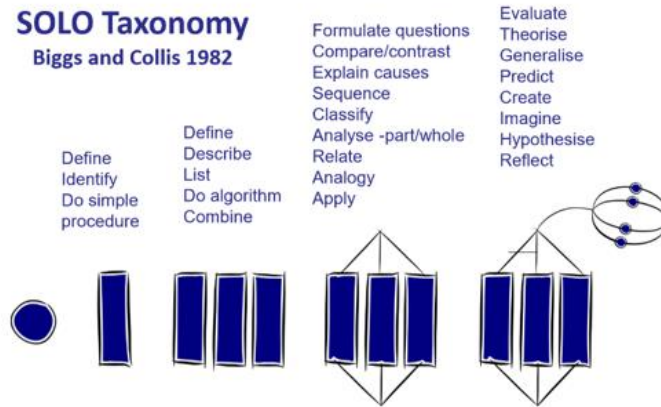






Computing Solo Taxonomy

Brindley Heath Academy







Lower Key Stage 2

Computing Lower KS2		<i>Uni-structural</i> 	<i>Multi-structural</i> 	<i>Relational</i> 	<i>Extended Abstract</i> 
Computing Skills		Emerging	Developing	Secure	Exceeding
Computer Systems and Networks	Navigating online	<p>Identify digital devices in terms of inputs, processes and outputs</p>	<p>Describe a computer network as being made up a number of devices that are connected with one another using infrastructure devices like routers and switches</p> <p>Recognise that the world wide web (WWW) is part of the internet which is a network of networks.</p> <p>Recognise that information/content/media can be shared via the WWW</p> <p>Recognise that not everything you find online can be trusted to be honest and accurate</p>	<p>Explain the need for security on the internet</p> <p>Analyse the reliability of content online and discuss the consequences of unreliable content</p>	<p>Evaluate the benefits and disadvantages of a computer network such as the WWW</p>
	Programming	Sequencing	<p>Define programming as a set of instructions that are designed to complete a task</p> <p>Define sequencing in programming</p> <p>Identify the basic principles of programming design</p>	<p>Understand that sequencing is the process of programming a series of instructions (combining motion, sounds and events) in order to perform a set goal.</p> <p>Understand the link between events and actions</p>	<p>Create a program that achieves a set goal through the principles of sequencing.</p>
Repetition and Loops		<p>Define repetition in programming</p> <p>Define loops in programming</p>	<p>Explain why repetition and loops are used to program in an efficient manner</p>	<p>Apply their understanding of repetition and loops to modify existing programs.</p>	<p>Design and code a program which uses the principles of repetition and loops, modifying their program in order to achieve a set goal in the most efficient manner.</p>

Creating Media	Animation	Identify animation as a form of digital media	Explain how an animation works. Understand that animations are designed using a sequence of frames.	Design and create a simple animation using a sequence of frames.	Evaluate their animations in order to modify their product in a justified manner.
	Desktop Publishing	Define publishing as a method of communicating effectively online	Understand that 'texts' (font size, colour and type) and 'images' are combined to communicate messages. Understand how templates, orientation and placeholders are used in layout design.	Create their own piece of work using desktop publishing software	Evaluate different page layouts and consider how and these can be used in the real world.
	Audio Editing	Identify devices capable of recording digital audio including input (microphone) and output (speaker/headphone) devices.	Recognise that they can create their own podcasts by combining multiple tracks together Recognise the implications of ownership of digital audio and copyright implications.	Create a podcast for a specific purpose that combines multiple tracks together.	Evaluate the effectiveness of their work and make appropriate edits as appropriate.
	Photo Editing	Identify changes that can be made to digital images	Recognise the effect different colours and filters can have on an image Recognise that editing images (editing colours, filters, retouching) can be done to achieve different purposes with different goals	Use an image editing software to make changes to a digital image with a specific purpose in mind	Reflect upon the effectiveness of the edits they made and the impact they had in achieving their desired goal
Data and Information	Branching Databases	Identify branching database in terms of real-life contexts	Recognise how a branching database is useful in terms of sorting information Understand what attributes are and how to use them in order to sort groups of objects by yes/no questions	Create physical and on-screen branching databases for a specific purpose	Evaluate the effectiveness of branching databases and decide what types of data should be presented as a branching database.
	Data Logging	Identify the use of data loggers in real-life contexts	Consider how and why data is collected over time Recognise that computers can use sensors to monitor the environment and collect data (data logging)	Collect data collected using a data logging device considering data points, data sets and logging intervals	Analyse data collected considering the effectiveness of data collected in terms of answering a set of questions

