



Knowledge Organisers for the priority subject for each concept to be issued 2-3 weeks before the learning block is taught.

Metacognition: Metacognition can take many forms; it includes knowledge about when and how to use particular strategies for learning or problem-solving. *These will vary depending on the needs of each class*.

Year A	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Owls						
Concept	Civilisation and Democracy	Culture	All Around the World	Exploration and Discoveries	Natural Wonder	Community
NC Objectives	<ul> <li>use technology purposefully to create, organise, store, manipulate and retrieve digital content</li> <li>recognise common uses of information technology beyond school</li> <li>use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.</li> </ul>	Use technology purposefully to create, organise, store, manipulate and retrieve digital content	<ul> <li>use technology purposefully to create, organise, store, manipulate and retrieve digital content</li> <li>use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.</li> </ul>	<ul> <li>use technology purposefully to create, organise, store, manipulate and retrieve digital content</li> <li>use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.</li> </ul>	<ul> <li>understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions</li> <li>create and debug simple programs</li> <li>use logical reasoning to predict the behaviour of simple programs</li> <li>recognise common uses of information technology beyond school</li> </ul>	<ul> <li>understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions</li> <li>create and debug simple programs</li> <li>use logical reasoning to predict the behaviour of simple programs</li> <li>use technology purposefully to create, organise, store, manipulate and</li> </ul>





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





#### To use Undo

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Skill	Choose a piece of	To create a picture using	To use punctuation and	To identify some attributes	To enact a given word	To choose a series of
Progression	technology to do a job	freehand tools	special characters	of an object	To predict the outcome of	words that can be
	Recognise that some	To use shape and line	To use letter, number, and	To collect simple data	a command on a device	enacted as a program
	technology can be used in	tools when precision is	Space keys to enter text into	To show that collected data	To list which commands	To choose a series of
	different ways	needed	a computer	can be counted	can be used on a given	commands that can be
	Identify main parts of a	To use a range of paint	To select text	To describe the properties	device	run as a program
	computer	colours	To change the appearance	of an object	To run a command on a	To run a program on a
	To use a mouse in	To use the fill tool to	of text on a computer	To choose an attribute to	floor robot	device
	different ways	colour an enclosed area	To choose options to	group objects by	To choose a command for	
	To use a keyboard to type	To use the undo button	achieve a desired effect	To explain that objects can	a given purpose	
	To use the keyboard to	to correct a mistake	To position the text cursor in	be grouped by similarities	To choose a series of	
	edit text	To combine a range of	a chosen location	(attribute)	words that can be enacted	
	To show how to use	tools to create a piece of	To use the Backspace key to	To describe a group of	as a program	
	technology safely	artwork	remove text	objects (based on	To choose a series of	
			To use Undo	commonality)	commands that can be run	
				To group objects to answer	as a program	
				questions	To build a sequence of	
					commands in step	
					To combine commands in	
					a program	
					To run a program on a	
					device	
Meta	LKS2	LKS2	LKS2	LKS2	LKS2	LKS2
Cognition						
Cogimicion	Pose questions pose	Organise and process	Consider alternatives	Think about thinking	Transfer knowledge into	Draw conclusions and
	questions to expand their	information collect,	explore situations using	(metacognition) reflect on,	new contexts transfer and	design a course of action
	knowledge about the	compare, and	creative thinking strategies	explain and check the	apply information in one	draw on prior knowledge
	world	categorise facts and	to propose a range of	processes used to come to	setting to enrich another	and use evidence when
		opinions found in a wide	alternatives	conclusions		choosing a course of
	Identify and clarify	range of sources	Seek solutions and put		Apply logic and reasoning	action or drawing a
	information and ideas		ideas into action	Reflect on processes	- identify and apply	conclusion
	identify main ideas and	Imagine possibilities	experiment with a range of	identify pertinent	appropriate reasoning and	
	select and clarify	and connect ideas	options when seeking	information in an		
	Select and clarify	and connect ideas	options when seeking	IIIIOIIIIatioii iii aii		





	UKS2  Pose questions pose questions to clarify and interpret information and probe further to discover causes and consequences  Identify and clarify information and ideas identify and clarify relevant information and prioritise ideas	expand on known ideas to create new and imaginative combinations  UKS2  Organise and process information analyse, condense, and combine relevant information from multiple sources  Imagine possibilities and connect ideas combine ideas in a variety of ways and from a range of sources to create new possibilities	solutions and putting ideas into action  UKS2  Consider alternatives identify situations where current approaches do not work, challenge existing ideas, and generate alternative solutions  Seek solutions and put ideas into action assess and test options to identify the most effective solution and put ideas into action	investigation and separate into smaller parts or ideas  UKS2  Think about thinking (metacognition) reflect on assumptions made, consider reasonable criticism, and adjust their thinking if necessary  Reflect on processes identify and justify the thinking behind choices they have made	thinking strategies for outcomes  UKS2  Transfer knowledge into new contexts apply knowledge gained from one context to another unrelated context and identify new meaning  Apply logic and reasoning - assess whether there is adequate reasoning and evidence to justify a claim, conclusion, or outcome	Evaluate procedures and outcomes explain and justify ideas and outcomes  UKS2  Draw conclusions and design a course of action scrutinise ideas or concepts, test conclusions and modify actions when designing a course of action  Evaluate procedures and outcomes evaluate the effectiveness of ideas, products, performances, methods, and courses of action against given criteria
Year B Owls	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Concept	Civilisation and Democracy	Culture	All Around the World	Exploration and Discoveries	Natural Wonder	Community
NC Objectives	use technology purposefully to create, organise, store, manipulate and retrieve digital content	use technology purposefully to create, organise, store, manipulate and retrieve digital content	<ul> <li>use technology purposefully to create, organise, store, manipulate and retrieve digital content</li> </ul>	use technology purposefully to create, organise, store, manipulate and retrieve digital content	<ul> <li>understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and</li> </ul>	<ul> <li>understand what algorithms are; how they are implemented as programs on digital devices; and that</li> </ul>





