

This Curriculum Overview shows what your child will learn in Computing during their time at The Free School Norwich. This is reviewed annually and may be adapted to meet the needs of individual children or classes, and where appropriate, will be linked to events or places in our local environment.

Year 1 Computing					
Harvest	Christmas	Winter	Spring	Whitsun	Summer
Computing systems and networks – Technology around us	Creating Media – Digital Painting	Programming – Moving a Robot	Data and Information - Grouping Data	Creating Media – Digital Writing	Programming – Programming Animations
Sequence:	Sequence:	Sequence:	Sequence:	Sequence:	Sequence:
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 picture	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	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 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 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
Vocabulary:	To compare painting a	solution to a problem	Vocabulary:	To compare typing on a	create a program
technology / desktop / laptop logging in / click / drag / keyboard /save / arrow keys / cursor	picture on a computer and on paper Vocabulary: paint tools / shape / line	Vocabulary: command / instruction direction / sequence	label / group / record	computer to writing on paper Vocabulary: word processor / keyboard backspace /	Vocabulary: Sprite / programming block



/space bar / doubleclick / font National Curriculum Links:

KS1 Computing

- Recognise common uses of information technology beyond school
- Use technology purposefully to create, organise, store, manipulate, and retrieve digital content
- 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

brush size / digital art National Curriculum Links:

KS1 Computing

 Use technology purposefully to create, organise, store, manipulate, and retrieve digital content

KS1 Art and Design

- To develop a wide range of art and design techniques in using colour, pattern, texture, line, shape, form, and space
- About the work of a range of artists, craft makers, and designers, describing the differences and similarities between different practices and

National Curriculum Links:

KS1 Computing

- Understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions
- Create and debug simple programs
- Use logical reasoning to predict the behaviour of simple programs
- Recognise common uses of information technology beyond school

National Curriculum Links:

KS1 Computing

- Use technology purposefully to create, organise, store, manipulate, and retrieve digital content
- Use technology safely and respectfully

text / capital letters / toolbar bold / italic / underline double clicking / dragging font / undo

National Curriculum Links:

KS1 Computing

- purposefully to create, organise, store, manipulate, and retrieve digital content
- Use technology safely and respectfully, keeping personal information private

English – writing (Y1)

Write sentences by:

 saying out loud what they are going to write about

National Curriculum Links:

KS1 Computing

- Understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions
- Create and debug simple programs
- Use logical reasoning to predict the behaviour of simple programs



other online	disciplines and	composing a
technologies.	making links to	sentence orally
	their own work	before writing it
		• sequencing
		sentences to form
		short narratives
		re-reading what
		they have written
		to check that it
		makes sense



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Harvest	Christmas	Winter	Spring	Whitsun	Summer
Information	Creating Media –	Programming –	Data and Information -	Creating Media –	Programming –
Technology Around Us	Digital Photography	Robot Algorithms	Pictograms	Digital Music	Programming Quizzes
Sequence:	Sequence:	Sequence:	Sequence:	Sequence:	Sequence:
			_	_	
To recognise the uses	To use a digital device	To describe a series of	To recognise that we	To say how music can	To explain that a
and features of	to take a photograph	instructions as a	can count and compare	make us feel	sequence of
information technology	To make choices when	sequence	objects using tally	To identify that there	commands has a start
To identify the uses of	taking a photograph	To explain what	charts	are patterns in music	To explain that a
information technology	To describe what makes	happens when we	To recognise that	To experiment with	sequence of
in the school	a good photograph	change the order of	objects can be	sound using a	commands has an
To identify information	To decide how	instructions	represented as pictures	computer	outcome
technology beyond	photographs can be	To use logical reasoning	To create a pictogram	To use a computer to	To create a program
school	improved	to predict the outcome	To select objects by	create a musical	using a given design
To explain how	To use tools to change	of a program	attribute and make	pattern	To change a given
information technology	an image	To explain that	comparisons	To create music for a	design
helps us	To recognise that	programming projects	To recognise that	purpose	To create a program
To explain how to use	photos can be changed	can have code and	people can be	To review and refine	using my own design
information technology		artwork	described by attributes	our computer work	To decide how my
safely	Vocabulary:	To design an algorithm	To explain that we can		project can be
To recognise that	digital device /	To create and debug a	present information	Vocabulary:	improved
choices are made when	landscape	program that I have	using a computer	digital music / rhythm	
using information	portrait / format	written	,	-	Vocabulary:
technology	composition /		Vocabulary:		algorithm / blocks
	autofocus	Vocabulary:	data / attribute		outcome
Vocabulary:	tool / editing	sequence / algorithm			
information technology		debug			
devices / technology	National Curriculum	National Curriculum	National Curriculum	National Curriculum	National Curriculum
. 3,	Links:	Links:	Links:	Links:	Links:



