p> <p>To be able to change text font, size and colour</p> <p>To add pictures</p>	<p>Programming - Events and Actions in Programs</p> <p>To explain that programs start because of an input</p> <p>To explain what a sequence is</p> <p>To identify that a program includes a sequence of demands</p> <p>To identify that the sequence of a program is a process</p>	<p>Programming – Repetition in games.</p> <p>To develop the use of count controlled loops in a different programming environment</p> <p>To explain there are infinite and count controlled loops</p> <p>To develop a design that runs two or more loops at the same time</p>

	<p>To identify and name objects needed for a project</p>	<p>To explain that a branching database is an identification tool</p> <p>To relate two levels of a branching database</p> <p>To suggest real-world applications for branching databases</p>	<p>To recognise how different font styles and effects are used for different purposes</p>	<p>To be able to research add information from a chosen topic</p> <p>To analyse and improve PowerPoint presentations</p> <p>To recognise real-world applications for PowerPoint Presentations</p>	<p>To identify that different sequences can achieve the same and different outputs</p>	<p>To modify an infinite loop</p> <p>To design and create a project that includes repetition</p>
Class 4	<p>Computing Systems and Networks - Systems and Searching</p> <p>To recognise that a system is a set of interconnected parts which work together</p> <p>To recognise inputs, processes and outputs in large IT systems</p> <p>To describe the role of a particular IT system in their lives</p> <p>To relate that search engines are examples of large IT systems</p>	<p>Creating media – Video Production</p> <p>To recognise which devices can and can't record video</p> <p>To explain the limitations of editing video on a recording device</p> <p>To identify videos can be improved through reshooting or editing</p> <p>To recognise projects need to exported to be shared</p>	<p>Programming - Selection in Physical Computing</p> <p>To explain that a condition can only be true or false</p> <p>To relate that a count-controlled loop contains a condition</p> <p>To compare a count-controlled loop with a condition-controlled loop</p> <p>To explain that when a condition is met, a loop will complete a cycle before it stops</p> <p>To explain that selection can be used to branch the flow of a program</p>	<p>Data and Information - Flat-file Databases</p> <p>To explain that tools can be used to select data to answer questions</p> <p>To outline how 'AND' and 'OR' can be used to refine data selection</p> <p>To explain that computer programs can be used to compare data visually</p> <p>To explain that we present information to communicate a message</p>	<p>Creating Media - Introduction to Vector Graphics</p> <p>To identify that a vector drawing comprises separate objects</p> <p>To recognise that each object in a drawing is in its own layer</p> <p>To explain how alignment and size guides can help create a more consistent drawing</p> <p>To recognise that vector images can be scaled without impact on quality</p>	<p>Programming - Selection of Quizzes</p> <p>To relate that a count-controlled loop contains a condition</p> <p>To explain that a condition-controlled loop will stop when a condition is met</p> <p>To explain that when a condition is met a loop will complete a cycle before it stops</p> <p>To explain that selection can be used to branch the flow of a program</p> <p>To explain that a loop can be used to repeatedly check</p>

					To recognise that objects can be modified in groups	whether a condition has been met
Class 5	<p>Creating media – 3D modelling. To recognise that it is possible to work in three dimensions on a computer</p> <p>Identify that 3D models can be modified</p> <p>That objects can be combined in 3D modelling</p> <p>To create a 3D model for a given purpose</p> <p>To plan and create own 3D model</p>	<p>Code cracking and Cryptography To understand why information is sometimes kept secret</p> <p>How a cypher works including a code wheel</p> <p>Understanding Morse code by coding and decoding messages (Linked to World War II).</p>	<p>Creating Media – Web page creation</p> <p>To plan the features of a web page</p> <p>To consider ownership and use of images</p> <p>To recognise the need to preview pages</p> <p>To outline the need for a navigation path</p> <p>To recognise the implications of linking to content owned by other people.</p>	<p>Programming – Variables in games</p> <p>To define a variable and understand why it is used in a program</p> <p>To choose how to improve a program</p> <p>To design, create and evaluate a project.</p>	<p>Selection in physical computing – designing a robot (Using Crumble) To program a motor to spin and stop, light an LED when an object is in the way and turn in different directions.</p>	<p>Using the micro:bit for primary to secondary transition To understand how variables and inputs can be used on the micro:bit.</p> <p>To create, evaluate and modify a program using the micro:bit.</p> <p>To modify a program to gather and visualise data</p>