ESW Computing Curriculum

Lesson Progression Document

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Digital Literacy	Computer Science	Information Technology

	Lesson	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	**1**	To identify technology	To describe what different freehand tools do	To explain what a given command will do	To label objects	To use a computer to write	To choose a command for a given purpose
	2	To identify a computer and its main parts	To use the shape tool and the line tools	To act out a given word	To identify that objects can be counted	To add and remove text on a computer	To show that a series of commands can be joined together
	3	To use a mouse in different ways	To make careful choices when painting a digital picture	To combine forwards and backwards commands to make a sequence	To describe objects in different ways	To identify that the look of text can be changed on a computer	To identify the effect of changing a value
	4	To use a keyboard to type	To explain why I chose the tools I used	To combine four direction commands to make sequences	To count objects with the same properties	To make careful choices when changing text	To explain that each sprite has its own instructions
	5	To use the keyboard to edit text	To use a computer on my own to paint a picture	To plan a simple program	To compare groups of objects	To explain why I used the tools that I chose	To design the parts of a project
	6	To create rules for using technology responsibly	To compare painting a picture on a computer and on paper	To find more than one solution to a problem	To answer questions about groups of objects	To compare writing on a computer with writing on paper	To use my algorithm to create a program

	Lesson	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 2	1	To recognise the uses and features of information technology	To know what devices can be used to take photographs	To describe a series of instructions as a sequence	To recognise that we can count and compare objects using tally charts	To say how music can make us feel	To explain that a sequence of commands has a start
	2	To identify information technology in the home	To use a digital device to take a photograph	To explain what happens when we change the order of instructions	To recognise that objects can be represented as pictures	To identify that there are patterns in music	To explain that a sequence of commands has an outcome
	3	To identify information technology beyond school	To describe what makes a good photograph	To use logical reasoning to predict the outcome of a program (series of commands)	To create a pictogram	To describe how music can be used in different ways	To create a program using a given design
	4	To explain how information technology benefits us	To decide how photographs can be improved	To explain that programming projects can have code and artwork	To select objects by attribute and make comparisons	To show how music is made from a series of notes	To change a given design
	5	To show how to use information technology safely	To use tools to change an image	To design an algorithm	To recognise that people can be described by attributes	To create music for a purpose	To create a program using my own design
	6	To recognise that choices are made when using information technology	To recognise that images can be changed	To create and debug a program that I have written	To explain that we can present information using a computer	To review and refine our computer work	To decide how my project can be improved

	Lesson	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 3	1	To explain how digital devices function	To explain that animation is a sequence of drawings or photographs	To explore a new programming environment	To create questions with yes/no answers	To recognise how text and images convey information	To explain how a sprite moves in an existing project
	2	To identify input and output devices	To relate animated movement with a sequence of images	I can identify that each sprite is controlled by the commands I choose	To identify the object attributes needed to collect relevant data	To recognise that text and layout can be edited	To create a program to move a sprite in four directions
	3	To recognise how digital devices can change the way we work	To plan an animation	To explain that a program has a start	To create a branching database	To choose appropriate page settings	To adapt a program to a new context
	4	To explain how a computer network can be used to share information	To identify the need to work consistently and carefully	To recognise that a sequence of commands can have an order	To identify objects using a branching database	To add content to a desktop publishing publication	To develop my program by adding features
	5	To explore how digital devices can be connected	To review and improve an animation	To change the appearance of my project	To explain why it is helpful for a database to be well structured	To consider how different layouts can suit different purposes	To identify and fix bugs in a program
	6	To recognise the physical components of a network	To evaluate the impact of adding other media to an animation	To create a project from a task description	To compare the information shown in a pictogram with a branching database	To consider the benefits of desktop publishing	To design and create a maze-based challenge