	<ul> <li>recognise common</li> </ul>	<ul> <li>recognise common</li> </ul>		<ul> <li>use technology safely</li> </ul>	unambiguous	programs
	uses of information	uses of information		and respectfully,	instructions	execute by
	technology beyond	technology beyond		keeping personal	<ul> <li>create and debug</li> </ul>	following precise
	school	school		information private;	simple programs	and
	<ul> <li>use technology safely</li> </ul>	<ul> <li>use technology</li> </ul>		identify where to go		unambiguous
	and respectfully,	safely and		for help and support	<ul> <li>use logical reasoning</li> </ul>	instructions
	keeping personal	respectfully,		when they have	to predict the	<ul> <li>create and</li> </ul>
	information private;	keeping personal		concerns about	behaviour of simple	debug simple
	identify where to go	information private;		content or contact on	programs	programs
	for help and support	identify where to go		the internet or other		<ul> <li>use logical</li> </ul>
	when they have	for help and		online technologies.	<ul> <li>use technology</li> </ul>	reasoning to
	concerns about	support when they			purposefully to	predict the
	content or contact on	have concerns			create, organise,	behaviour of
	the internet or other	about content or			store, manipulate and	simple programs
	online technologies.	contact on the			retrieve digital	
		internet or other			content	
		online technologies.				
Knowledge	To recognise the uses and	To use a digital device to	To say how music can make	To recognise that we can	To describe a series of	To explain that a
	features of information	take a photograph	us feel	count and compare objects	instructions as a sequence	sequence of commands
	technology	To make choices when	To identify that there are	using tally charts	To explain what happens	has a start
	To identify the uses of	taking a photograph	patterns in music	To recognise that objects	when we change the	To explain that a
	information technology in	To describe what makes	To show how music is made	can be represented as	order of instructions	sequence of commands
	the school	a good photograph	from a series of notes	pictures	To use logical reasoning to	has an outcome
	To identify information	To decide how	To show how music is made	To create a pictogram	predict the outcome of a	To create a program using
	technology beyond school	photographs can be	from a series of notes	To select objects by	program (series of	a given design
	To explain how	improved	To create music for a	attribute and make	commands)	To change a given design
	information technology	To use tools to change	purpose	comparisons	To explain that	To create a program using
	helps us	an image	To review and refine our	To recognise that people	programming projects can	my own design
	To explain how to use	To recognise that	computer work	can be described by	have code and artwork	To decide how my project
	information technology	photos can be changed		attributes	To design an algorithm	can be improved
	safely	To say how music can		To explain that we can	To create and debug a	
	To recognise that choices	make us feel		present information using a	program that I have	
	are made when using			computer	written	
	information technology					





Skills	To describe some uses of	To capture a digital	To experiment with	To show I can enter data	To choose a series of	To choose a series of
Progressio	computers	image	different sounds on a	onto a computer	words that can be enacted	words that can be
n	To identify information	To take photographs in	computer	To recognise that people,	as a sequence	enacted as a sequence
	technology in school	both landscape and	To experiment with musical	animals and objects can be	To choose a series of	To explain what happens
	To identify information	portrait format	patterns on a computer	described by attributes	instructions that can be	when we change the
	technology beyond school	To view photographs on	To use a computer to create	To use a computer to view	run as a program	order of instructions
	To show how to use	a digital device	a musical pattern	data in different formats	To create a program	To choose a series of
	information technology	To decide which	To use a computer to	To use a computer to	To trace a sequence to	commands that can be
	safely	photographs to keep	compose a rhythm and a	answer comparison	make a prediction	run as a program
		To use zoom to change	melody on a given theme	questions (graphs, tables)	To run a program on a	To trace a sequence to
		the composition of a	To use a computer to play		device	make a prediction
		photograph	the same music in different		To debug a program that I	To test a prediction by
		To hold the camera still	ways (e.g. tempo)		have written	running the sequence
		to take a clear	To evaluate a musical			To create and debug a
		photograph	composition created on a			program that I have
		To consider lighting	computer			written
		before taking a	To improve a musical			To run a program on a
		photograph	composition created on a			device
		To use filters to edit the	computer			
		appearance of a				
		photograph				
		To improve a				
		photograph by retaking				
		it				
Metacognit	LKS2	LKS2	LKS2	LKS2	LKS2	LKS2
ion						
1011	Pose questions pose	Organise and process	Consider alternatives	Think about thinking	Transfer knowledge into	Draw conclusions and
	questions to expand their	information collect,	explore situations using	(metacognition) reflect on,	new contexts transfer and	design a course of action
	knowledge about the	compare, and	creative thinking strategies	explain and check the	apply information in one	draw on prior knowledge
	world	categorise facts and	to propose a range of	processes used to come to	setting to enrich another	and use evidence when
		opinions found in a wide	alternatives	conclusions		choosing a course of
	Identify and clarify	range of sources	Seek solutions and put		Apply logic and reasoning	action or drawing a
	information and ideas		ideas into action	Reflect on processes	- identify and apply	conclusion
	identify main ideas and		experiment with a range of	identify pertinent	appropriate reasoning and	
	information and ideas	Talige of sources	ideas into action	-	- identify and apply	





	select and clarify information from a range of sources  UKS2  Pose questions pose questions to clarify and interpret information and probe further to discover causes and consequences  Identify and clarify information and ideas identify and clarify relevant information and prioritise ideas	Imagine possibilities and connect ideas expand on known ideas to create new and imaginative combinations  UKS2  Organise and process information analyse, condense, and combine relevant information from multiple sources  Imagine possibilities and connect ideas combine ideas in a variety of ways and from a range of sources to create new	options when seeking solutions and putting ideas into action  UKS2  Consider alternatives identify situations where current approaches do not work, challenge existing ideas, and generate alternative solutions  Seek solutions and put ideas into action assess and test options to identify the most effective solution and put ideas into action	information in an investigation and separate into smaller parts or ideas  UKS2  Think about thinking (metacognition) reflect on assumptions made, consider reasonable criticism, and adjust their thinking if necessary  Reflect on processes identify and justify the thinking behind choices they have made	thinking strategies for outcomes  UKS2  Transfer knowledge into new contexts apply knowledge gained from one context to another unrelated context and identify new meaning  Apply logic and reasoning - assess whether there is adequate reasoning and evidence to justify a claim, conclusion, or outcome	Evaluate procedures and outcomes explain and justify ideas and outcomes  UKS2  Draw conclusions and design a course of action scrutinise ideas or concepts, test conclusions and modify actions when designing a course of action  Evaluate procedures and outcomes evaluate the effectiveness of ideas, products, performances, methods, and courses of action against given
Year A	Autumn 1	possibilities  Autumn 2	Spring 1	Spring 2	Summer 1	criteria  Summer 2
Buzzards	Autumiii	Autumi 2	Spring 1	Spring 2	Julillel 1	Julilliel 2
Concept	Civilisation and	Culture	All Around the	Exploration and	Natural Wonder	Community
	Democracy		World	Discoveries		
NC	<ul> <li>use sequence,</li> </ul>	<ul><li>select, use and</li></ul>	<ul><li>design, write and</li></ul>	<ul><li>select, use and</li></ul>	<ul><li>use search</li></ul>	<ul><li>design, write</li></ul>
objectives	selection, and	combine a	debug programs	combine a variety	technologies	and debug
	repetition in programs; work	variety of software	that accomplish specific goals,	of software (including internet	effectively, appreciate how	programs that
	with variables	(including	including	services) on a	results are	accomplish
	and various	internet	controlling or	range of digital	selected and	specific goals,
		services) on a	simulating physical	devices to design	ranked, and be	including





