

<u>Progression in Computational Knowledge, Concepts and Skills</u>



Overview of Computing Skills

Skills (including word processing skills and painting) *Using technology purposefully to create, organise, store, manipulate and retrieve. *Recognise common uses of create, organise software services) on a common uses of common uses of common uses of common uses of create, organise software selecting, using and combining a variety of and combining a variety of software (including internet services) on a range of digital devices to design	2: cadsheets ecting, using
Skills (including word processing skills and painting) *Using technology purposefully to create, organise, store, manipulate and retrieve. *Achines *Recognise common uses of information *Using technology technology and combining a variety of selecting, using and combining a variety of software (including internet services) on a range of digital devices to design and create a *Retch Up *Selecting, using and combining a variety of software (including internet services) on a range of digital devices to design and create a	
*Using technology purposefully to create, organise, store, manipulate and retrieve. *Recognise common uses of information *Using technology purposefully to create, organise, store, manipulate and retrieve. *Selecting, using and combining a variety of software (including internet services) on a range of digital devices to design and create a *Selecting, using and combining a variety of software (including internet services) on a range of digital devices to design and create a	ecting, using
skills and painting) technology purposefully to create, organise, store, manipulate and retrieve. Machines technology purposefully to create, organise, store, manipulate and retrieve. *Recognise common uses of information technology purposefully to create, organise, software software (including internet services) on a range of digital devices to design and create a *Recognise common uses of information technology purposefully to variety of software (including internet services) on a range of digital devices to design and create a	ecting, using
painting) purposefully to create, organise, store, manipulate and retrieve. Machines purposefully to create, organise, store, manipulate and retrieve. *Recognise common uses of information purposefully to create, organise, software (including internet services) on a range of digital devices to design and create a variety of software (including internet services) on a range of digital devices to design and create a	
create, organise, store, manipulate and retrieve. Machines create, organise, store, manipulate and retrieve. *Recognise common uses of information create, organise, store, manipulate and retrieve. store, manipulate and retrieve. store, manipulate and retrieve. (including internet services) on a range of digital devices to design and create a create, organise, store, manipulate and retrieve. software (including internet services) on a range of digital devices to design and create a	combining a
Store, manipulate and retrieve. Machines *Recognise common uses of information store, manipulate and retrieve. *Recognise common uses of information store, manipulate and retrieve. (including internet services) on a range of digital devices to design and create a software (including internet services) on a range of digital devices to design and create a	,
And retrieve. And retrieve. and retrieve. and retrieve. internet services) on a *Recognise common uses of information information information internet services) on a range of digital devices to design and create a (including internet services) on a range of digital devices to design and create a	
*Recognise common uses of information information services) on a services) on a range of digital devices to design and create a internet services) on a range of digital devices to design and create a services) on a range of digital devices to design and create a services on a range of digital devices and create a services on a range of digital devices and create a services on a range of digital devices and create a services on a range of digital devices and create a services of design an	9
*Recognise	
common uses of common uses of devices to design information information and create a range of digital devices to design and c	e of digital
information information and create a devices to design and c	ces to design
	create a
1	rams,
	ems and
content. systems and conte	ent.
content.	
*Using	
technology	
safely,	
respectfully and	J
responsibly.	

			4 (1, 1,,, 11		
			*Understand how		
			to recognise		
			acceptable and		
			unacceptable		
			behaviour.		
			*Understand how		
			to identify a		
			range of ways to		
			report concerns		
			about content		
			and contact.		
Unit 2	2: Uni	t 4:	Unit 3: Drawing		
		sentation	and DTP		
	Skil	lls			
*Usino	7		*Selecting, using		
techno	·	sing	and combining a		
		hnology	variety of		
	•	posefully to	software		
retrie	' '	anise, store	(including		
		retrieve.	internet		
*Usind	,		services) on a		
~	'	cognise	range of digital		
		nmon uses of	devices to design		
	•	ormation	and create a		
*Keep		hnology	range of		
inform	•	ond school.	programs,		
privat	,		systems and		
p u.	*Us	sina	content.		
		hnology safely			
		respectfully.			

	Linit 2. Daintina		Unit 5:			
	Unit 3: Painting					
	₩ (1,5 1 5 1		Presentation			
	*Using logical		Skills			
	reasoning to					
	predict the					
	behaviour of					
	simple programs.					
	Using technology					
	purposefully to					
	create and					
	manipulate.					
Programming	Unit 4:	Unit 1:	Unit 1:	Unit 1: Scratch:	Unit 1: Scratch:	Unit 1: Scratch:
Skills	Programming	Preparing for	Programming	Questions and	Developing	Animated
	Toys	Turtle Logo	Turtle Logo and	Quizzes	Games	Stories
Concepts			Scratch			
Logic	*Understand	*Understand		*Designing,	*Designing,	*Designing,
Abstraction	what algorithms	what algorithms	*Designing,	writing and	writing and	writing and
Algorithms	are and how they	are and how they	writing and	debugging	debugging	debugging
Program	are implemented	are implemented	debugging	programs that	programs that	programs that
	as programs on	as programs on	programs that	accomplish	accomplish	accomplish
	digital devices.	digital devices.	accomplish	specific goals,	specific goals,	specific goals,
			specific goals,	including	including	including
	*Understand	*Understand	including	controlling or	controlling or	controlling or
	programs and	programs and	controlling or	simulating	simulating	simulating
	how to execute	how to execute	simulating	physical systems.	physical systems.	physical systems.
	these by	these by	physical systems.			
	following precise	following precise	' '	*Solving	*Solving	*Solving
	and unambiguous	and unambiguous	*Solving	problems by	problems by	problems by
	instructions.	instructions.	problems by	decomposing into	decomposing into	decomposing into
			decomposing into	smaller parts.	smaller parts.	smaller parts.
	*Use logical		smaller parts.	·	,	,
	reasoning to		,			

predict the behaviour of	*Create and debug simple	*Using sequence, selection and	*Using sequence, selection and	*Using sequence, selection and	*Using sequence, selection and
simple programs.	programs.	repetition in	repetition in	repetition in	repetition in
*Using		programs.	programs.	programs.	programs.
technology purposefully to create, organise and retrieve.		*Working with variables and various forms of input and output.		*Using logical reasoning to explain how simple algorithms work.	*Using logical reasoning to explain how simple algorithms work.
		*Using logical reasoning to explain how simple algorithms work.		WOTE.	WOT N.
Unit 6: Scratch	Unit 3:		Unit 2:	Unit 2: Flowol	Unit 3: Kodu
Jr Programming	Programming		Programming		Programming
	Turtle Logo and		Turtle Logo	*Designing,	
*Understand	Scratch			writing and	*Designing,
what algorithms			*Designing,	debugging	writing and
are and how they	*Understand		writing and	programs that	debugging
are implemented	what algorithms		debugging	accomplish	programs that
as programs on	are and how they		programs that	specific goals,	accomplish
digital devices.	are implemented		accomplish	including	specific goals,
*I Indonetor d	as programs on		specific goals,	controlling or	including
*Understand	digital devices.		including	simulating	controlling or
programs and how to execute	*Understand		controlling or simulating	physical systems.	simulating
these by	programs and		physical systems.	*Solving	physical systems.
following precise	how to execute		priyaicur ayarems.	problems by	*Solving
and unambiguous	these by		*Solving	decomposing into	problems by
instructions.	following precise		problems by	smaller parts.	decomposing into smaller parts.

*Use lo	oical an	d unambiguous	decomposing into	*Using sequence,	
	•	•	, ,	•	* 111atus as success
reasoni	5	structions.	smaller parts.	selection and	*Using sequence,
predict			411	repetition in	selection and
behavio	=	reate and	*Using sequence,	programs.	repetition in
simple		bug simple	selection and		programs.
	pr	ograms.	repetition in	*Using logical	
*Using			programs.	reasoning to	*Using logical
techno	logy *U	Jse logical		explain how	reasoning to
purpose	efully to re	asoning to	*Using logical	simple algorithms	explain how
create	organise pr	edict the	reasoning to	work.	simple algorithms
and ret	rieve. be	chaviour of	explain how		work.
	sir	mple programs.	simple algorithms		
			work and to		*Selecting, using
	*U	Jse technology	detect and		and combining a
		rposefully to	correct errors in		variety of
		eate.	algorithms.		software
			3		(including
					internet
					services) on a
					range of digital
					devices to design
					and create a
					range of
					programs,
					systems and
					content.
			Unit 4:	Unit 3: Radio	Unit 5: Film
			Animation	Station	Making
			*Selecting, using	*Selecting, using	*Understand
			and combining a	and combining a	computer
			variety of	variety of	networks
			software	software	

