

The background features three blue, 3D-rendered spheres of different sizes. The largest sphere is at the bottom right, a medium-sized one is at the top center, and the smallest one is in the middle left. Thin blue lines connect the top-left corners of the spheres, forming a triangular shape that points towards the top left of the page.

Mapping the Curriculum

KS3 and 4

Cross curricular links with core subjects

Julie Bartlett-Fry
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ICT Mapping KS3 and 4 Computing Curriculum History of Computing

Developing core understanding of the component parts of a computer system

Lesson plan	KS3 Cross curricular Aims	KS4 Attainment targets	Resources
01 Computers stripped back	KS3 Computing : understand the hardware and software components that make up computer systems, and how they communicate with one another and with other systems	KS4 Computing : Develop their capability, creativity and knowledge in computer science, digital media and information technology	3D-displays Dismantled computers. www.kidsdomain.com
	KS3 English: learning new vocabulary, relating it explicitly to known vocabulary and understanding it with the help of context and dictionaries		
	KS3 English: drawing on new vocabulary and grammatical constructions from their reading and listening, and using these consciously in their writing and speech to achieve particular effects		
	KS3 Science: make predictions using scientific knowledge and understanding		
	KS3 Design Technology: understand and use the properties of materials and the performance of structural elements to achieve functioning solutions		

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Lesson plan	KS3 Cross curricular Aims	KS4 Attainment targets	Resources
02 Data flow KS3 Computing: understand the hardware and software components that make up computer systems, and how they communicate with one another and with other systems	KS3 Computing: understand the hardware and software components that make up computer systems, and how they communicate with one another	KS4 Computing: Develop their capability, creativity and knowledge in computer science, digital media and information technology.	ICT interactive FLOWOL http://hoc.lgfl.org.uk/s4_dataflow.html
KS3 English: making inferences and referring to evidence in the text			
KS3 Mathematics: select appropriate concepts, methods and techniques to apply to unfamiliar and non-routine problems			

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Lesson plan	KS3 Cross curricular Aims	KS4 Attainment targets	Resources
03 Input and Output	KS3 Computing: understand the hardware and software components that make up computer systems, and how they communicate with one another and with other systems	KS4 Computing: Develop their capability, creativity and knowledge in computer science, digital media and information technology.	Presentations. www.BBCbitesize.co.uk www.ICTworkout.com
	KS3 English: learning new vocabulary, relating it explicitly to known vocabulary and understanding it with the help of context and dictionaries		
	KS3 Mathematics: extend their understanding of the number system, make connections between number relationships, and their algebraic and graphical representations		
	KS3 Mathematics: establish when to use additive, multiplicative or proportional reasoning from the underlying structure of a problem when working numerically		
	KS3 Science: understand that scientific methods and theories develop as scientists modify earlier explanations to take account of new evidence and ideas, together with the importance of publishing results and peer review	KS3 History: challenges for Britain, Europe and the wider world 1901 to the present day (Second World War)	

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Lesson plan	KS3 Cross curricular Aims	KS4 Attainment targets	Resources
04 System Process	KS3 Computing: understand the hardware and software components that make up computer systems, and how they communicate with one another and with other systems	KS4 Computing: Develop their capability, creativity and knowledge in computer science, digital media and information technology	ICT Interactive
	KS3 Computing: understand and use binary digits, such as to be able to convert between binary and decimal and perform simple binary addition		
	KS3 English: making inferences and referring to evidence in the text		
	KS3 Mathematics: identify variables and express relations between them algebraically and graphically		

London grid for learning.