National Curriculum Links:

KS1 Computing

- Use technology purposefully to create, organise, store, manipulate, and retrieve digital content
- Recognise common uses of information technology beyond school
- Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content

KS1 Computing

- Use technology purposefully to create, organise, store, manipulate, and retrieve digital content
- Recognise common uses of information technology beyond school

KS1 Art and design

 To develop a wide range of art and design techniques in using colour, pattern, texture, line, shape, form, and space

KS1 Computing

- Understand
 what
 algorithms are,
 how they are
 implemented
 as programs on
 digital devices,
 and that
 programs
 execute by
 following
 precise and
 unambiguous
 instructions
- Create and debug simple programs
- Use logical reasoning to predict the behaviour of simple programs

KS1 Computing

- Use technology purposefully to create, organise, store, manipulate, and retrieve digital content
- 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

KS1 Computing

 Use technology purposefully to create, organise, store, manipulate, and retrieve digital content

KS1 Music

- Play tuned and untuned instruments musically
- Listen with concentration and understanding to a range of high-quality live and recorded music
- Experiment with, create, select, and combine sounds using the

KS1 Computing

- Understand
 what
 algorithms are;
 how they are
 implemented
 as programs on
 digital devices;
 and that
 programs
 execute by
 following
 precise and
 unambiguous
 instructions
- Create and debug simple programs
- Use logical reasoning to predict the behaviour of simple programs
- Use technology purposefully to create, organise, store,



or contact on	Maths – Year 2	interrelated	manipulate
the internet or	 Interpret and 	dimensions of	and retrieve
other online	construct	music	digital content
technologies	simple		
	pictograms,		
	tally charts,		
	block diagrams		
	and simple		
	tables		
	 Ask and 		
	answer simple		
	questions by		
	counting the		
	number of		
	objects in each		
	category and		
	sorting the		
	categories by		
	quantity ask		
	and answer		
	questions		
	about totalling		
	and comparing		
	categorical		
	data		



Year 3 Computing					
Harvest	Christmas	Winter	Spring	Whitsun	Summer
Computing systems and networks – Connecting computers	Creating Media – Stop-Frame Animation	Programming – Sequencing Sounds	Data and Information – Branching Databases	Creating Media – Desktop Publishing	Programming – Events and Actions in Programming
Sequence:	Sequence:	Sequence:	Sequence:	Sequence:	Sequence:
To explain how digital devices function To identify input and output devices To recognise how digital devices can change the way that we work To explain how a computer network can be used to share information To explore how digital devices can be connected	To explain that animation is a sequence of drawings or photographs To relate animated movement with a sequence of images To plan an animation To identify the need to work consistently and carefully To review and improve an animation To evaluate the impact of adding other media	To explore a new programming environment To identify that commands have an outcome To explain that a program has a start To recognise that a sequence of commands can have an order To change the appearance of my project	To create questions with yes/no answers To identify the attributes needed to collect data about an object To create a branching database To explain why it is helpful for a database to be well structured To plan the structure of a branching database To independently create an identification	To recognise how text and images convey information To recognise that text and layout can be edited To choose appropriate page settings To add content to a desktop publishing publication To consider how different layouts can suit different purposes To consider the	To explain how a sprite moves in an existing project To create a program to move a sprite in four directions To adapt a program to a new context To develop my program by adding features To identify and fix bugs in a program To design and create a maze-based challenge
To recognise the	to an animation	To create a project	tool	benefits of desktop	Vocabulary:
physical components of a network	Vocabulary:	from a task description	Vocabulary:	publishing	programming / extension
Vocabulary: inputs/outputs	stop- frame animation media	Vocabulary: sprites / backdrops commands / blocks	attributes branching database / group	Vocabulary: template / layout placeholders /	debugging / code
Wi-Fi / network switch		algorithm / code	identification tool	orientation	



Server / wireless access
point / network(ed)

National Curriculum Links: KS2 Computing

- Use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- Understand computer networks including the internet; how they can provide multiple services, such as the World Wide Web; and the opportunities they offer for