Upper Key Stage 2

Computing Upper KS2		<i>Uni-structural</i> 	<i>Multi-structural</i> 	<i>Relational</i> 	<i>Extended Abstract</i> 
Computing Skills		Emerging	Developing	Secure	Exceeding
Computer Systems and Networks	Collaboration and Communication	<p>Define a system as a number of things (parts, components, people) that work together to complete or perform a task</p> <p>Define communication</p>	<p>Recognise that connections between networks such as the internet allow us to work together in different locations (collaborate)</p> <p>Describe the different methods of communicating online</p>	<p>Compare and contrast the benefits of working online and offline</p> <p>Categorise the different forms of online communication and analyse the benefits of them</p>	<p>Evaluate different ways of working together</p> <p>Evaluate which methods of online communication could be used for different purposes</p>
	Programming	<p style="text-align: center;">Selection</p> <p style="text-align: center;"><small>(including the use of physical devices)</small></p>	<p>Identify the physical devices (inputs and outputs) that can be used with a programming environment (e.g. crumble kits)</p> <p>Define selection in programming</p>	<p>Recognise the way in which devices are connected (e.g. how a microcontroller connects to a crumble kit)</p> <p>Explain the concept of selection in computer programming through the use of the if, then structure</p> <p>Explain how selection can be used to control the operation of a physical device</p>	<p>Create programs and algorithms that utilise the concept of selection</p> <p>Create programs and algorithms that ask questions and use selection to control the outcomes based on the given</p>
	<p style="text-align: center;">Variables</p> <p style="text-align: center;"><small>(including the use of physical devices)</small></p>	<p>Identify the physical devices (inputs and outputs) that can be used with a programming environment (e.g. micro:kit)</p> <p>Define what variables are in programming and identify the use of them within real-world examples</p>	<p>Modify variables within a program to achieve different goals</p> <p>Explain the affect changing variables has upon a program</p>	<p>Create their own programs and algorithms that utilise the concepts of sequencing, loops, selection and variables to achieve a set goal</p>	<p>Evaluate their program by identifying how it meets the requirements of the task and the ways they could have improved it</p>

Creating Media	Vector Drawing	Identify vector images as being made up of different shapes	Understand that images are created in layers that can be grouped and duplicated in order to make more complex pieces of work.	Compare and contrast the way in which vector drawing differs from paper-based drawings Use techniques learnt to create a vector drawing for a specific purpose	Suggest and implement improvements to vector drawings in order to achieve a set goal effectively
	Video Editing	Identify the ways in which videos are used as a tool for online communication Identify the different devices that can be used to create video based digital media	Understand how to capture, edit and manipulate video using video editing software	Create a video for a specific purpose and audience combining the skills of capturing, editing and manipulation	Reflect on and assess their progress in creating a video.suggesting improvements that could have been made
	3D Modelling	Identify 3D computer modelling as a form of graphical representation	Examine the differences between working digitally with 2D and 3D graphics Combine 3D objects together to make simple representations	Design and create accurate 3D models of physical objects	Evaluate the effectiveness of their 3D models and suggest improvements that could be made
	Website Design	Understand that web-pages are a form of online communication	Recognise the features of a good web page Use tools to create online web pages (e.g. Using Google Sites)	Design and create their own website showing an awareness of their audience	Evaluate the effectiveness of their website paying specific attention to copyright, fair use of media, the aesthetics of the site, and navigation paths.
Data and Information	Flat-file Databases	Identify flat-file databases in terms of real-life contexts	Recognise that flat-file databases can be used to organise data Recognise that tools within a database can be used to order data and answer questions about data	Create graphs and charts from their data in order to solve problems	Evaluate the effectiveness of flat-file databases in terms of representing data
	Spreadsheets	Identify the use of spreadsheets in real-life contexts	Consider how and why data is collected over time Recognise that computers can use sensors to monitor the environment and collect data (data logging) Recognise spreadsheets can be used to organise and sort data Recognise that formulas can be used to produce calculated data	Create a spreadsheet to plan an event and answer questions Create graphs and charts that enable to visualise their information	Evaluate their results in comparison to questions asked