forms of input and output understand computer networks including the internet; how they can provide multiple services, such as the world	range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including	systems; solve problems by decomposing them into smaller parts  use sequence, selection, and repetition in programs; work with variables and various forms of	and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data	discerning in evaluating digital content select, use and combine a variety of software (including internet services) on a range of digital devices to	controlling or simulating physical systems; solve problems by decomposing them into smaller parts  use sequence,
communication and collaboration  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	presenting data and information  use technology safely, respectfully and responsibly; recognise acceptable/una cceptable behaviour; identify a range of ways to report concerns about content and contact.  use search technologies effectively, appreciate how	explain how some simple algorithms work and to detect and correct errors in algorithms and programs  • 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	effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content	systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information	with variables and various forms of input and output  use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs select, use and combine a variety of software (including





	<ul><li>design, write and</li></ul>	results are	presenting data			internet
	debug programs	selected and	and information			services) on a
	that accomplish	ranked, and be				range of digital
	specific goals,	discerning in				devices to
	including	evaluating				design and
	controlling or	digital content				create a range
	simulating					of programs,
	physical systems;					
	solve problems					systems and
	by decomposing					content that
	them into smaller					accomplish
	parts					given goals,
						including
						collecting,
						analysing,
						evaluating and
						presenting data
						and
						information
Knowledge	Y3/4	Y3/4	Y3/4	Y3/4	Y3/4	Y3/4
	To know how digital	To explain that	To explore a new	To create questions with	To recognise how text and	To explain how a sprite
	devices function	animation is a sequence	programming environment	yes/no answers	images convey	moves in an existing
	To identify input and	of drawings or	To identify that commands	To identify the object	information	project
	output devices	photographs	have an outcome	attributes needed to collect	To recognise that text and	To create a program to
	To recognise how digital	To relate animated	To explain that a program	relevant data	layout can be edited	move a sprite in four
	devices can change the	movement with a	has a start	To create a branching	To choose appropriate	directions
	way we work	sequence of images	To recognise that a	database	page settings	To adapt a program to a
	To explain how a	To plan an animation	sequence of commands can	To explain why it is helpful	To add content to a	new context
	computer network can be	To identify the need to	have an order	for a database to be well	desktop publishing	To develop my program
	used to share information	work consistently and	To change the appearance	structured	publication	by adding features
	To explore how digital	carefully	of my project	To identify objects using a	To consider how different	To identify and fix bugs in
	devices can be connected	To review and improve	To create a project from a	branching database	layouts can suit different	a program
	To recognise the physical	an animation	task description	To compare the	purposes	To design and create a
	components of a network			information shown in a		maze-based challenge





	To evaluate the impact	Y5/6	pictogram with a branching	To consider the benefits of	
Y5/6	of adding other media	To control a simple circuit	database	desktop publishing	Y5/6
To explain that computers	to an animation	connected to a computer			To explain how selection
can be connected		To write a program that	Y5/6	Y5/6	is used in computer
together to form systems	Y5/6	includes count-controlled	To use a form to record	To identify that drawing	programs
To recognise the role of		loops	information	tools can be used to	To relate that a
computer systems in our	To review an existing	To explain that a loop can	To compare paper and	produce different	conditional statement
lives	website and consider its	stop when a condition is	computer-based databases	outcomes	connects a condition to
To recognise how	structure	met	To outline how grouping	To create a vector drawing	an outcome
information is transferred	To plan the features of a	To explain that a loop can	and then sorting data	by combining shapes	To explain how selection
over the internet	web page	be used to repeatedly check	allows us to answer	To use tools to achieve a	directs the flow of a
To explain how sharing	To consider the	whether a condition has	questions	desired effect	program
information online lets	ownership and use of	been met	To explain that tools can be	To recognise that vector	To design a program
people in different places	images (copyright)	To design a physical project	used to select specific data	drawings consist of layers	which uses selection
work together	To recognise the need	that includes selection	To explain that computer	To group objects to make	To create a program
To contribute to a shared	to preview pages	To create a program that	programs can be used to	them easier to work with	which uses selection
project online	To outline the need for	controls a physical	compare data visually	To evaluate my vector	To evaluate my program
To evaluate different ways	a navigation path	computing project	To apply my knowledge of	drawing	
of working together online	To recognise the		a database to ask and		
	implications of linking to		answer real-world		
	content owned by other		questions		
	people				





Skills	
Progressio	
n	

Y3/4 To identify input and output devices To explain that a computer system accepts an input and processes it to produce an output To explain how a computer network can be used to share information To explain the role of a switch, server and wireless access point in a network To identify network devices around me To explain how networks can be connected to other networks

#### Y5/6

To describe the input and output of a search engine To demonstrate that different search terms produce different results To evaluate the results of search terms

Y3/4 To plan an animation using a storyboard To set up the work area with an awareness of what will be captured To capture an image To use the onion skinning tool to review subject position To move a subject between captures To review a captured sequence of frames as an animation To remove frames to improve an animation To add media to enhance an animation To review a completed project

Y5/6 To recognise the relationship between HTML and visual display

To recognise that web pages can contain different media types

To recognise that web pages are written by people

Y3/4

To show that page orientation can be changed To add text to a placeholder To organise text and image placeholders in a page layout To add and remove images

To add and remove images to and from placeholders
To edit text in a placeholder
To move, resize and rotate images
To choose fonts and apply

effects to text
To review a document

To use different camera

#### Y5/6

angles
To use pan, tilt and zoom
To identify features of a
video recording device or
application
To combine filming
techniques for a given
purpose
To determine what scenes
will convey your idea
To choose to reshoot a
scene or improve later
through editing
To decide what changes I
will make when editing

Y3/4

To create questions with yes/no answers
To choose questions that will divide objects into evenly sized subgroups
To repeatedly create subgroups of objects
To identify an object using a branching database
To retrieve information from different levels of the branching database

#### Y5/6

data

To choose different ways to view data To choose which attribute and value to search by to answer a given question (operands) To ask questions that need more than one attribute to answer To choose which attribute to sort data by to answer a given question To choose multiple criteria to search data to answer a given question (AND and OR) To select an appropriate graph to visually compare

Y3/4

To build a sequence of commands
To combine commands in a program
To order commands in a program
To create a sequence of commands to produce a given outcome

#### Y5/6

To choose a condition to use in a program
To create a conditioncontrolled loop
To use a condition in an
'if... then...' statement to
start an action
To use selection to switch
program flow
To use 'if... then... else...'
to switch program flow in
one of two way

Y3/4

To build a sequence of commands
To combine commands in a program
To order commands in a program
To create a sequence of commands to produce a

Y5/6

given outcome

To create a condition-controlled loop
To use a condition in an 'if...then...' statement to start an action
To use selection to switch the program flow in one of two ways
To use a condition in an 'if...then...else...' statement to produce given outcomes





		To recognise that a	To use split, trim and crop to	To choose suitable ways to		
		website is a set of	edit a video	present information to		
		hyperlinked web pages	edit a video	other people		
		Hyperlinked web pages		other people		
		To recognise				
		components				
		•				
		of a web page layout				
		To consider the				
		ownership and use of images				
		(copyright)				
		(сорупуні)				
		To recognise the need to				
		preview pages (different				
		screens / devices)				
		To recognise the need				
		for a navigation path				
Motocognit	LKS2	LKS2	LKS2	LKS2	LKS2	LKS2
Metacognit	LK32	LN32	LK32	LK32	LN32	LK32
ion	Pose questions pose	Organise and process	Consider alternatives	Think about thinking	Transfer knowledge into	Draw conclusions and
	questions to expand their	information collect,	explore situations using	(metacognition) reflect on,	new contexts transfer and	design a course of action
	knowledge about the	compare, and	creative thinking strategies	explain and check the	apply information in one	draw on prior knowledge
	world	categorise facts and	to propose a range of	processes used to come to	setting to enrich another	and use evidence when
	World	opinions found in a wide	alternatives	conclusions	setting to enrich another	choosing a course of
	Identify and clarify	range of sources	Seek solutions and put	Conclusions	Apply logic and reasoning	action or drawing a
	information and ideas	runge or sources	ideas into action	Reflect on processes	- identify and apply	conclusion
	identify main ideas and	Imagine possibilities	experiment with a range of	identify pertinent	appropriate reasoning and	Concidation
	select and clarify	and connect ideas	options when seeking	information in an	thinking strategies for	Evaluate procedures and
	information from a range	expand on known ideas	solutions and putting ideas	investigation and separate	outcomes	outcomes explain and
	of sources	to create new and	into action	into smaller parts or ideas	55.5011165	justify ideas and
	0.000	imaginative		mits sinding parts of racus	UKS2	outcomes
		combinations	UKS2	UKS2		Gattomes
		COMBINACIONS	UN3Z	UK3Z		





	Pose questions pose questions to clarify and interpret information and probe further to discover causes and consequences  Identify and clarify information and ideas identify and clarify relevant information and prioritise ideas	Organise and process information analyse, condense, and combine relevant information from multiple sources  Imagine possibilities and connect ideas combine ideas in a variety of ways and from a range of sources to create new possibilities	Consider alternatives identify situations where current approaches do not work, challenge existing ideas, and generate alternative solutions  Seek solutions and put ideas into action assess and test options to identify the most effective solution and put ideas into action	Think about thinking (metacognition) reflect on assumptions made, consider reasonable criticism, and adjust their thinking if necessary  Reflect on processes identify and justify the thinking behind choices they have made	Transfer knowledge into new contexts apply knowledge gained from one context to another unrelated context and identify new meaning  Apply logic and reasoning - assess whether there is adequate reasoning and evidence to justify a claim, conclusion, or outcome	Draw conclusions and design a course of action scrutinise ideas or concepts, test conclusions and modify actions when designing a course of action  Evaluate procedures and outcomes evaluate the effectiveness of ideas, products, performances, methods, and courses of action against given criteria
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year B	Civilisation and	Culture	All around the world	Exploration and	Natural Wonder	Community
Buzzards	democracy			discoveries		
NC	<ul><li>design, write and</li></ul>	<ul><li>use search</li></ul>	<ul><li>design, write and</li></ul>	<ul><li>select, use and</li></ul>	<ul><li>use search</li></ul>	<ul><li>design, write and</li></ul>
Objectives	debug programs that	technologies	debug programs that	combine a variety of	technologies	debug programs that
	accomplish specific	effectively,	accomplish specific	software (including	effectively, appreciate	accomplish specific
	goals, including controlling or	appreciate how results are selected	goals, including controlling or	internet services) on a range of digital devices	how results are selected and ranked,	goals, including controlling or
	simulating physical	and ranked, and be	simulating physical	to design and create a	and be discerning in	simulating physical
	systems; solve	discerning in	systems; solve	range of programs,	evaluating digital	systems; solve
	problems by	evaluating digital	problems by	systems and content	content	problems by
	decomposing them	content	decomposing them into	that accomplish given	<ul><li>select, use and</li></ul>	decomposing them
	into smaller parts	<ul><li>select, use and</li></ul>	smaller parts	goals, including	combine a variety of	into smaller parts
	<ul> <li>understand computer</li> </ul>	combine a variety	<ul><li>use sequence,</li></ul>	collecting, analysing,	software (including	<ul><li>use sequence,</li></ul>
	networks including	of software	selection, and	evaluating and	internet services) on a	selection, and
	the internet; how	(including internet	repetition in programs;		range of digital	repetition in





they can provide
multiple services,
such as the world
wide web; and the
opportunities they
offer for
communication and
collaboration

- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- 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 use technology safely,

respectfully and responsibly; recognise acceptable/unaccepta

- 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
- use technology safely, respectfully and responsibly; recognise acceptable/unaccep table behaviour; identify a range of ways to report concerns about content and contact.

- work with variables and various forms of input and output
- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
- 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

#### presenting data and information

use sequence,
selection, and
repetition in programs;
work with variables
and various forms of
input and output

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

use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

- programs; work with variables and various forms of input and output
- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
- 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





	ble behaviour;					
	identify a range of					
	ways to report					
	concerns about					
	content and contact.					
Knowledge	Y3/4	Y3/4	Y3/4	Y3/4	Y3/4	Y3/4
i i i i i i i i i i i i i i i i i i i	To describe how networks	To identify that sound	To identify that accuracy in	To explain that data	To explain that digital	To develop the use of
	physically connect to	can be digitally recorded	programming is important	gathered over time can be	images can be changed	count-controlled loops in
	other networks	To use a digital device to	To create a program in a	used to answer questions	To change the	a different programming
	To recognise how	record sound	text-based language	To use a digital device to	composition of an image	environment
	networked devices make	To explain that a digital	To explain what 'repeat'	collect data automatically	To describe how images	To explain that in
	up the internet	recording is stored as a	means	To explain that a data	can be changed for	programming there are
	To outline how websites	file	To modify a count-	logger collects 'data points'	different uses	infinite loops and count
	can be shared via the	To explain that audio	controlled loop to produce	from sensors over time	To make good choices	controlled loops
	World Wide Web (WWW)	can be changed through	a given outcome	To use data collected over	when selecting different	To develop a design that
	To describe how content	editing	To decompose a task into	a long duration to find	tools	includes two or more
	can be added and	To show that different	small steps	information	To recognise that not all	loops which run at the
	accessed on the World	types of audio can be	To create a program that	To identify the data needed	images are real	same time
	Wide Web (WWW)	combined and played	uses count-controlled loops	to answer questions	To evaluate how changes	To modify an infinite loop
	To recognise how the	together	to produce a given outcome	To use collected data to	can improve an image	in a given program
	content of the WWW is	To evaluate editing		answer questions		To design a project that
	created by people	choices made	Y5/6		Y5/6	includes repetition
	To evaluate the		To define a 'variable' as	Y5/6	To use a computer to	To create a project that
	consequences of	Y5/6	something that is	To identify questions which	create and manipulate	includes repetition
	unreliable content		changeable	can be answered using data	three-dimensional (3D)	
		To explain what makes a	To explain why a variable is	To explain that objects can	digital objects	Y5/6
	Y5/6	video effective	used in a program	be described using data	To compare working	To create a program to
		To identify digital	To choose how to improve a	To explain that formulas	digitally with 2D and 3D	run on a controllable
	To identify how to use a	devices that can record	game by using variables	can be used to produce	graphics	device
	search engine	video	To design a project that	calculated data	To construct a digital 3D	To explain that selection
	To describe how search	To capture video using a	builds on a given example	To apply formulas to data,	model of a physical object	can control the flow of a
	engines select results	range of techniques	To use my design to create	including duplicating	To identify that physical	program
	To explain how search	To create a storyboard	a project	To create a spreadsheet to	objects can be broken	To update a variable with
	results are ranked	To identify that video	To evaluate my project	plan an event	down into a collection of	a user input
		can be improved			3D shapes	





	To recognise why the order of results is important, and to whom To recognise how we communicate using technology To evaluate different methods of online communication	through reshooting and editing To consider the impact of the choices made when making and sharing a video		To choose suitable ways to present data	To design a digital model by combining 3D objects To develop and improve a digital 3D model	To use an conditional statement to compare a variable to a value To design a project that uses inputs and outputs on a controllable device To develop a program to use inputs and outputs on a controllable device
Skills Progressio	Y3/4	Y3/4 To record sound using a	Y3/4 To recognise that digital	Y3/4 To use a digital device to	Y3/4 To list an everyday task as	Y3/4 To list an everyday task as
n	To use a search engine	computer	images can be manipulated	collect data automatically	a set of instructions	a set of instructions
''	effectively	To play recorded audio	To recognise that digital	To choose how often to	including repetition	including repetition
	To choose the most	To import audio into a	images can be changed for	automatically collect data	To use an indefinite loop	To use an indefinite loop
	practical form of	project	different purposes	samples	to produce a given	to produce a given
	communication	To delete a section of	To choose the most	To use a set of logged data	outcome	outcome
		audio	appropriate tool for a	to find information	To use a count-controlled	To use a count-controlled
	Y5/6	To change the volume	particular purpose	To use a computer program	loop to produce a given	loop to produce a given
		of tracks in a project	To consider the impact of	to sort data by one	outcome	outcome
	To outline methods of	VE 10	changes made on the	attribute	To plan a program that	To plan a program that
	communicating and	Y5/6	quality of the image	To export information in different formats	includes appropriate loops	includes appropriate
	collaborating using the internet	To position 3D shapes relative to one another	Y5/6	different formats	to produce a given outcome	loops to produce a given outcome
	To choose methods of	To use digital tools to	13/0	Y5/6	To recognise tools that	To recognise tools that
	internet communication	modify 3D objects	To review an existing	To calculate data using a	enable more than one	enable more than one
	and collaboration for	To combine objects to	website (navigation bars,	formula for each operation	process to be run at the	process to be run at the
	given purposes	create a 3D digital	header)	To use functions to create	same time (concurrency)	same time (concurrency)
	To evaluate different	artefact	To create a new blank web	new data	Y5/6	To create two or more
	methods of online	To use digital tools to	page	To use existing cells within	To identify a variable in an	sequences that run at the
	communication and	accurately size 3D	To add text to a web page	a formula	existing program	same time
	collaboration	objects	To change the appearance	To choose suitable ways to		
			of text	present spreadsheet data		Y5/6





	To decide what you	To construct a 3D model	To embed media in a web		To experiment with the	To identify a variable in
	should and should not	which reflects a real	page		value of an existing	an existing program
	share online	world object	To set the style of text on a		variable	To experiment with the
			web page		To choose a name that	value of an existing
			To add web pages to a		identifies the role of a	variable
			website		variable to make it easier	To choose a name that
			To preview a web page		for humans to understand	identifies the role of a
			(different screen sizes)		it	variable to make it more
			To insert hyperlinks		To decide where in a	usable (to humans)
			between pages		program to set a variable	To decide where in a
			To insert hyperlinks to		To update a variable with	program to set a variable
			another site		a user input	To update a variable with
					To use an event in a	a user input
					program to update a	To use an event in a
					variable	program to update a
					To use a variable in a	variable
					conditional statement to	To use a variable in a
					control the flow of a	conditional statement to
					program	control the flow of a
					To use the same variable	program
					in more than one location	
					in a program	
Metacognit	LKS2	LKS2	LKS2	LKS2	LKS2	LKS2
ion						
	Pose questions pose	Organise and process	Consider alternatives	Think about thinking	Transfer knowledge into	Draw conclusions and
	questions to expand their	information collect,	explore situations using	(metacognition) reflect on,	new contexts transfer and	design a course of action
	knowledge about the	compare, and	creative thinking strategies	explain and check the	apply information in one	draw on prior knowledge
	world	categorise facts and	to propose a range of	processes used to come to	setting to enrich another	and use evidence when
		opinions found in a wide	alternatives	conclusions		choosing a course of
	Identify and clarify	range of sources	Seek solutions and put	- 4	Apply logic and reasoning	action or drawing a
	information and ideas		ideas into action	Reflect on processes	- identify and apply	conclusion
	identify main ideas and	Imagine possibilities	experiment with a range of	identify pertinent	appropriate reasoning and	
	select and clarify	and connect ideas	options when seeking	information in an	thinking strategies for	Evaluate procedures and
	information from a range	expand on known ideas	solutions and putting ideas	investigation and separate	outcomes	outcomes explain and
	of sources	to create new and	into action	into smaller parts or ideas		