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Year 4	1	To describe how networks physically connect to other networks	To identify that sound can be digitally recorded:	To identify that accuracy in programming is important	To explain that data gathered over time can be used to answer questions	To explain that digital images can be changed	To develop the use of count-controlled loops in a different programming environment
	2	To recognise how networked devices make up the internet	To use a digital device to record sound:	To create a program in a text-based language	To use a digital device to collect data automatically	To change the composition of an image	To explain that in programming there are infinite loops and count controlled loops
	3	To outline how websites can be shared via the World Wide Web	To explain that a digital recording is stored as a file:	To explain what 'repeat' means	To explain that a data logger collects 'data points' from sensors over time	To describe how images can be changed for different uses	To develop a design which includes two or more loops which run at the same time
	4	To describe how content can be added and accessed on the World Wide Web	To explain that audio can be changed through editing:	To modify a count-controlled loop to produce a given outcome	To use data collected over a long duration to find information	To make good choices when selecting different tools	To modify an infinite loop in a given program
	5	To recognise how the content of the WWW is created by people	To show that different types of audio can be combined and played together:	To decompose a program into parts	To identify the data needed to answer questions	To recognise that not all images are real	To design a project that includes repetition
	6	To evaluate the consequences of unreliable content	To evaluate editing choices made:	To create a program that uses count-controlled loops to produce a given outcome	To use collected data to answer questions	To evaluate how changes can improve an image	To create a project that includes repetition

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Year 5	1	To explain that computers can be connected together to form systems	To recognise video as moving pictures, which can include audio	To control a simple circuit connected to a computer	To use a form to record information	To identify that drawing tools can be used to produce different outcomes	To explain how selection is used in computer programs
	2	To recognise the role of computer systems in our lives	To identify digital devices that can record video	To write a program that includes count-controlled loops	To compare paper and computer-based databases	To create a vector drawing by combining shapes	To relate that a conditional statement connects a condition to an outcome
	3	To recognise how information is transferred over the internet	To capture video using a digital device	To explain that a loop can stop when a condition is met, eg number of times	To outline how grouping and then sorting data allows us to answer questions	To use tools to achieve a desired effect	To explain how selection directs the flow of a program
	4	To explain how sharing information online lets people in different places work together	To recognise the features of an effective video	To conclude that a loop can be used to repeatedly check whether a condition has been met	To explain that tools can be used to select specific data	To recognise that vector drawings consist of layers	To design a program which uses selection
	5	To contribute to a shared project online	To identify that video can be improved through reshooting and editing	To design a physical project that includes selection	To explain that computer programs can be used to compare data visually	To group objects to make them easier to work with	To create a program which uses selection
	6	To evaluate different ways of working together online	To consider the impact of the choices made when making and sharing a video	To create a controllable system that includes selection	To apply my knowledge of a database to ask and answer real-world questions	To evaluate my vector drawing	To evaluate my program

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Year 6	1	To identify how to use a search engine	To review an existing website and consider its structure	To define a 'variable' as something that is changeable	To identify questions which can be answered using data	To use a computer to create and manipulate three-dimensional (3D) digital objects	To create a program to run on a controllable device
	2	To describe how search engines select results	To plan the features of a web page	To explain why a variable is used in a program	To explain that objects can be described using data	To compare working digitally with 2D and 3D graphics	To explain that selection can control the flow of a program
	3	To explain how search results are ranked	To consider the ownership and use of images (copyright)	To choose how to improve a game by using variables	To explain that formula can be used to produce calculated data	To construct a digital 3D model of a physical object	To update a variable with a user input
	4	To recognise why the order of results is important, and to whom	To recognise the need to preview pages	To design a project that builds on a given example	To apply formulas to data, including duplicating	To identify that physical objects can be broken down into a collection of 3D shapes	To use an conditional statement to compare a variable to a value
	5	To recognise how we communicate using technology	To outline the need for a navigation path	To use my design to create a project	To create a spreadsheet to plan an event	To design a digital model by combining 3D objects	To design a project that uses inputs and outputs on a controllable device
	6	To evaluate different methods of online communication	To recognise the implications of linking to content owned by other people	To evaluate my project	To choose suitable ways to present data	To develop and improve a digital 3D model	To develop a program to use inputs and outputs on a controllable device