National Curriculum Links:

KS2 Computing

- 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/un

National Curriculum Links:

KS2 Computing

- Design, write, and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into
- Use sequence, selection, and repetition in programs; work with variables and various forms of input and output

smaller parts

Use logical reasoning to explain how

National Curriculum Links:

KS2 Computing

- 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

paste / desktop publishing

National Curriculum Links:

KS2 Computing

- 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

National Curriculum Links:

KS2 Computing

- Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems 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



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communicatio	acceptable	some simple	and	given goals,	some simple
n and	behaviour;	algorithms	responsibly	including	algorithms
collaboration	identify a	work, and to		collecting,	work and to
 Select, use and 	range of ways to report	detect and		analysing,	detect and
combine a	concerns about	correct errors		evaluating, and	correct errors
variety of	content and	in algorithms		presenting	in algorithms
software	contact.	and programs		data and	and programs
(including		Select, use and		information	 Select, use and
internet	English	combine a variety of			combine a
services) on a	Pupils should	software (including		English	variety of
range of digital	be taught to: draft and write	internet services) on a range of digital devices		 Pupils should 	software (including
devices to	by: in	to design and create a		be taught to	internet
design and	narratives,	range of programs,		draft and write	services) on a
create a range	creating	systems and content		by: in non-	range of digital
of programs,	settings,	that accomplish given		narrative	devices to
systems and	characters and	goals, including		material, using	design and
content that	plot	collecting, analysing,		simple	create a range
accomplish	 Pupils should be taught to: 	evaluating and presenting data and		organisational	of programs, systems and
given goals,	proof-read for	information		devices [for	content that
including	spelling and			example,	accomplish
collecting,	punctuation			headings and	given goals,
analysing,	errors			subheadings]	including
evaluating and				 Evaluate and 	collecting,
presenting	History			edit by	analysing,
data and	 The Roman Empire and its 			assessing the	evaluating and presenting
information	impact on			effectiveness	data and
	Britain			of their own	information
				and others'	
				writing and	



Maths (Lesson 1)		suggesting	
 Number and 		improvements	
place value:		 Proofread for 	
solve number		spelling and	
problems and		punctuation	
practical		errors	
problems			
involving these			
ideas.			
Art (Lesson 3)			
 To improve 			
their mastery			
of art and			
design			
techniques,			
including			
drawing,			
painting and			
sculpture with			
a range of			
materials			



Year 4 Computing							
Harvest	Harvest Christmas Winter Spring Whitsun Summer						
Computer Systems and Networks – The Internet	Creating Media – Audio Production	Programming – Repetition in Shapes	Data and Information – Data Logging	Creating Media – Photo Editing	Programming – Repetition in Games		
Sequence:	Sequence:	Sequence:	Sequence:	Sequence:	Sequence:		
To describe how networks physically connect to other networks To recognise how networked devices make up the internet To outline how websites can be shared via the World Wide Web (WWW) To describe how content can be added and accessed on the World Wide Web (WWW) To recognise how the content of the WWW is created by people To evaluate the	To identify that sound can be recorded To explain that audio recordings can be edited To recognise the different parts of creating a podcast project To apply audio editing skills independently To combine audio to enhance my podcast project To evaluate the effective use of audio Vocabulary: audio recording / copyright	To identify that accuracy in programming is important To create a program in a text-based language To explain what 'repeat' means To modify a count-controlled loop to produce a given outcome To decompose a task into small steps To create a program that uses count-controlled loops to produce a given outcome	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 To recognise how a computer can help us analyse data To identify the data needed to answer questions To use data from sensors to answer questions	To explain that the composition of digital images can be changed To explain that colours can be changed in digital images To explain how cloning can be used in photo editing To explain that images can be combined To combine images for a purpose To evaluate how changes can improve an image Vocabulary: digital images / crop	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 develop a design that includes two or more loops which run at the same time To modify an infinite loop in a given program To design a project that includes repetition To create a project that		
consequences of unreliable content	soundwave view / podcast	Vocabulary: commands / value		photo editing / cloning	includes repetition		