	Pose questions pose questions to clarify and interpret information and probe further to discover causes and consequences  Identify and clarify information and ideas identify and clarify relevant information and prioritise ideas	imaginative combinations  UKS2  Organise and process information analyse, condense, and combine relevant information from multiple sources  Imagine possibilities and connect ideas combine ideas in a variety of ways and from a range of sources to create new possibilities	Consider alternatives identify situations where current approaches do not work, challenge existing ideas, and generate alternative solutions  Seek solutions and put ideas into action assess and test options to identify the most effective solution and put ideas into action	Think about thinking (metacognition) reflect on assumptions made, consider reasonable criticism, and adjust their thinking if necessary  Reflect on processes identify and justify the thinking behind choices they have made	Transfer knowledge into new contexts apply knowledge gained from one context to another unrelated context and identify new meaning  Apply logic and reasoning - assess whether there is adequate reasoning and evidence to justify a claim, conclusion, or outcome	justify ideas and outcomes  UKS2  Draw conclusions and design a course of action scrutinise ideas or concepts, test conclusions and modify actions when designing a course of action  Evaluate procedures and outcomes evaluate the effectiveness of ideas, products, performances, methods, and courses of action against given criteria
Year C Buzzards	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Civilisation and democracy	Culture	All Around the World	Exploration and Discovery	Natural Wonder	Community
NC Objectives	<ul> <li>use sequence, selection, and repetition in programs; work with variables and various forms of input and output</li> </ul>	select, use and combine a variety of software (including internet services) on a range of digital devices to	<ul> <li>design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by</li> </ul>	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,	use search technologies effectively, appreciate how results are selected and ranked, and be discerning in	design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems





•	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
_	and a second control

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 design, write and debug programs

that accomplish

- design and create a range of programs, systems and content that
- accomplish given goals, including collecting, analysing, evaluating and presenting data and information
- use technology safely, respectfully and responsibly; recognise acceptable/una cceptable behaviour; identify a range of ways to report concerns about content and contact. use search technologies effectively, appreciate how results are selected

and ranked, and be

digital content

discerning in evaluating

#### decomposing them into smaller parts

- use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
   select, use and combine a variety of software

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

systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information

use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content evaluating digital content 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

- by decomposing them into smaller parts
- use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs select, use and combine a variety of software

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





	specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts					
Knowledge	To identify input and output devices To explain that a computer system accepts an input and processes it to produce an output To explain how a computer network can be used to share information To explain the role of a switch, server and wireless access point in a network To identify network devices around me To explain how networks can be connected to other networks	To plan an animation using a storyboard To set up the work area with an awareness of what will be captured To capture an image To use the onion skinning tool to review subject position To move a subject between captures To review a captured sequence of frames as an animation To remove frames to improve an animation To add media to	Y3/4 To show that page orientation can be changed To add text to a placeholder To organise text and image placeholders in a page layout To add and remove images to and from placeholders To edit text in a placeholder To move, resize and rotate images To choose fonts and apply effects to text To review a document  Y5/6	Y3/4 To create questions with yes/no answers To choose questions that will divide objects into evenly sized subgroups To repeatedly create subgroups of objects To identify an object using a branching database To retrieve information from different levels of the branching database  Y5/6 To choose different ways to view data	Y3/4 To build a sequence of commands To combine commands in a program To order commands in a program To create a sequence of commands to produce a given outcome  Y5/6  To choose a condition to use in a program To create a condition-controlled loop To use a condition in an	Y3/4 To build a sequence of commands To combine commands in a program To order commands in a program To create a sequence of commands to produce a given outcome  Y5/6  To create a condition-controlled loop To use a condition in an 'ifthen' statement to start an action
	Y5/6 To describe the input and output of a search engine	enhance an animation To review a completed project  Y5/6 To recognise the relationship between	To use different camera angles To use pan, tilt and zoom To identify features of a video recording device or application	To choose which attribute and value to search by to answer a given question (operands)  To ask questions that need more than one attribute to answer	'if then' statement to start an action To use selection to switch program flow To use 'if then else' to switch program flow in one of two way	To use selection to switch the program flow in one of two ways To use a condition in an 'ifthenelse' statement to produce given outcomes





	To demonstrate that different search terms produce different results To evaluate the results of search terms	HTML and visual display  To recognise that web pages can contain different media types  To recognise that web pages are written by people	To combine filming techniques for a given purpose To determine what scenes will convey your idea To choose to reshoot a scene or improve later through editing To decide what changes I	To choose which attribute to sort data by to answer a given question To choose multiple criteria to search data to answer a given question (AND and OR) To select an appropriate graph to visually compare		
		To recognise that a website is a set of hyperlinked web pages	will make when editing To use split, trim and crop to edit a video	data To choose suitable ways to present information to other people		
		To recognise components of a web page layout				
		To consider the ownership and use of images (copyright)				
		To recognise the need to preview pages (different screens / devices)  To recognise the need				
		for a navigation path				
Skills	Y3/4 To identify input and	Y3/4 To plan an animation	Y3/4 To show that page	Y3/4 To create questions with	Y3/4 To build a sequence of	Y3/4 To build a sequence of
Progressio n	output devices To explain that a computer system accepts	using a storyboard	orientation can be changed To add text to a placeholder	yes/no answers	commands To combine commands in a program	commands To combine commands in a program





an input and processes it to produce an output To explain how a computer network can be used to share information To explain the role of a switch, server and wireless access point in a network To identify network devices around me To explain how networks can be connected to other networks

#### Y5/6

To describe the input and output of a search engine To demonstrate that different search terms produce different results To evaluate the results of search terms

To set up the work area with an awareness of what will be captured To capture an image To use the onion skinning tool to review subject position To move a subject between captures To review a captured sequence of frames as an animation To remove frames to improve an animation To add media to enhance an animation To review a completed project

Y5/6 To add an object to a vector drawing To select one object or multiple objects To delete objects To move objects between the layers of a drawing To duplicate objects using copy and paste To modify objects To reposition objects To group and ungroup selected objects

To organise text and image placeholders in a page will divide objects into layout evenly sized subgroups To add and remove images To repeatedly create to and from placeholders subgroups of objects To edit text in a placeholder To move, resize and rotate a branching database To retrieve information images To choose fonts and apply effects to text branching database To review a document

Y5/6

angles To use pan, tilt and zoom To identify features of a video recording device or application To combine filming techniques for a given purpose To determine what scenes will convey your idea To choose to reshoot a scene or improve later through editing To decide what changes I will make when editing To use split, trim and crop to edit a video

To use different camera

To choose questions that To identify an object using from different levels of the

Y5/6 To choose different ways to view data To choose which attribute and value to search by to answer a given question (operands) To ask questions that need more than one attribute to answer To choose which attribute to sort data by to answer a given question To choose multiple criteria to search data to answer a given question (AND and OR) To select an appropriate graph to visually compare data To choose suitable ways to present information to

other people

To order commands in a program To create a sequence of commands to produce a given outcome

Y5/6

To choose a condition to use in a program To create a conditioncontrolled loop To use a condition in an 'if... then...' statement to start an action To use selection to switch program flow To use 'if... then... else...' to switch program flow in one of two way

To order commands in a program To create a sequence of commands to produce a given outcome

Y5/6

To create a conditioncontrolled loop To use a condition in an 'if...then...' statement to start an action To use selection to switch the program flow in one of two ways To use a condition in an 'if...then...else...' statement to produce given outcomes





		To combine options to				
		achieve a desired effect				
		To create a vector				
		drawing for a given				
		purpose				
Metacognit	LKS2	LKS2	LKS2	LKS2	LKS2	LKS2
ion						
	Pose questions pose	Organise and process	Consider alternatives	Think about thinking	Transfer knowledge into	Draw conclusions and
	questions to expand their	information collect,	explore situations using	(metacognition) reflect on,	new contexts transfer and	design a course of action
	knowledge about the	compare, and	creative thinking strategies	explain and check the	apply information in one	draw on prior knowledge
	world	categorise facts and	to propose a range of	processes used to come to	setting to enrich another	and use evidence when
		opinions found in a wide	alternatives	conclusions		choosing a course of
	Identify and clarify	range of sources	Seek solutions and put		Apply logic and reasoning	action or drawing a
	information and ideas		ideas into action	Reflect on processes	- identify and apply	conclusion
	identify main ideas and	Imagine possibilities	experiment with a range of	identify pertinent	appropriate reasoning and	
	select and clarify	and connect ideas	options when seeking	information in an	thinking strategies for	Evaluate procedures and
	information from a range	expand on known ideas	solutions and putting ideas	investigation and separate	outcomes	outcomes explain and
	of sources	to create new and	into action	into smaller parts or ideas		justify ideas and
		imaginative			UKS2	outcomes
		combinations	UKS2	UKS2		
					Transfer knowledge into	UKS2
	UKS2	UKS2	Consider alternatives	Think about thinking	new contexts apply	
			identify situations where	(metacognition) reflect on	knowledge gained from	Draw conclusions and
	Pose questions pose	Organise and process	current approaches do not	assumptions made,	one context to another	design a course of action
	questions to clarify and	information analyse,	work, challenge existing	consider reasonable	unrelated context and	scrutinise ideas or
	interpret information and	condense, and combine	ideas, and generate	criticism, and adjust their	identify new meaning	concepts, test conclusions
	probe further to discover	relevant information	alternative solutions	thinking if necessary		and modify actions when
	causes and consequences	from multiple sources			Apply logic and reasoning	designing a course of
			Seek solutions and put	Reflect on processes	- assess whether there is	action
	Identify and clarify	Imagine possibilities	ideas into action assess and	identify and justify the	adequate reasoning and	
	information and ideas	and connect ideas	test options to identify the	thinking behind choices	evidence to justify a claim,	Evaluate procedures and
	identify and clarify	combine ideas in a	most effective solution and	they have made	conclusion, or outcome	outcomes evaluate the
	relevant information and	variety of ways and	put ideas into action			effectiveness of ideas,
	prioritise ideas	from a range of sources				products, performances,





Year D Buzzards	Autumn1	to create new possibilities  Autumn 2	Spring 1	Spring 2	Summer 1	methods, and courses of action against given criteria  Summer 2
Buzzarus	Civilisation and	Culture	All Around the World	Exploration and	Natural Wonder	Community
		Culture	All Albana the World	Discoveries	ivaturai vvondei	Community
NC Objectives	design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts 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 use search technologies effectively, appreciate how results are	<ul> <li>use search         technologies         effectively,         appreciate how         results are selected         and ranked, and be         discerning in         evaluating digital         content</li> <li>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</li> </ul>	<ul> <li>design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</li> <li>use sequence, selection, and repetition in programs; work with variables and various forms of input and output</li> <li>use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</li> <li>select, use and combine a variety of software</li> </ul>	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 use sequence, selection, and repetition in programs; work with variables and various forms of input and output	<ul> <li>use search         technologies         effectively, appreciate         how results are         selected and ranked,         and be discerning in         evaluating digital         content</li> <li>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</li> <li>use technology safely,         respectfully and</li> </ul>	<ul> <li>design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</li> <li>use sequence, selection, and repetition in programs; work with variables and various forms of input and output</li> <li>use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</li> <li>select, use and</li> </ul>





	and be discerning in evaluating digital content  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 use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	use technology safely, respectfully and responsibly; recognise acceptable/unaccep table behaviour; identify a range of ways to report concerns about content and contact.	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		acceptable/unaccepta ble behaviour; identify a range of ways to report concerns about content and contact.	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
Knowledge	and contact.  Y3/4  To describe how networks physically connect to other networks  To recognise how networked devices make up the internet	Y3/4 To identify that sound can be digitally recorded To use a digital device to record sound To explain that a digital recording is stored as a file	Y3/4 To identify that accuracy in programming is important To create a program in a text-based language To explain what 'repeat' means	Y3/4 To explain that data gathered over time can be used to answer questions To use a digital device to collect data automatically To explain that a data logger collects 'data points' from sensors over time	Y3/4 To explain that digital images can be changed To change the composition of an image To describe how images can be changed for different uses	Y3/4 To develop the use of count-controlled loops in a different programming environment To explain that in programming there are infinite loops and count controlled loops