				(including internet services) on a range of digital devices to design and create a range of programs, systems and content.	(including internet services) on a range of digital devices to design and create a range of programs, systems and content.	including the internet. *Understand how computer networks can provide multiple services, such as the world wide web.
Online Safety	Unit 5: Online	Unit 7: Online	Unit 7: Online	Unit 6: Online	Unit 4: Online	Unit 4: Online
Skills	Safety	Safety	Safety	Safety	Safety	Safety
Concepts Logic Abstraction Data Program Algorithms Machines	*Using technology purposefully to create, organise, store, manipulate and retrieve. *Recognise common uses of information technology beyond school. *Using technology safely and respectfully.	*Recognise common uses of information technology beyond school. *Using technology safely and respectfully. *Keep personal information private. *Understand where to go for help and support with concerns about content or	*Understand computer networks including the internet. *Understand how computer networks can provide multiple services, such as the world wide web. *Using technology safely, respectfully and responsibly.	*Using technology safely, respectfully and responsibly. *Understand how to recognise acceptable and unacceptable behaviour. *Understand how to identify a range of ways to report concerns about content and contact.	*Using search technologies effectively. *Understand how results are selected and ranked. *Understand how to be discerning in evaluating digital content. *Using technology safely, respectfully and responsibly.	*Using technology safely, respectfully and responsibly.

		4 41.	*1 local constant d		*1 lood 1 l	
		contact on the	*Understand how		*Understand how	
		internet.	to recognise		to recognise	
			acceptable and		acceptable and	
			unacceptable		unacceptable	
			behaviour.		behaviour.	
			*Understand how		*Understand how	
			to identify a		to identify a	
			range of ways to		range of ways to	
			report concerns		report concerns	
			about content		about content	
			and contact.		and contact.	
Using and	Unit 7: Using	Unit 6: Using	Unit 6: Using	Unit 5: Using	Unit 6: Using	Unit 6: Using
Applying	and Applying	and Applying	and Applying	and Applying	and Applying	and Applying
11 7 3	''' '	11,75	''' '	11,75	11,7,5	11,75
Concepts	*Using	*Understand				
Logic	technology	what algorithms				
Abstraction	purposefully to	are and how they				
Data	create, organise,	are implemented				
Program	store, manipulate	as programs on				
Algorithms	and retrieve.	digital devices.				
Machines	and retrieve.	digital devices.				
Machines	*Daganiaa	*Understand				
	*Recognise common uses of					
		programs and				
	information	how to execute				
	technology	these by				
	beyond school.	following precise				
		and unambiguous				
		instructions.				
		*Create and				
		debug simple				
		programs.				

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	*Use logical reasoning to predict the behaviour of simple programs. *Using technology purposefully to create, organise, store, manipulate and retrieve. *Recognise common uses of information			
	technology			
	beyond school.			
Communication	Unit 5: Using	Unit 4: Internet		
Skills	the Internet	Research and		
		Communication		
Concepts	*Using			
Data	technology	*Understand		
Machines	purposefully to	computer		
Algorithms	create, organise,	networks		
	store and	including the		
	retrieve.	internet.		
	*Recognise	*Understand how		
	common uses of	computer		
	information	networks can		
		provide multiple		

	technology	services, such as		
	beyond school.	the world wide		
		web.		
	*Using			
	technology safely	*Using search		
	and respectfully.	technologies		
		effectively.		
,	*Keep personal	,		
	information	*Understand how		
	private.	results are		
		selected and		
	*Understand	ranked.		
	where to go for			
	help and support	*Understand how		
	with concerns	to be discerning		
	about content or	in evaluating		
	contact on the	digital content.		
	internet.	aigital content.		
	miernei.	*Using		
		•		
		technology		
		safely,		
		respectfully and		
		responsibly.		
		*Understand how		
		to recognise		
		acceptable and		
		unacceptable		
		behaviour.		
		*Understand how		
		to identify a		
		range of ways to		

		report concerns		
		about content		
		and contact.		