how results are

collecting,



various forms

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Vocabulary:	National Curriculum	code snippet /	Vocabulary:	Vocabulary:	Vocabulary:
networked devices	Links:	template	data set / sensor	digital images / crop	count-controlled loops
World Wide Web	KS2 Computing	algorithm / repetition	data logger / interval	photo editing / cloning	infinite loops /
websites/ web pages	• Use	count controlled loop			outcome
online content /	search		National Curriculum	National Curriculum	count controlled loop
ownership	technologies	National Curriculum	Links:	Links:	repetition / algorithm
	effectively,	Links:	KS2 Computing	KS2 Computing	
National Curriculum	appreciate	KS2 Computing	• Use	 Select, 	National Curriculum
Links:	how results are	 Design, 	sequence,	use, and	Links:
KS2 Computing	selected and	write and	selection, and	combine a	KS2 Computing
 Unders 	ranked, and be	debug	repetition in	variety of	 Design,
tand computer	discerning in	programs that	programs;	software	write, and
networks	evaluating	accomplish	work with	(including	debug
including the	digital content	specific goals,	variables and	internet	programs that
internet; how	 Select, 	including	various forms	services) on a	accomplish
they can	use, and	controlling or	of input and	range of digital	specific goals,
provide	combine a	simulating	output	devices to	including
multiple	variety of	physical	 Select, 	design and	controlling or
services, such	software	systems; solve	use, and	create a range	simulating
as the World	(including	problems by	combine a	of programs,	physical
Wide Web, and	internet	decomposing	variety of	systems, and	systems; solve
the	services) on a	them into	software	content that	problems by
opportunities	range of digital	smaller parts	(including	accomplish	decomposing
they offer for	devices to	• Use	internet	given goals,	them into
communicatio	design and	sequence,	services) on a	including	smaller parts
n and	create a range	selection, and	range of digital	collecting,	• Use
collaboration	of programs,	repetition in	devices to	analysing,	sequence,
 Use 	systems, and	programs;	design and	evaluating, and	selection, and
search	content that	work with	create a range	presenting	repetition in
technologies	accomplish	variables and	of programs,	data and	programs;
effectively,	given goals,	various forms	systems, and	information	work with
appreciate	including	of input and	content that	• Use	variables and

accomplish

technology

output



selected and ranked, and be discerning in evaluating, and legical presenting reasoning to explain how analysing, digital content information some simple combine a variety of software internet recognise acceptable/un and programs services) on a range of digital devices to behaviour; of programs, systems, and content that content that - Use logical reasoning to explain how analysing, analysing, responsibly; reasoning to explain how analysing, analysing, responsibly; logical reasoning to explain how analysing, and presenting acceptable, analysing, responsibly; reasoning to evaluating, and presenting acceptable, output detecting, and presenting acceptable, output outpu	1
discerning in evaluating data and explain how digital content Select, use, and combine a variety of software internet services) on a range of digital devices to design and content that discerning in evaluating data and digital content evaluating data and digital content behaviour; and programs of programs, systems, and content that evaluating data and explain how explain how some simple algorithms work and to detect and information behaviour; algorithms and programs of content and combine a variety of software and concerns about content and content that evaluating, and responsibly; reasoning to explain how analysing, evaluating, and presenting and evaluating, and presenting data and information behaviour; algorithms of acceptable work, and to detect and information some simple algorithms of the content and information information behaviour; algorithms of acceptable work, and to range of ways detect and concerns about concerns about careful content and observations and, where appropriate, taking accurate of programs, systems, and concerns about concerns about concerns about concerns about concerns about concerns about using standard units, using a internet	
evaluating digital content • Select, use, and combine a variety of software (including internet services) on a range of digital devices to design and content that • Careate a range of programs, systems, and content that • Careate a range of digital content and content that • Careate a range of digital content and content that • Careate a range of digital content and content that • Caplain how analysing, evaluating, and presenting devaluating, and presenting acceptable work and to data and acceptable information • Select, algorithms • Correct errors • Careate a range of digital content and content and content and content and content and range of digital content and and programs and using standard units, using a content and and programs and using standard units, using a content and content and and programs and using standard units, using a content and and programs and using standard units, using a content and and programs and units, using a content and and programs and units, using a content and and programs and acceptable and accepta	
digital content	
 Select, use, and combine a variety of software (including range of digital devices to design and create a range of programs, systems, and combine a combine a combine a combine a variety of systems, and content that Select, use, and technology work and to detect and combine a safely, detect and information information information information behaviour; algorithms work, and to detect and information information information behaviour; algorithms work, and to some simple algorithms work, and to detect and correct errors in algorithms and programs of detect and correct errors in algorithms systematic and combine a combine a variety of software appropriate, taking accurate measurements systems, and content and range of digital units, using a 	
use, and combine a safely, respectfully, and in algorithms (including internet services) on a range of digital devices to design and create a range of programs, systems, and combine a combine a content that content that content that content that content and combine a safely, work and to detect and information detect and information behaviour; algorithms identify a correct errors information behaviour; identify a lagorithms work, and to some simple information behaviour; identify a lagorithms work, and to some simple information behaviour; identify a softence – Year 4 range of ways to report correct errors systematic and correct errors systematic and correct errors and programs of the correct errors systems, and concerns about content that content that content and correct errors some simple information behaviour; identify a work, and to select errors in algorithms and programs of to report use and concerns about content and content that content that content that correct errors in algorithms work, and to correct errors in algorithms of the correct errors and programs of to report use and content that content to detect and content to software use and in algorithms work, and to correct errors and programs of the correct errors of the correct errors and programs of the correct errors and programs of the correct errors and programs of the correct errors of the cor)
combine a variety of respectfully, and programs internet recognise arange of digital devices to design and content that content that content and content that content and content that content that content and content that content and content that content and	!
variety of software and in algorithms (including responsibly; recognise internet services) on a range of digital devices to design and create a range of programs, systems, and content that content and content that content and content that content and correct errors in algorithms and programs in algorithms and programs sidentify a in algorithms software in algorithms software and programs in algorithms software and careful content and content and correct errors systematic and careful content and content and correct errors in algorithms content errors in algorithms and programs content errors in algorithms content errors content errors	جَ
software (including responsibly; recognise internet services) on a range of digital devices to design and create a range of ways internet systems, and content that software (including responsibly; recognise internet services) on a acceptable (including content that in algorithms and programs • Science – Year 4 • Making systematic and concerns about concerns about careful content and observations and programs observations and, where appropriate, taking accurate measurements systems, and concerns about content and range of digital units, using a in algorithms • Making systematic and concerns about careful content and and programs observations observations and programs observations and programs observations and programs observations and programs observations observations and programs observations observations and programs observations observations and programs observations	
(including internet recognise responsibly; and programs of digital devices to design and create a range of programs, systems, and content that content and content that content and concerns about in algorithms systematic and concerns about content and concerns about and programs observations and, where appropriate, combine a combine a variety of and, where appropriate, combine a variety of software using standard units, using a internet)
internet recognise services) on a range of digital devices to design and create a range of programs, systems, and content that content and content that recognise acceptable use and careful content and content and content and careful content and careful content and content and careful content and content and content and content and careful content and content and content and careful content and careful content and content and careful content and content and content and content and careful content and careful content and careful content and careful content and content and careful careful content and content and careful content and content and careful careful content and content and content and content and content and careful careful content and content and careful careful content and content and careful careful content and content and content and careful careful content and content and content and content and content and careful caref	
services) on a range of digital range of digital devices to behaviour; variety of design and create a range of programs, systems, and content and careful combine a acceptable/un acceptable/un acceptable/un acceptable/un combine a combine a contact services) on a contact services) on a contact services) on a contact services) on a contact services of and, where appropriate, combine a combine a variety of to report internet measurements software (including taking accurate using standard units, using a internet i	rs
range of digital devices to design and create a range of ways of programs, systems, and content that content and combine a combine a combine a observations and, where and combine a software appropriate, to report internet measurements using standard content that content and combine a observations contact • Select use and combine a appropriate, to report and software using accurate wariety of software using standard units, using a internet	S
devices to design and create a range of programs, systems, and content thatbehaviour; identify a softwarevariety of softwareand, where appropriate, taking accurate measurements use and taking accurate measurements using standard units, using a	กร
design and create a range of programs, systems, and content thatidentify a range of ways to report concerns about range of digitalsoftware (including internetappropriate, taking accurate measurements using standard units, using acombine a variety of software (including internet	ct,
create a range of ways of programs, systems, and concerns about content that content and concerns about content and concerns about content and concerns about concerns about content and concerns about concerns about content and concerns about content and concerns about concerns about content and concerns about concerns abou	
of programs, to report internet measurements software systems, and concerns about content that content and range of digital units, using a software using standard units, using a internet	
systems, and concerns about services) on a using standard (including content that content and range of digital units, using a internet	
content that content and range of digital units, using a internet	
accomplish contact devices to range of services) on a	а
given goals, design and equipment, range of digit	ital
including Science – Year 4 create a range including devices to	
collecting, (Lesson 2) of programs, thermometers design and	
analysing, • Sound: systems and and data create a range	ge
evaluating, and Find patterns content that loggers. of programs,	,
presenting between the accomplish • They systems and	1
data and volume of a given goals, should learn content that	t
information sound and the including how to use accomplish	
• Use strength of the collecting, new given goals,	
technology vibrations that analysing, equipment, including	
safely, produced it evaluating and such as data collecting,	
respectfully, presenting loggers, analysing,	



and	English	data and	appropriately.	evaluating and
responsibly;	 Writing 	information	They should	presenting
recognise	: Read aloud		collect data	data and
acceptable/un	their own		from their own	information
acceptable	writing, to a		observations	
behaviour;	group or the		and	
identify a	whole class,		measurements	
range of ways	using		, using notes,	
to report	appropriate		simple tables	
concerns about	intonation and		and standard	
content and	controlling the		units, and help	
contact.	tone and		to make	
	volume so that		decisions	
PSHE (Lesson 6)	the meaning is		about how to	
 Evaluat 	clear		record and	
ing content for			analyse this	
honesty and			data.	
accuracy				



Year 5 Computing						
Harvest	Christmas	Winter	Spring	Whitsun	Summer	
Computer Systems and Networks – Systems and Searching	Creating Media – Video Production	Programming – Selection in Physical Programming	Data and Information – Flat-File Databases	Creating Media – Introduction to Vector Graphics	Programming – Selection in Quizzes	
Sequence:	Sequence:	Sequence:	Sequence:	Sequence:	Sequence:	
To explain that	To explain what makes	To control a simple	To use a form to record	To identify that	To explain how	
computers can be	a video effective	circuit connected to a	information	drawing tools can be	selection is used in	
connected together to	To use a digital device	computer	To compare paper and	used to produce	computer programs	
form systems	to record video	To write a program	computer-based	different outcomes	To relate that a	
To recognise the role	To capture video using	that includes count-	databases	To create a vector	conditional statement	
of computer systems in	a range of techniques	controlled loops	To outline how you can	drawing by combining	connects a condition to	
our lives	To create a storyboard	To explain that a loop	answer questions by	shapes	an outcome	
To identify how to use	To identify that video	can stop when a	grouping and then	To use tools to achieve	To explain how	
a search engine	can be improved	condition is met	sorting data	a desired effect	selection directs the	
To describe how search	through reshooting	To explain that a loop	To explain that tools	To recognise that	flow of a program	
engines select results	and editing	can be used to	can be used to select	vector drawings consist	To design a program	
To explain how search	To consider the impact	repeatedly check	specific data	of layers	that uses selection	
results are ranked	of the choices made	whether a condition	To explain that	To group objects to	To create a program	
To recognise why the	when making and	has been met	computer programs	make them easier to	that uses selection	
order of results is	sharing a video	To design a physical	can be used to	work with	To evaluate my	
important, and to		project that includes	compare data visually	To apply what I have	program	
whom	Vocabulary:	selection	To use a real-world	learned about vector		
	visual media	To create a program	database to answer	drawings	Vocabulary:	
Vocabulary:	camera angles	that controls a physical	questions		Conditions	
systems / input /	digital device /	computing project		Vocabulary:	conditional statement	
process	recording		Vocabulary:	vector drawings /	condition outcome	
output / address bar	editing / importing	Vocabulary:	database / field	resize	selection / algorithm	
search engine		circuit/ microcontroller		rotate / duplicate		