	To outline how websites	To explain that audio	To modify a count-	To use data collected over	To make good choices	To develop a design that
		•	•		•	•
	can be shared via the	can be changed through	controlled loop to produce	a long duration to find	when selecting different	includes two or more
	World Wide Web (WWW)	editing	a given outcome	information	tools	loops which run at the
	To describe how content	To show that different	To decompose a task into	To identify the data needed	To recognise that not all	same time
	can be added and	types of audio can be	small steps	to answer questions	images are real	To modify an infinite loop
	accessed on the World	combined and played	To create a program that	To use collected data to	To evaluate how changes	in a given program
	Wide Web (WWW)	together	uses count-controlled loops	answer questions	can improve an image	To design a project that
	To recognise how the	To evaluate editing	to produce a given outcome			includes repetition
	content of the WWW is	choices made		Y5/6	Y5/6	To create a project that
	created by people		Y5/6	To identify questions which	To use a computer to	includes repetition
	To evaluate the	Y5/6	To define a 'variable' as	can be answered using data	create and manipulate	
	consequences of		something that is	To explain that objects can	three-dimensional (3D)	Y5/6
	unreliable content	To explain what makes a	changeable	be described using data	digital objects	To create a program to
		video effective	To explain why a variable is	To explain that formulas	To compare working	run on a controllable
	Y5/6	To identify digital	used in a program	can be used to produce	digitally with 2D and 3D	device
		devices that can record	To choose how to improve a	calculated data	graphics	To explain that selection
	To identify how to use a	video	game by using variables	To apply formulas to data,	To construct a digital 3D	can control the flow of a
	search engine	To capture video using a	To design a project that	including duplicating	model of a physical object	program
	To describe how search	range of techniques	builds on a given example	To create a spreadsheet to	To identify that physical	To update a variable with
	engines select results	To create a storyboard	To use my design to create	plan an event	objects can be broken	a user input
	To explain how search	To identify that video	a project	To choose suitable ways to	down into a collection of	To use an conditional
	results are ranked	can be improved	To evaluate my project	present data	3D shapes	statement to compare a
	To recognise why the	through reshooting and			To design a digital model	variable to a value
	order of results is	editing			by combining 3D objects	To design a project that
	important, and to whom	To consider the impact			To develop and improve a	uses inputs and outputs
	To recognise how we	of the choices made			digital 3D model	on a controllable device
	communicate using	when making and			G	To develop a program to
	technology	sharing a video				use inputs and outputs on
	To evaluate different					a controllable device
	methods of online					
	communication					
Skills	Y3/4	Y3/4	Y3/4	Y3/4	Y3/4	Y3/4
Progression		To record sound using a	To recognise that digital	To use a digital device to		•
		computer	images can be manipulated	collect data automatically		





To use a search engine
effectively
To choose the most
practical form of
communication

Y5/6

To outline methods of communicating and collaborating using the internet To choose methods of internet communication and collaboration for given purposes To evaluate different methods of online communication and collaboration To decide what you should and should not share online

To play recorded audio To import audio into a project To delete a section of audio To change the volume of tracks in a project

Y5/6 To position 3D shapes relative to one another To use digital tools to modify 3D objects To combine objects to create a 3D digital artefact To use digital tools to accurately size 3D objects To construct a 3D model which reflects a real world object

To recognise that digital images can be changed for different purposes To choose the most appropriate tool for a particular purpose To consider the impact of changes made on the quality of the image

Y5/6

To review an existing website (navigation bars, header) To create a new blank web To add text to a web page To change the appearance of text To embed media in a web page To set the style of text on a web page To add web pages to a website To preview a web page (different screen sizes) To insert hyperlinks between pages To insert hyperlinks to another site

To choose how often to automatically collect data samples To use a set of logged data to find information To use a computer program to sort data by one attribute To export information in different formats

Y5/6 To calculate data using a formula for each operation To use functions to create new data To use existing cells within a formula To choose suitable ways to present spreadsheet data

To list an everyday task as a set of instructions including repetition To use an indefinite loop to produce a given outcome To use a count-controlled loop to produce a given outcome To plan a program that includes appropriate loops to produce a given outcome To recognise tools that enable more than one process to be run at the same time (concurrency) Y5/6 To identify a variable in an existing program To experiment with the value of an existing variable To choose a name that identifies the role of a variable to make it easier for humans to understand it To decide where in a program to set a variable To update a variable with a user input To use an event in a program to update a variable

To list an everyday task as a set of instructions including repetition To use an indefinite loop to produce a given outcome To use a count-controlled loop to produce a given outcome To plan a program that includes appropriate loops to produce a given outcome To recognise tools that enable more than one process to be run at the same time (concurrency) To create two or more sequences that run at the same time Y5/6 To identify a variable in an existing program To experiment with the value of an existing variable To choose a name that identifies the role of a variable to make it more

usable (to humans) To decide where in a program to set a variable To update a variable with a user input





					To use a variable in a conditional statement to control the flow of a program To use the same variable	To use an event in a program to update a variable To use a variable in a conditional statement to
					in more than one location	control the flow of a
N 4 - t iti	11/63	11/02	1463	LVC2	in a program	program
Metacogniti on	LKS2	LKS2	LKS2	LKS2	LKS2	LKS2
OII	Pose questions pose	Organise and process	Consider alternatives	Think about thinking	Transfer knowledge into	Draw conclusions and
	questions to expand their	information collect,	explore situations using	(metacognition) reflect on,	new contexts transfer and	design a course of action
	knowledge about the	compare, and	creative thinking strategies	explain and check the	apply information in one	draw on prior knowledge
	world	categorise facts and	to propose a range of	processes used to come to	setting to enrich another	and use evidence when
		opinions found in a wide	alternatives	conclusions	<b>3</b>	choosing a course of
	Identify and clarify	range of sources	Seek solutions and put		Apply logic and reasoning	action or drawing a
	information and ideas		ideas into action	Reflect on processes	- identify and apply	conclusion
	identify main ideas and	Imagine possibilities	experiment with a range of	identify pertinent	appropriate reasoning and	
	select and clarify	and connect ideas	options when seeking	information in an	thinking strategies for	Evaluate procedures and
	information from a range	expand on known ideas	solutions and putting ideas	investigation and separate	outcomes	outcomes explain and
	of sources	to create new and	into action	into smaller parts or ideas		justify ideas and
		imaginative			UKS2	outcomes
		combinations	UKS2	UKS2		
		111/09			Transfer knowledge into	UKS2
	UKS2	UKS2	Consider alternatives	Think about thinking	new contexts apply	
	Dose supertions nose	Organise and process	identify situations where current approaches do not	(metacognition) reflect on assumptions made,	knowledge gained from one context to another	Draw conclusions and
	Pose questions pose questions to clarify and	information analyse,	work, challenge existing	consider reasonable	unrelated context and	design a course of action
	interpret information and	condense, and combine	ideas, and generate	criticism, and adjust their	identify new meaning	scrutinise ideas or
	probe further to discover	relevant information	alternative solutions	thinking if necessary	identity new inearing	concepts, test conclusions and modify actions when
	causes and consequences	from multiple sources	are native solutions	cilinaing ir ricecooury	Apply logic and reasoning	designing a course of
			Seek solutions and put	Reflect on processes	- assess whether there is	action
	Identify and clarify	Imagine possibilities	ideas into action assess and	identify and justify the	adequate reasoning and	
	information and ideas	and connect ideas	test options to identify the	thinking behind choices	evidence to justify a claim,	Evaluate procedures and
	identify and clarify	combine ideas in a	most effective solution and	they have made	conclusion, or outcome	outcomes evaluate the
		variety of ways and	put ideas into action			





relevant information and	from a range of sources		effectiveness of ideas,
prioritise ideas	to create new		products, performances,
	possibilities		methods, and courses of
			action against given
			criteria