



LKS2 Markland Hill Computing Curriculum – Lower Key Stage 2 YEAR A

Key Stage 2 National Curriculum Objectives		
Significant people in computing: Ada Lovelace		
Computer Science	Information Technology	Digital Literacy
<i>(How computers and computer systems work and how they are designed and programmed)</i>	<i>(the purposeful use of existing programs to develop products and solutions)</i>	<i>(the skills, knowledge and understanding needed in order to participate fully and safely in an increasingly digital world)</i>
A - design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts		
B - use sequence, selection, and repetition in programs; work with variables and various forms of input and output		
C - use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs		
D - understand computer networks, including the internet; how they can provide multiple services, such as the World Wide Web, and the opportunities they offer for communication and collaboration		
E - use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content		
F - select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information		
G - use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact		

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Computer Science	<u>Computer Systems and Networks</u> Purple Mash 4.7 effective Searching		<u>Programming A</u> Sequencing sounds Teach Computing 3.3			<u>Programming B</u> Repetition in games Teach Computing 4.6
IT		<u>Creating Media</u> Stop-frame animation Teach Computing 3.2		<u>Data and information</u> Branching databases Teach Computing 3.4	<u>Creating Media</u> Markland Hill Unit of work – desktop publishing	
NC objectives	BDEFG	F	ABCF	F	FG	ABCF
Key Vocabulary	Internet, internet browser, search, search engine, spoof website, website	Animation, flip book Stop frame animation, frame, sequence, image, photograph Setting, character, events, onion skinning , consistency, evaluation, delete, media, import, transition	Scratch, programming, blocks, commands, code, sprite, costume, stage, backdrop, motion, turn, point in direction, go to, glide Sequence, event, task, design, run the code, order, note, chord Design, algorithm, bug, debug	Attribute, value, questions, table, objects Branching database, database, attribute, equal, even, separate structure, compare, order, organise, j2data, pictogram, information, decision tree	Text, images, communicate Font, font style, communicate, Landscape, portrait, orientation, placeholder, template Desktop publishing, copy, paste Layout, purpose Benefits, copyright, image credit Text box, text wrapping	Scratch, programming, sprite, blocks, code, loop, repeat, value, forever, infinite loop, count-controlled loop, costume Repetition, animate, costume, event block, duplicate, modify, design, algorithm, debug, refine, evaluate
	- I can locate information on the search results page. - I can use search effectively to find out information (use of keywords/which words can be omitted – explicitly teach this). - I can assess whether an information source is true	- I can explain that animation is a sequence of drawings or photographs - I can relate animated movement with a sequence of images - I can plan an animation	- I can explore a new programming environment - I can identify that commands have an outcome - I can explain that a program has a start - I can recognise that a sequence of commands can have an order	- I can create questions with yes/no answers - I can identify the attributes needed to collect data about an object - I can create a branching database - I can explain why it is helpful for a database to be well structured	- I can retrieve saved work from a given space - I can save work in a specific place – discussing the difference between save and save as and the need to save often In a word processing software:	- I can develop the use of count-controlled loops in a different programming environment - I can explain that in programming there are infinite loops and count controlled loops - I can develop a design that includes two or

	and reliable (rule of 3 websites to check reliability).	- I can identify the need to work consistently and carefully - I can review and improve an animation	- I can change the appearance of my project - I can create a project from a task description	- I can plan the structure of a branching database - I can independently create an identification tool	I can insert and manipulate text I can discuss copyright and identifying sources for copyright purposes I can insert and manipulate image and refer to copyright rules (e.g. crediting the owner of the image) I can insert and manipulate a text box I can upload published work as a pdf document to the blog (publishing content)	more loops which run at the same time -I can modify an infinite loop in a given program -I can design a project that includes repetition -I can create a project that includes repetition
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Computing End Points for KS2

- As computer scientists, pupils will develop further skills to create and manipulate programmes, using elements such as variables and debugging and be able to talk about intended and specific outcomes.
- Pupils will have a secure understanding of the role of algorithms and be able to successfully use them.
- As digital citizens, pupils will have a secure understanding of how to keep themselves safe online. This includes identity and password security, identifying inappropriate and inaccurate content and being aware of cyber-bullying and knowing how to respond to it. It is essential that pupils have a sound knowledge of how to be a positive and responsible member of the online community.
- In the use of information technology, pupils will be able to select and manipulate software and online resources to create their own digital content. Pupils will have a range of skills including being able to analyse, evaluate and present information on a range of devices for specific purposes.