web crawler / index /	National Curriculum	infinite loop /	record / flat-file	alignment grid/ layer	National Curriculum
rank	Links:	condition	database		Links:
	KS2 Computing	conditional loop /		National Curriculum	KS2 Computing
National Curriculum	• Use	debug	National Curriculum	Links:	design,
Links:	search		Links:	KS2 Computing	write and
KS2 Computing	technologies	National Curriculum	KS2 Computing	 Select, 	debug
 Unders 	effectively,	Links:	• Use	use, and	programs that
tand computer	appreciate	KS2 Computing	search	combine a	accomplish
networks,	how results are	 Design, 	technologies	variety of	specific goals,
including the	selected and	write, and	effectively,	software	including
internet; how	ranked, and be	debug	appreciate	(including	controlling or
they can	discerning in	programs that	how results are	internet	simulating
provide	evaluating	accomplish	selected and	services) on a	physical
multiple	digital content	specific goals,	ranked, and be	range of digital	systems; solve
services, such	 Select, 	including	discerning in	devices to	problems by
as the World	use, and	controlling or	evaluating	design and	decomposing
Wide Web, and	combine a	simulating	digital content	create a range	them into
the	variety of	physical	• Select,	of programs,	smaller parts
opportunities	software	systems; solve	use, and	systems, and	• use
they offer for	(including	problems by	combine a	content that	sequence,
communicatio	internet	decomposing	variety of	accomplish	selection, and
n and	services) on a	them into	software	given goals,	repetition in
collaboration	range of digital	smaller parts	(including	including	programs;
 Use search 	devices to	• Use	internet	collecting,	work with
technologies	design and	sequence,	services) on a	analysing,	variables and
effectively,	create a range	selection, and	range of digital	evaluating, and	various forms
appreciate how	of programs,	repetition in	devices to	presenting	of input and
results are	systems, and	programs;	design and	data and	output
selected and	content that	work with	create a range	information.	• use
ranked, and be	accomplish	variables and	of programs,		logical
discerning in	given goals,	various forms	systems, and		reasoning to
evaluating	including	of input and	content that		explain how
digital content	collecting,	output	accomplish		some simple



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	analysing,	• Use	given goals,	algorithms
	evaluating, and	logical	including	work and to
	presenting	reasoning to	collecting,	detect and
	data and	explain how	analysing,	correct errors
	information	some simple	evaluating, and	in algorithms
	• Use	algorithms	presenting	and programs
	technology	work and to	data and	 select, use and
	safely,	detect and	information	combine a
	respectfully,	correct errors		variety of
	and	in algorithms		software
	responsibly;	and programs		(including
	recognise	 Select, 		internet
	acceptable/un	use, and		services) on a
	acceptable	combine a		range of digital
	behaviour;	variety of		devices to
	identify a	software		design and
	range of ways	(including		create a range
	to report	internet		of programs,
	concerns about	services) on a		systems and
	content and	range of digital		content that
	contact	devices to		accomplish
		design and		given goals,
PS	HE	create a range		including
	• Use	of programs,		collecting,
	technology	systems, and		analysing,
	safely,	content that		evaluating and
	respectfully,	accomplish		presenting
	and	given goals,		data and
	responsibly;	including		information
	recognise	collecting,		
	acceptable/un	analysing,		
	acceptable	evaluating, and		
	behaviour	presenting		
l l			· · · · · · · · · · · · · · · · · · ·	



data and	1
information	1
	ł
Science – Electricity	l
• Constr	ł
uct a simple	ł
series electrical	ł
circuit,	ł
identifying and	l
naming its	l
basic parts,	1
including cells,	l
wires, bulbs,	ł
switches, and	ł
buzzers	l
	ł
Design and	ł
Technology	i
• Select	l
from and use a	ł
wider range of	l
tools and	l
equipment to	ł
perform	ł
practical tasks	ł
[for example,	ł
cutting,	ł
shaping,	ł
joining, and	ł
finishing],	l
accurately	ł
• produc	ł
ts against their	ł
is against their	I

FREE SCHOOL NORWICH **Computing Curriculum Overview** own design criteria and consider the views of others to improve their work Unders tand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers, and motors] Apply their understanding

of computing to program, monitor, and control their products



Year 6 Computing					
Harvest	Christmas	Winter	Spring	Whitsun	Summer
Computing Systems and Networks – Communication and Collaboration	Creating Media – Web Page Creation	Programming – Variables in Games	Data and Information – Introduction to Spreadsheets	Creating Media – 3D Modelling	Programming – Sensing Movement
Sequence:	Sequence:	Sequence:	Sequence:	Sequence:	Sequence:
To explain the	To review an existing	To define a 'variable'	To create a data set in	To recognise that you	To create a program to
importance of internet	website and consider	as something that is	a spreadsheet	can work in three	run on a controllable
addresses	its structure	changeable	To build a data set in a	dimensions on a	device
To recognise how data	To plan the features of	To explain why a	spreadsheet	computer	To explain that
is transferred across	a web page	variable is used in a	To explain that	To identify that digital	selection can control
the internet	To consider the	program	formulas can be used	3D objects can be	the flow of a program
To explain how sharing	ownership and use of	To choose how to	to produce calculated	modified	To update a variable
information online can	images (copyright)	improve a game by	data	To recognise that	with a user input
help people to work	To recognise the need	using variables	To apply formulas to	objects can be	To use an conditional
together	to preview pages	To design a project	data	combined in a 3D	statement to compare
To evaluate different	To outline the need for	that builds on a given	To create a	model	a variable to a value
ways of working	a navigation path	example	spreadsheet to plan an	To create a 3D model	To design a project
together online	To recognise the	To use my design to	event	for a given purpose	that uses inputs and
To recognise how we	implications of linking	create a project	To choose suitable	To plan my own 3D	outputs on a
communicate using	to content owned by	To evaluate my project	ways to present data	model	controllable device
technology	other people			To create my own	To develop a program
To evaluate different		Vocabulary:	Vocabulary:	digital 3D model	to use inputs and
methods of online	Vocabulary:	Variable / placeholder	spreadsheet / cell		outputs on a
communication	HTML code	algorithms	data / cell references	Vocabulary:	controllable device
	copyright-free images		formula / format	group / resize	
Vocabulary:	fair use / navigation			duplicate / workplane	Vocabulary:
IP address / protocols	path			placeholders	emulator



Domain Name Server	hyperlink				controllable device /
data packet					flow
National Curriculum	National Curriculum	National Curriculum	National Curriculum	National Curriculum	physical input /
Links:	Links:	Links:	Links:	Links:	operand
KS2 Computing	KS2 Computing	KS2 Computing	KS2 Computing	KS2 Computing	
 Unders 	• Use	 Design, 	 Select, 	 Select, 	National Curriculum
tand computer	search	write and	use, and	use, and	Links:
networks,	technologies	debug	combine a	combine a	KS2 Computing
including the	effectively,	programs that	variety of	variety of	 Design,
internet; how	appreciate	accomplish	software	software	write, and
they can	how results are	specific goals,	(including	(including	debug
provide	selected and	including	internet	internet	programs that
multiple	ranked, and be	controlling or	services) on a	services) on a	accomplish
services, such	discerning in	simulating	range of digital	range of digital	specific goals,
as the World	evaluating	physical	devices to	devices to	including
Wide Web, and	digital content	systems; solve	design and	design and	controlling or
the	 Select, 	problems by	create a range	create a range	simulating
opportunities	use, and	decomposing	of programs,	of programs,	physical
they offer for	combine a	them into	systems, and	systems, and	systems; solve
communicatio	variety of	smaller parts	content that	content that	problems by
n and	software	• Use	accomplish	accomplish	decomposing
collaboration	(including	sequence,	given goals,	given goals,	them into
• Select,	internet	selection, and	including	including	smaller parts
use and	services) on a	repetition in	collecting,	collecting,	• Use
combine a	range of digital	programs;	analysing,	analysing,	sequence,
variety of	devices to	work with	evaluating, and	evaluating, and	selection, and
software	design and	variables and	presenting	presenting	repetition in
(including	create a range	various forms	data and	data and	programs;
internet	of programs,	of input and	information	information	work with
services) on a	systems, and	output		• Use	variables and
range of digital	content that	• Use	Maths – addition,	technology	various forms
devices to	accomplish	logical	subtraction,	safely,	of input and
design and	given goals,	reasoning to		respectfully,	output



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/un

range of ways

concerns about

content and

acceptable

behaviour;

identify a

to report

contact

- including collecting, analysing, evaluating, and presenting data and information.
- use technology safely, respectfully, and responsibly; recognise acceptable/un acceptable behaviour.

English

 Writing composition: Identifying the audience for and purpose of the writing, selecting the appropriate form, and using other similar writing as models for their own. 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,

presenting

information

data and

evaluating and

multiplication, and division:

 Solve problems involving addition, subtraction, multiplication, and division

Statistics:

- Interpret and construct pie charts and line graphs, and use these to solve problems
 Calcula te and interpret the
- Calcula te and interpret the mean as an average

and
responsibly;
recognise
acceptable/un
acceptable
behaviour;
identify a
range of ways
to report
concerns about
content and
contact

Design and technology

Mathematics

Genera te. develop. model, and communicate their ideas through discussion. annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computeraided design

- logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs Select, use and
- 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

Computing Curriculum Overview Recognise, data and information build simple 3D shapes, including making nets Recognise, describe, and information build simple 3D shapes, including making nets