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Lesson plan	KS3 Cross curricular Aims	KS4 Attainment targets	Resources
05 Storage	KS3 Computing: understand the hardware and software components that make up computer systems, and how they communicate with one another and with other systems	KS4 Computing: Develop their capability, creativity and knowledge in computer science, digital media and information technology	ICT Interactive
	KS3 Computing: understand how instructions are stored and executed within a computer system; understand how data of various types (including text, sounds and pictures) can be represented and manipulated digitally, in the form of binary digits		How to do binary Presentations (Power point)
	KS3 English: learning new vocabulary, relating it explicitly to known vocabulary and understanding it with the help of context and dictionaries		
	KS3 English: drawing on new vocabulary and grammatical constructions from their reading and listening, and using these consciously in their writing and speech to achieve particular effects		
	KS3 Science: pay attention to objectivity and concern for		

	accuracy, precision and repeatability.		
	KS3 Science: electric current, measured in amperes, in circuits, series and parallel circuits, currents add where branches meet and current as flow of charge		

ICT Mapping KS3 and 4 Computing Curriculum

Lesson plan	KS3 Cross curricular Aims	KS4 Attainment targets	Resources
06 How we interact with social Media.	KS3 Computing: understand the implication of social media on young people.	KS4 Computing: Develop their capability, creativity and knowledge in computer science, digital media and information technology.	ICT Interactive www.Thinkuknow.uk
	KS3 Computing: understand how instructions are stored and executed within a computer system; understand how data of various types (including text, sounds and pictures) can be represented and manipulated digitally, in the form of binary digits		
	KS3 Mathematics: develop their mathematical knowledge, in part through solving problems and evaluating the outcomes		

ICT Mapping KS3/4 Computing Curriculum History of Computing

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Lesson plan	KS3 Cross curricular Aims	Computing	Resources
03 Lesson plan	Computing: 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.	Pupils should be taught to: select, use and combine a variety of software (including internet services) on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information.	Who is Collossus?(1944) Alun Turrin www.Tynker.com WWW.code.org WWW.Techfuture girls.com
	Mathematics: Through data collection and presentation reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language.	use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs	LOGO
	Literacy: use discussion in order to learn; they should be able to elaborate and communication and collaboration		
	History: know and understand the story of these islands: how the British people shaped this nation and how Britain influenced the world.		
	Computing: are responsible, competent, confident and creative		

	users of information and communication technology.		
	Computing: can understand and apply the fundamental principles of computer science, including logic, algorithms, data representation, and communication.		

ICT Mapping KS3/4 Computing Curriculum History of Computing

Developing core understanding of the component parts of a computer system

Lesson plan	KS3 Cross curricular Aims	Computing	Resources
04 – Build a Computer	<p>Computing: understand computer networks and the opportunities they offer for communication and collaboration.</p> <p>Literacy: write clearly, accurately and coherently, adapting their language and style in and for a range of contexts, purposes and audiences</p>	<p>Pupils should be taught to: use sequence, selection, and repetition in programs; work with variables and various forms of input and output select, use and combine a variety of software (including internet services) on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and info.</p>	<p>3D-displays Dismantled computers. www.kidsdomain.com www.Code.org</p>
	<p>Computing: understand computer networks and the opportunities they offer for communication and collaboration.</p> <p>Literacy: write clearly, accurately and coherently, adapting their language and style in and for a range of contexts, purposes and audiences</p>		

ICT Mapping KS3/4 Computing Curriculum

Developing core understanding of the use of the English language to communicate in a variety of methods using a Word processing software

Lesson plan	KS3 Cross curricular Aims	Computing	Resources
01 – Word Processing	Literacy: write clearly, accurately and coherently, adapting their language and style in and for a range of contexts, purposes and audiences.	To use appropriate techniques to enter text and other information accurately and efficiently. Store and retrieve information effectively. Identify what information is appropriate for different types of text documents.	Presentation Worksheets
	Literacy: use discussion in order to learn; they should be able to elaborate and explain clearly their understanding and ideas.		
	Mathematics: reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language.		
	Mathematics: can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions		

Lesson plan	KS3 Cross curricular Aims	Computing	Resources
01 – Word Processing	Literacy: write clearly, accurately and coherently, adapting their language and style in and for a range of contexts, purposes and audiences.		
	Literacy: use discussion in order to learn; they should be able to elaborate and explain clearly their understanding and ideas.		
	Mathematics: reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language.		
	Mathematics: can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions		