Our Computing curriculum will nurture competent and safe digital users who understand and create technology; express themselves and their ideas through technology; use analytical and logical thinking skills to solve problems; are proactive members of their digital community and have the skills and knowledge to thrive in an ever-changing digital world.

COMPUTING: Concepts Overview

The **concepts** are the 'core ideas' that run throughout the curriculum for each subject, from Nursery to Year 6. The concepts link directly to the National Curriculum subject aims.

Concept 1	Concept 2	Concept 3
Computer Science	Information Technology	Digital Expertise
 Can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation Can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems 	Can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems	Are responsible, competent, confident and creative users of information and communication technology.

COMPUTING – Contents

Concept Milestones

Nursery

Reception

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Year 2 Autumn	Year 2 Spring	Year 2 Summer
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COMPUTING: Milestones Overview

The **Milestones** break down the overarching concepts and indicate what pupils should achieve in each concept by the end of each Key Stage. The Milestones link directly to the EYFS Framework and the National Curriculum subject content.

	Concept 1: Computer Science	Concept 2: Information Technology	Concept 3: Digital Expertise
Milestone 1 (EYFS)	 Understand that some outcomes require a sequence of actions that must be carried out in a specific order. Be able to plan and carry out a sequence of actions both in the physical environment and using programmable devices. 	 Complete a simple program on a computer Use ICT hardware to interact with age-appropriate computer software Recognise that a range of technology is used in places such as homes and schools Select and use technology for particular purposes. 	Use technology safely.
Milestone 2 (Yr 1/2)	 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, 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 or contact on the internet or other online technologies.
Milestone 3 (Yr 3/4)	 Begin to design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts Begin to use sequence, selection, and repetition in programs; work with variables and various forms of input and output Begin to use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs 	 Begin to 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 Begin to use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content Select, use and combine a small range of software (including internet services) on a small range of digital devices to design and create a small 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.

Milestone 4 (Yr
5/6)	

- Confidently design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
- Confidently use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- Confidently use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
- 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 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/unacceptable behaviour; confidently identify an increasing range of ways to report concerns about content and contact.

COMPUTING Learning - Nursery

Concept		Milestone	Learning
Concept 1:	•	Understand that some outcomes require a	Computational Thinking
Computer		sequence of actions that must be carried out in a	a) I can follow simple oral instructions
Science		specific order	b) I can spot simple patterns
	•	Be able to plan and carry out a sequence of actions	c) I can sequence simple familiar tasks
		both in the physical environment and using	Coding and Programming
		programmable devices	a) I can use a touch screen to select options on screen
Concept 2:	•	Complete a simple program on a computer	Word Processing/Typing
Information	•	Use ICT hardware to interact with age-appropriate	a) I can play on a touch screen game and use computers/keyboards/mouse in role play
Technology		computer software	b) I can record my voice into a digital device
	•	Recognise that a range of technology is used in	Data Handling
		places such as homes and schools	c) I can sort physical objects and take a picture
	•	They select and use technology for particular	<u>Animation</u>
		purposes	d) I can play a simple animation online
			<u>Video Creation</u>
			e) I know the difference between a photography and video.
			Photography and Digital Art
			f) I can take a photograph
			<u>Sound</u>
			g) I can explore making sounds with my voice (tube, tin can, shouting to create an echo)
Concept 3:	•	Use technology safely	Self-Image and Identity
Digital			a) I can recognise that I can say 'no' / 'please stop' / 'I'll tell' / 'I'll ask' to somebody who asks me to do
Expertise			something that makes me feel sad, embarrassed or upset
			Online Bullying
			b) I can tell someone if something I see online makes me feel sad
			Managing online information
			c) I can recognise that the internet can be used to play, communicate and find things out.
			d) I can identify a simple device I could use to access the internet.
			Health, Wellbeing and Lifestyle
			e) I can use technology safely at Nursery
			Privacy and security
			f) I can identify my name and age
			g) I can describe some people who are special to me
			Copyright and Ownership
			h) I know that work I create belongs to me.

COMPUTING Learning - Reception

Concept		Milestone	Learning
Concept 1:	•	Understand that some outcomes require a	Computational Thinking
Computer		sequence of actions that must be carried out in a	a) I can follow simple oral algorithms
Science		specific order	b) I can spot simple patterns
	•	Be able to plan and carry out a sequence of actions	c) I can sequence simple familiar tasks
		both in the physical environment and using	Coding and Programming
		programmable devices	d) I can use a mouse, touch screen or appropriate access device to target and select options on screen
			e) I can input a simple sequence of commands to control a digital device with support
Concept 2:	•	Complete a simple program on a computer	Word Processing/Typing
Information	•	Use ICT hardware to interact with age-appropriate	a) I can play on a touch screen game and use computers/keyboards/mouse in role play
Technology		computer software	b) I can type letters with increasing confidence using a keyboard and tablet.
	•	Recognise that a range of technology is used in	c) I can dictate short, clear sentences into a digital device
		places such as homes and schools	Data Handling
	•	They select and use technology for particular	d) I can identify a chart.
		purposes	e) I can sort physical objects, take a picture and discuss what I have done
			f) I can present simple data on a digital device.
			Presentations, web design and eBook creation
			g) I can record my voice over a picture.
			h) I can create a simple digital collage.
			i) I can move and resize images with my fingers or mouse
			Animation
			j) I can animate a simple image to speak in role
			k) I can create a simple animation to tell a story including more than one character. Video Creation
			I know the difference between a photography and video. m) I can record a short film using the camera
			n) I can record and play a film
			o) I can watch films back
			Photography and Digital Art
			p) I can take a photograph
			q) I can take a photograph and use it in an app
			r) I can use a painting app and explore the paint and brush tools
			Augmented reality and Virtual reality
			s) I can scan a QR code
			t) I can explore a 360 image
			u) I can talk about AR objects in my class

		Sound
		v) I can record sounds with different resources
		w) I can find ways to change your voice (tube, tin can, shouting to create an echo)
		x) I can record sounds/voices in storytelling and explanations
Concept 3:	Use technology safely	Self-Image and Identity
Digital	<u> </u>	a) I can recognise that I can say 'no' / 'please stop' / 'I'll tell' / 'I'll ask' to somebody who asks me to do
Expertise		something that makes me feel sad, embarrassed or upset.
Expertise		b) I can explain how this could be either in real life or online
		Online Relationships
		c) I can recognise some ways in which the internet can be used to communicate.
		d) I can give examples of how I (might) use technology to communicate with people I know
		Online Reputation
		e) I can identify ways that I can put information on the internet.
		Online Bullying
		f) I can describe ways that some people can be unkind online.
		g) I can offer examples of how this can make others feel.
		Managing online information
		h) I can talk about how I can use the internet to find things out.
		i) I can identify devices I could use to access information on the internet.
		j) I can give simple examples of how to find information (e.g. search engine, voice activated searching)
		Health, Wellbeing and Lifestyle
		k) I can identify rules that help keep us safe and healthy in and beyond the home when using
		technology.
		I) I can give some simple examples.
		Privacy and security
		m) I can identify some simple examples of my personal information (e.g. name, address, birthday, age,
		location).
		n) I can describe the people I can trust and can share this with; I can explain why I can trust them.
		Copyright and Ownership
		o) I know that work I create belongs to me.
		p) I can name my work so that others know it belongs to me.

COMPUTING Learning Year 1 Autumn: 'Toys R Us!'

Concept	Milestone	Learning
Concept 1:	1. Understand what algorithms are; how they are	Computational Thinking
Computer	implemented as programs on digital devices; and that	a) I understand what algorithms are
Science	programs execute by following precise and	b)I can write simple algorithms
	unambiguous instructions	c) I understand the sequence of algorithms is important
	2.Create and debug simple programs	d)I can debug simple algorithms
	3. Use logical reasoning to predict the behaviour of simple	
	programs	Coding and Programming
		e) I can create a simple program on a digital device e.g. Bee Bot
		f) I can use sequence in programs
		g) I can locate and fix bugs in my program
Concept 2:	1.Use technology purposefully to create, organise, store,	Logging On
Information	manipulate and retrieve digital content	a) I can log on and off a computer using a shared login.
Technology	2. Recognise common uses of information technology	b)I can log on and off a computer using an individual login.
0.	beyond school	c) I can begin to use a mouse with increasing control.
		Word Processing/Typing
		d)I can confidently type words quickly and correctly on a digital device.
		e) I can use the space bar to make space and delete to delete letters/ words
		f) I can make a new line using enter/return
		<u>Data Handling</u>
		g) I can collect data on a topic.
		h)I can create a tally chart and pictogram
		Presentations, web design and eBook creation
		i) I can add a voice recording to a storyboard.
		j) I can add speech bubbles to an image to show what a character thinks.
		k) I can import images to a project from the web and camera roll.
		<u>Video Creation</u>
		I) I can record a film using the camera app.
		m) I can highlight and zoom into images as I record.
		Photography & Digital Art
		n) I can take a photo using a camera.
		o) I can edit a photo with simple tools.
		p)I can use a paint/drawing app to create a digital image.

Concept	Milestone	Learning
Concept 3:	1. Use technology safely and respectfully, keeping	Self-Image and Identity
Digital	personal information private; identify where to go for	a) I can recognise that there may be people online who could make me feel sad, embarrassed or upset.
Expertise	help and support when they have concerns about	b) If something happens that makes me feel sad, worried, uncomfortable or frightened I can give
•	content or contact on the internet or other online	examples of when and how to speak to an adult I can trust.
	technologies.	Online Relationships
		c) I can use the internet with adult support to communicate with people I know.
		d)I can explain why it is important to be considerate and kind to people online.
		Online Reputation
		e) I can recognise that information can stay online and could be copied.
		f) I can describe what information I should not put online without asking a trusted adult first.
		Online Bullying
		g) I can describe how to behave online in ways that do not upset others and can give examples.
		Managing Online Information
		h)I can use the internet to find things out.
		i) I can use simple keywords in search engines
		j) I can describe and demonstrate how to get help from a trusted adult or helpline if I find content that
		makes me feel sad, uncomfortable worried or frightened.
		Health , Wellbeing and Lifestyle
		k) I can explain rules to keep us safe when we are using technology both in and beyond the home.
		1) I can give examples of some of these rules.
		Privacy and Security
		m) I can recognise more detailed examples of information that is personal to me (e.g. where I live,
		my family's names, where I go to school).
		n)I can explain why I should always ask a trusted adult before I share any information about myself online.
		o) I can explain how passwords can be used to protect information and devices.
		Copyright and Ownership
		p)I can explain why work I create using technology belongs to me.
		q)I can say why it belongs to me (e.g. 'it is my idea' or 'I designed it').
		r) I can save my work so that others know it belongs to me (e.g. filename, name on content).

Year 1 Spring: 'Island Destinations'

Concept	Milestone	Learning
Concept 1:	1. Understand what algorithms are; how they are	Computational Thinking
Computer	implemented as programs on digital devices; and that	a) I understand what algorithms are
Science	programs execute by following precise and	b) I can write simple algorithms
	unambiguous instructions	c) I understand the sequence of algorithms is important
	Create and debug simple programs	d) I can debug simple algorithms
	3. Use logical reasoning to predict the behaviour of	
	simple programs	Coding and Programming
		e) I can create a simple program on a digital device e.g. Bee Bot
		f) I can use sequence in programs
		g) I can locate and fix bugs in my program
Concept 2:	Use technology purposefully to create, organise,	Word Processing/Typing
Information	store, manipulate and retrieve digital content	a) I can confidently type words quickly and correctly on a digital device.
Technology	Recognise common uses of information technology	b) I can use the space bar to make space and delete to delete letters/ words
	beyond school	c) I can make a new line using enter/return
		Data Handling
		d) I can collect data on a topic.
		I can create a tally chart and pictogram
		Presentations, web design and eBook creation
		e) I can add a voice recording to a storyboard.
		f) I can add speech bubbles to an image to show what a character thinks.
		g) I can import images to a project from the web and camera roll.
		Video Creation
		h) I can record a film using the camera app.
		i) I can highlight and zoom into images as I record.
		Photography & Digital Art
		j) I can take a photo using a camera.k) I can edit a photo with simple tools.
		k) I can edit a photo with simple tools.l) I can use a paint/drawing app to create a digital image.
Concept 3:	Use technology safely and respectfully, keeping	Self Image and Identity
Concept 3:	personal information private; identify where to go for	a) I can recognise that there may be people online who could make me feel sad, embarrassed or upset.
Digital	help and support when they have concerns about	b) If something happens that makes me feel sad, worried, uncomfortable or frightened I can give
Expertise	content or contact on the internet or other online	examples of when and how to speak to an adult I can trust.
	technologies.	Online Relationships
	teaming leaf.	c) I can use the internet with adult support to communicate with people I know.
	<u> </u>	of real age the internet with addit support to communicate with people richow.

Concept	Milestone	Learning
		d) I can explain why it is important to be considerate and kind to people online.
		Online Reputation
		e) I can recognise that information can stay online and could be copied.
		f) I can describe what information I should not put online without asking a trusted adult first.
		Online Bullying
		g) I can describe how to behave online in ways that do not upset others and can give examples.
		Managing Online Information
		h) I can use the internet to find things out.
		i) I can use simple keywords in search engines
		j) I can describe and demonstrate how to get help from a trusted adult or helpline if I find content that
		makes me feel sad, uncomfortable worried or frightened.
		Health , Wellbeing and Lifestyle
		k) I can explain rules to keep us safe when we are using technology both in and beyond the home.
		I) I can give examples of some of these rules.
		Privacy and Security
		m) I can recognise more detailed examples of information that is personal to me (e.g. where I live, my
		family's names, where I go to school).
		n) I can explain why I should always ask a trusted adult before I share any information about myself
		online.
		o) I can explain how passwords can be used to protect information and devices.
		Copyright and Ownership
		p) I can explain why work I create using technology belongs to me.
		q) I can say why it belongs to me (e.g. 'it is my idea' or 'I designed it').
		r) I can save my work so that others know it belongs to me (e.g. filename, name on content).

Year 1 Summer: 'If You Go Down To The Woods Today'

Concept	Milestone	Learning
Concept	1. Understand what algorithms are; how they are	Computational Thinking
1:	implemented as programs on digital devices; and that	a) I understand what algorithms are
Computer	programs execute by following precise and unambiguous	b) I can write simple algorithms
Science	instructions	c) I understand the sequence of algorithms is important
	2.Create and debug simple programs	d) I can debug simple algorithms
	3. Use logical reasoning to predict the behaviour of simple	Coding and Programming
	programs	e) I can create a simple program on a digital device e.g. Bee Bot
		f) I can use sequence in programs
		g) I can locate and fix bugs in my program
Concept	1. Use technology purposefully to create, organise, store,	Word Processing/Typing
2:	manipulate and retrieve digital content	a) I can confidently type words quickly and correctly on a digital device.
Informati	2. Recognise common uses of information technology	b) I can use the space bar to make space and delete to delete letters/ words
on	beyond school	c) I can make a new line using enter/return
Technolo		<u>Data Handling</u>
gy		d) I can collect data on a topic.
87		I can create a tally chart and pictogram
		Presentations, web design and eBook creation
		e) I can add a voice recording to a storyboard.
		f) I can add speech bubbles to an image to show what a character thinks.
		g) I can import images to a project from the web and camera roll.
		<u>Video Creation</u>
		h) I can record a film using the camera app.
		i) I can highlight and zoom into images as I record.
		Photography & Digital Art
		j) I can take a photo using a camera.
		k) I can edit a photo with simple tools.
Composit	1.Use technology safely and respectfully, keeping personal	I can use a paint/drawing app to create a digital image. Self Image and Identity
Concept	information private; identify where to go for help and	a) I can recognise that there may be people online who could make me feel sad, embarrassed or upset.
3:	support when they have concerns about content or	If something happens that makes me feel sad, worried, uncomfortable or frightened I can give examples
Digital	contact on the internet or other online technologies.	of when and how to speak to an adult I can trust.
Expertise	contact on the internet of other offine technologies.	Online Relationships
		c) I can use the internet with adult support to communicate with people I know.
		d) I can explain why it is important to be considerate and kind to people online.
	<u> </u>	a, rean explain why it is important to be considerate and kind to people online.

Concept	Milestone	Learning
		Online Reputation
		e) I can recognise that information can stay online and could be copied.
		f) I can describe what information I should not put online without asking a trusted adult first
		Online Bullying
		g) I can describe how to behave online in ways that do not upset others and can give examples.
		Managing Online Information
		h) I can use the internet to find things out.
		i) I can use simple keywords in search engines
		j) I can describe and demonstrate how to get help from a trusted adult or helpline if I find content that
		makes me feel sad, uncomfortable worried or frightened.
		Health , Wellbeing and Lifestyle
		k) I can explain rules to keep us safe when we are using technology both in and beyond the home.
		I) I can give examples of some of these rules.
		Privacy and Security
		m) I can recognise more detailed examples of information that is personal to me (e.g. where I live, my
		family's names, where I go to school).
		n) I can explain why I should always ask a trusted adult before I share any information about myself
		online.
		o) I can explain how passwords can be used to protect information and devices.
		Copyright and Ownership
		p) I can explain why work I create using technology belongs to me.
		q) I can say why it belongs to me (e.g. 'it is my idea' or 'I designed it').
		r) I can save my work so that others know it belongs to me (e.g. filename, name on content).

Year 2 Autumn: 'Fame, Fortune and Fire'

Concept	Milestone	Learning
Concept 1:	 Understand what 	Computational Thinking
Computer	algorithms are; how they are	a) I can write algorithms for everyday tasks
Science	implemented as programs on	b) I can use logical reasoning to predict the outcome of algorithms
	digital devices; and that	c) I understand decomposition is breaking objects/processes down
	programs execute by following	d) I can debug algorithms
	precise and unambiguous	Coding and Programming
	instructions	e) I understand programs follow precise instructions
	2.Create and debug simple	f) I can create programs using different digital devices E.g. Bee Bot or ScratchJr on a tablet
	programs	g) I can debug programs of increasing complexity
	3. Use logical reasoning to predict	h) I can use logical reasoning to predict the outcome of simple programs
	the behaviour of simple	
	programs	
Concept 2:	 Use technology purposefully 	Word Processing/Typing
Information	to create, organise, store,	a) I can use the space bar only once between words.
Technology	manipulate and retrieve	b) I can copy and paste images and text.
· ·	digital content	c) I can use caps locks for capital letters.
	2. Recognise common uses of	d) I can add images alongside text in a word processed document
	information technology	Data Handling
	beyond school	e) I can talk about the different ways I use technology to collect information, including a camera, microscope or sound recorder.
		f) I can make and save a chart or graph using the data I collect.
		g) I can talk about the data that is shown in my chart or graph.
		h) I am starting to understand a branching database.
		i) I can tell you what kind of information I could use to help me investigate a question.
		Presentations, web design and eBook creation
		j) I can add a voice recording to a storyboard. (Could use Uso jit5 – animate or PowerPoint and use the Audio feature)
		k) I can add speech bubbles to an image to show what a character thinks.
		I) I can import images to a project from the web and camera roll.
		<u>Video Creation</u>
		m) I can write and record a script using a teleprompter tool within PowerPoint.
		n) I can use tools to add effects to a video.
		Have a look at this website which demos how to use the teleprompter tool on PowerPoint
		https://www.labnol.org/software/powerpoint-as-teleprompter/18453/
		Photography & Digital Art
		o) I can edit a photo (crop, filters, mark up etc)

Concept	Milestone	Learning
		p) I can select and use tools to create digital imagery - controlling the pen and using the fill tool.
Concept 3:	Use technology safely and	Self Image and Identity
Digital	respectfully, keeping personal	a) I can explain how other people's identity online can be different to their identity in real life.
Expertise	information private; identify	b) I can describe ways in which people might make themselves look different online.
	where to go for help and	c) I can give examples of issues online that might make me feel sad, worried, uncomfortable or frightened; I can give examples
	support when they have	of how I might get help.
	concerns about content or	Online Relationships
	contact on the internet or	d) I can use the internet to communicate with people I don't know well (e.g. email a penpal in another school/ country).
	other online technologies.	e) I can give examples of how I might use technology to communicate with others I don't know well.
		Online Reputation
		f) I can explain how information put online about me can last for a long time.
		g) I know who to talk to if I think someone has made a mistake about putting something online.
		Online Bullying
		h) I can give examples of bullying behaviour and how it could look online.
		i) I understand how bullying can make someone feel.
		j) I can talk about how someone can/would get help about being bullied online or offline.
		Managing Online Information
		k) I can use keywords in search engines.
		I) I can demonstrate how to navigate a simple webpage to get to information I need (e.g. home, forward, back buttons; links,
		tabs and sections).
		m) I can explain what voice activated searching is and how it might be used (e.g. Alexa, Google Now, Siri).
		n) I can explain the difference between things that are imaginary, 'made up' or 'make believe' and things that are 'true' or 'real'.
		o) I can explain why some information I find online may not be true.
		Health , Wellbeing and Lifestyle
		p) I can explain simple guidance for using technology in different environments and settings.
		q) I can say how those rules/guides can help me Privacy and Security
		r) I can describe how online information about me could be seen by others
		s) I can describe and explain some rules for keeping my information private.
		t) I can explain what passwords are and can use passwords for my accounts and devices.
		u) I can explain how many devices in my home could be connected to the internet and can list some of those devices.
		Privacy & Security
		v) I can describe how online information about me could be seen by others
		w) I can describe and explain some rules for keeping my information private.
		x) I can explain what passwords are and can use passwords for my accounts and devices.
		y) I can explain how many devices in my home could be connected to the internet and can list some of those devices.
		Copyright and Ownership
		z) I can describe why other people's work belongs to them.
		aa) I can recognise that content on the internet may belong to other people.

COMPUTING Learning Year 2 Spring: 'A World Of Contrasts'

Concept	Milestone	Learning
Concept 1:	1. Understand what algorithms are; how	Computational Thinking
Computer	they are implemented as programs on	a) I can write algorithms for everyday tasks
Science	digital devices; and that programs	b) I can use logical reasoning to predict the outcome of algorithms
	execute by following precise and	c) I understand decomposition is breaking objects/processes down
	unambiguous instructions	d) I can debug algorithms
	2. Create and debug simple programs	Coding and Programming
	3. Use logical reasoning to predict the	e) I understand programs follow precise instructions
	behaviour of simple programs	f) I can create programs using different digital devices E.g. Bee Bot or ScratchJr on a tablet
		g) I can debug programs of increasing complexity
		h) I can use logical reasoning to predict the outcome of simple programs
Concept 2:	1. Use technology purposefully to create,	Word Processing/Typing
Information	organise, store, manipulate and	a) I can use the space bar only once between words.
Technology	retrieve digital content	b) I can copy and paste images and text.
recimology	2. Recognise common uses of information	c) I can use caps locks for capital letters.
	technology beyond school	d) I can add images alongside text in a word processed document.
		Data Handling
		e) I can talk about the different ways I use technology to collect information, including a camera, microscope or sound
		recorder.
		f) I can make and save a chart or graph using the data I collect.
		g) I can talk about the data that is shown in my chart or graph.
		h) I am starting to understand a branching database.
		i) I can tell you what kind of information I could use to help me investigate a question.
		Presentations, web design and eBook creation
		j) I can add a voice recording to a storyboard.
		k) I can add speech bubbles to an image to show what a character thinks.
		I) I can import images to a project from the web and camera roll.
		<u>Video Creation</u>
		m) I can write and record a script using a teleprompter tool within PowerPoint.
		n) I can use tools to add effects to a video.
		Photography & Digital Art
		o) I can edit a photo (crop, filters, mark up etc)
		p) I can select and use tools to create digital imagery - controlling the pen and using the fill tool.

Concept	Milestone	Learning
Concept 3:	1. Use technology safely and	Self Image and Identity
Digital	respectfully, keeping personal	a) I can explain how other people's identity online can be different to their identity in real life.
Expertise	information private; identify where to	b) I can describe ways in which people might make themselves look different online.
·	go for help and support when they have concerns about content or	c) I can give examples of issues online that might make me feel sad, worried, uncomfortable or frightened; I can give examples of how I might get help.
	contact on the internet or other	Online Relationships
	online technologies.	d) I can use the internet to communicate with people I don't know well (e.g. email a penpal in another school/ country). e) I can give examples of how I might use technology to communicate with others I don't know well.
		Online Reputation
		f) I can explain how information put online about me can last for a long time.
		g) I know who to talk to if I think someone has made a mistake about putting something online.
		Online Bullying
		h) I can give examples of bullying behaviour and how it could look online.
		i) I understand how bullying can make someone feel.
		j) I can talk about how someone can/would get help about being bullied online or offline.
		Managing Online Information
		k) I can use keywords in search engines.
		I) I can demonstrate how to navigate a simple webpage to get to information I need (e.g. home, forward, back buttons; links, tabs and sections).
		m) I can explain what voice activated searching is and how it might be used (e.g. Alexa, Google Now, Siri).
		n) I can explain the difference between things that are imaginary, 'made up' or 'make believe' and things that are 'true' or 'real'.
		o) I can explain why some information I find online may not be true.
		Health , Wellbeing and Lifestyle
		p) I can explain simple guidance for using technology in different environments and settings.
		q) I can say how those rules/guides can help me Privacy and Security
		r) I can describe how online information about me could be seen by others
		s) I can describe and explain some rules for keeping my information private.
		t) I can explain what passwords are and can use passwords for my accounts and devices.
		u) I can explain how many devices in my home could be connected to the internet and can list some of those devices.
		Privacy & Security
		v) I can describe how online information about me could be seen by others
		w) I can describe and explain some rules for keeping my information private.
		x) I can explain what passwords are and can use passwords for my accounts and devices.
		y) I can explain how many devices in my home could be connected to the internet and can list some of those devices.
		Copyright and Ownership
		z) I can describe why other people's work belongs to them.
		aa) I can recognise that content on the internet may belong to other people.

COMPUTING Learning Year 2 Summer: 'All Aboard!'

Concept	Milestone	Learning
Concept 1:	 Understand what algorithms 	Computational Thinking
Computer	are; how they are implemented	a) I can write algorithms for everyday tasks
Science	as programs on digital devices;	b) I can use logical reasoning to predict the outcome of algorithms
	and that programs execute by	c) I understand decomposition is breaking objects/processes down
	following precise and	d) I can debug algorithms
	unambiguous instructions	Coding and Programming
	2.Create and debug simple	e) I understand programs follow precise instructions
	programs	f) I can create programs using different digital devices E.g. Bee Bot or ScratchJr on a tablet
	3. Use logical reasoning to predict	g) I can debug programs of increasing complexity
	the behaviour of simple	h) I can use logical reasoning to predict the outcome of simple programs
	programs	
Concept 2:	1. Use technology purposefully to	Word Processing/Typing
Information	create, organise, store,	a) I can use the space bar only once between words.
Technology	manipulate and retrieve digital	b) I can copy and paste images and text.
	content	c) I can use caps locks for capital letters.
	2. Recognise common uses of	d) I can add images alongside text in a word processed document.
	information technology beyond	<u>Data Handling</u>
	school	e) I can sort digital objects into a range of charts such as Venn diagrams, carroll diagrams and bar charts.
		f) I can orally record myself explaining what the data shows me.
		g) I can create a branching database using questions.
		<u>Presentations, web design and eBook creation</u>
		h) I can add a voice recording to a storyboard.
		i) I can add speech bubbles to an image to show what a character thinks.
		j) I can import images to a project from the web and camera roll.
		<u>Video Creation</u>
		k) I can write and record a script using a teleprompter tool within PowerPoint.
		I) I can use tools to add effects to a video.
		Photography & Digital Art
		m) I can edit a photo (crop, filters, mark up etc)
		n) I can select and use tools to create digital imagery - controlling the pen and using the fill tool.
Concept 3:	1. Use technology safely and	Self Image and Identity
	respectfully, keeping personal	a) I can explain how other people's identity online can be different to their identity in real life.
	information private; identify	b) I can describe ways in which people might make themselves look different online.

Concept	Milestone	Learning
Digital	where to go for help and	c) I can give examples of issues online that might make me feel sad, worried, uncomfortable or frightened; I can give examples
Expertise	support when they have	of how I might get help.
·	concerns about content or	Online Relationships
	contact on the internet or	d) I can use the internet to communicate with people I don't know well (e.g. email a penpal in another school/ country).
	other online technologies.	e) I can give examples of how I might use technology to communicate with others I don't know well.
		Online Reputation
		f) I can explain how information put online about me can last for a long time.
		g) I know who to talk to if I think someone has made a mistake about putting something online.
		Online Bullying
		h) I can give examples of bullying behaviour and how it could look online.
		i) I understand how bullying can make someone feel.
		j) I can talk about how someone can/would get help about being bullied online or offline.
		Managing Online Information
		k) I can use keywords in search engines.
		I) I can demonstrate how to navigate a simple webpage to get to information I need (e.g. home, forward, back buttons; links,
		tabs and sections).
		m) I can explain what voice activated searching is and how it might be used (e.g. Alexa, Google Now, Siri).
		n) I can explain the difference between things that are imaginary, 'made up' or 'make believe' and things that are 'true' or 'real'.
		o) I can explain why some information I find online may not be true.
		Health , Wellbeing and Lifestyle
		p) I can explain simple guidance for using technology in different environments and settings.
		q) I can say how those rules/guides can help me Privacy and Security
		r) I can describe how online information about me could be seen by others
		s) I can describe and explain some rules for keeping my information private.
		t) I can explain what passwords are and can use passwords for my accounts and devices.
		u) I can explain how many devices in my home could be connected to the internet and can list some of those devices.
		Privacy & Security
		v) I can describe how online information about me could be seen by others
		w) I can describe and explain some rules for keeping my information private.
		x) I can explain what passwords are and can use passwords for my accounts and devices.
		y) I can explain how many devices in my home could be connected to the internet and can list some of those devices.
		Copyright and Ownership
		z) I can describe why other people's work belongs to them.
		aa) I can recognise that content on the internet may belong to other people.

Year 3 Autumn: 'Life Forces'

	Autumn	Spring	Summer
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Concept	Milestone	Learning
Concept 1:	1. Begin to design, write and debug programs that	Computational Thinking
Computer	accomplish specific goals, including controlling or	a) I can create algorithms for my programming projects
Science	simulating physical systems; solve problems by	b) I can decompose projects (such as an animation) into steps to create an algorithm
	decomposing them into smaller parts	c) I understand abstraction is focusing on important information
	2. Begin to use sequence, selection, and repetition in	d) I can identify patterns in an algorithm
	programs; work with variables and various forms of	Coding and Programming
	input and output	a) I can design a program
	3. Begin to use logical reasoning to explain how some	b) I can create a program using a design
	simple algorithms work and to detect and correct	c) I can create a sequence of code
	errors in algorithms and programs	d) I can work with different inputs
		e) I can evaluate my program
Concept 2:	1. Begin to understand computer networks including the	<u>Computer Networks</u>
Information	internet; how they can provide multiple services, such	a) I understand that computers in a school are connected together in a network
Technology	as the world wide web; and the opportunities they	b) I understand why computers are networked
0,	offer for communication and collaboration	c) I understand the difference between the Internet and the World Wide Web (WWW)
	2. Begin to use search technologies effectively, appreciate	Word Processing/Typing
	how results are selected and ranked, and be discerning	d) I can use index fingers on keyboard home keys (f/j), use left fingers for a/ s/d/f/g, and use right fingers
	in evaluating digital content	for h/j/k/l
	3. Select, use and combine a small range of software	e) I can edit the style and effect of my text and images to make my document more engaging and eye-
	(including internet services) on a small range of digital	catching. For example, borders and shadows.
	devices to design and create a small range of programs,	f) I can use cut, copy and paste to quickly duplicate and organise text.
	systems and content that accomplish given goals,	Data Handling
	including collecting, analysing, evaluating and	g) I can talk about the different ways data can be organised.
	presenting data and information	h) I can search a ready-made database to answer questions.
		i) I can collect data help me answer a question.
		j) I can add to a database.
		k) I can make a branching database.
		Presentations, web design and eBook creation
		I) I can create an interactive comic with sounds, formatted text and video.
		m) I can annotate an image with videos
		n) I can create a simple web page.
		o) I can create a simple digital timeline/mindmap
		<u>Video Creation</u>
		p) I can trim and cut film clips and add titles and transitions.

Concept	Milestone	Learning
		Photography & Digital Art
		q) I can confidently take and manipulate photos.
		r) I can create a digital image using a range of tools, pens, brushes and effects
Concept 3:	1. Use technology safely, respectfully and responsibly;	Self Image and Identity
Digital	recognise acceptable/unacceptable behaviour; identify	a) I can explain what is meant by the term 'identity'.
Expertise	a range of ways to report concerns about content and	b) I can explain how I can represent myself in different ways online.
•	contact.	c) I can explain ways in which and why I might change my identity depending on what I am doing online
		(e.g. gaming; using an avatar; social media).
		Online Relationships
		d) I can describe ways people who have similar likes and interests can get together online.
		e) I can give examples of technology-specific forms of communication (e.g. emojis, acronyms, text speak).
		f) I can explain some risks of communicating online with others I don't know well.
		g) I can explain how my and other people's feelings can be hurt by what is said or written online.
		h) I can explain why I should be careful who I trust online and what information I can trust them with. I
		can explain why I can take back my trust in someone or something if I feel nervous, uncomfortable or
		worried.
		I can explain what it means to 'know someone' online and why this might be different from knowing
		someone in real life. I can explain what is meant by 'trusting someone online'. I can explain why this is
		different from 'liking someone online'.
		Online Reputation I can search for information about myself online.
		k) I can recognise I need to be careful before I share anything about myself or others online.
		I know who I should ask if I am not sure if I should put something online.
		Online Bullying
		m) I can explain what bullying is and can describe how people may bully others.
		n) I can describe rules about how to behave online and how I follow them.
		Managing Online Information
		p) I can use key phrases in search engines.
		p) I can explain what autocomplete is and how to choose the best suggestion.
		g) I can explain how the internet can be used to sell and buy things
		r) I can explain the difference between a 'belief', an 'opinion' and a 'fact'.
		Health , Wellbeing and Lifestyle
		s) I can explain why spending too much time using technology can sometimes have a negative impact on
		me; I can give some examples of activities where it is easy to spend a lot of time engaged (e.g. games,
		films,
		Privacy and Security
		t) I can give reasons why I should only share information with people I choose to and can trust. I can
		explain that if I am not sure or I feel pressured, I should ask a trusted adult.

Concept	Milestone	Learning
		u) I understand and can give reasons why passwords are important.
		v) I can describe simple strategies for creating and keeping passwords private.
		w) I can describe how connected devices can collect and share information
		Copyright and Ownership
		x) I can explain why copying someone else's work from the internet without permission can cause
		problems.
		y) I can give examples of what those problems might be.

COMPUTING Learning Year 3 Spring: 'Let There Be Light'

Autumn S	pring	Summer
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Concept	Milestone	Learning
Concept 1:	1. Begin to design, write and debug programs that	Computational Thinking
Computer	accomplish specific goals, including controlling or	a) I can create algorithms for my programming projects
Science	simulating physical systems; solve problems by	b) I can decompose projects (such as an animation) into steps to create an algorithm
0.0101100	decomposing them into smaller parts	c) I understand abstraction is focusing on important information
	2. Begin to use sequence, selection, and repetition in	d) I can identify patterns in an algorithm
	programs; work with variables and various forms of	Coding and Programming
	input and output	i) I can design a program
	3. Begin to use logical reasoning to explain how some	j) I can create a program using a design
	simple algorithms work and to detect and correct errors	k) I can create a sequence of code
	in algorithms and programs	I) I can work with different inputs
		m) I can evaluate my program
Concept 2:	1. Begin to understand computer networks including the	<u>Computer Networks</u>
Information	internet; how they can provide multiple services, such	a) I understand that computers in a school are connected together in a network
Technology	as the world wide web; and the opportunities they offer	b) I understand why computers are networked
	for communication and collaboration	c) I understand the difference between the Internet and the World Wide Web (WWW)
	2. Begin to use search technologies effectively, appreciate	Word Processing/Typing
	how results are selected and ranked, and be discerning	d) I can use index fingers on keyboard home keys (f/j), use left fingers for a/ s/d/f/g, and use right fingers
	in evaluating digital content	for h/j/k/l
	3. Select, use and combine a small range of software	e) I can edit the style and effect of my text and images to make my document more engaging and eye-
	(including internet services) on a small range of digital	catching. For example, borders and shadows.
	devices to design and create a small range of programs,	f) I can use cut, copy and paste to quickly duplicate and organise text.
	systems and content that accomplish given goals,	Data Handling
	including collecting, analysing, evaluating and	g) I can talk about the different ways data can be organised.
	presenting data and information	h) I can search a ready-made database to answer questions.
		i) I can collect data help me answer a question.
		j) I can add to a database.
		k) I can make a branching database.
		Presentations, web design and eBook creation
		I) I can create an interactive comic with sounds, formatted text and video.
		m) I can annotate an image with videos
		n) I can create a simple web page.
		o) I can create a simple digital timeline/mindmap
		<u>Video Creation</u>

Concept	Milestone	Learning
		p) I can trim and cut film clips and add titles and transitions.
		q) I can create my own movie trailer
		Photography & Digital Art
		r) can confidently take and manipulate photos
		I can create a digital image using a range of tools, pens, brushes and effects.
Concept 3:	1. Use technology safely, respectfully and responsibly;	Self Image and Identity
Digital	recognise acceptable/unacceptable behaviour; identify	a) I can explain what is meant by the term 'identity'.
Expertise	a range of ways to report concerns about content and	b) I can explain how I can represent myself in different ways online.
·	contact.	c) I can explain ways in which and why I might change my identity depending on what I am doing online
		(e.g. gaming; using an avatar; social media).
		Online Relationships
		d) I can describe ways people who have similar likes and interests can get together online.
		e) I can give examples of technology-specific forms of communication (e.g. emojis, acronyms, text speak).
		f) I can explain some risks of communicating online with others I don't know well.
		g) I can explain how my and other people's feelings can be hurt by what is said or written online.
		h) I can explain why I should be careful who I trust online and what information I can trust them with. I
		can explain why I can take back my trust in someone or something if I feel nervous, uncomfortable or
		worried.
		I) I can explain what it means to 'know someone' online and why this might be different from knowing
		someone in real life. I can explain what is meant by 'trusting someone online'. I can explain why this is different from 'liking someone online'.
		Online Reputation
		i) I can search for information about myself online.
		k) I can recognise I need to be careful before I share anything about myself or others online.
) I know who I should ask if I am not sure if I should put something online.
		Online Bullying
		m) I can explain what bullying is and can describe how people may bully others.
		n) I can describe rules about how to behave online and how I follow them.
		Managing Online Information
		o) I can use key phrases in search engines.
		p) I can explain what autocomplete is and how to choose the best suggestion.
		q) I can explain how the internet can be used to sell and buy things
		r) I can explain the difference between a 'belief', an 'opinion' and a 'fact'.
		Health , Wellbeing and Lifestyle
		s) I can explain why spending too much time using technology can sometimes have a negative impact on
		me; I can give some examples of activities where it is easy to spend a lot of time engaged (e.g. games,
		films,

Concept	Milestone	Learning
		Privacy and Security
		t) I can give reasons why I should only share information with people I choose to and can trust. I can explain that if I am not sure or I feel pressured, I should ask a trusted adult.
		u) I understand and can give reasons why passwords are important.
		v) I can describe simple strategies for creating and keeping passwords private.
		w) I can describe how connected devices can collect and share information
		Copyright and Ownership
		x) I can explain why copying someone else's work from the internet without permission can cause
		problems.
		y) I can give examples of what those problems might be.

Year 3 Summer: 'Our Local World'

Concept	Milestone	Learning
Concept 1:	1. Begin to design, write and debug programs that	Computational Thinking
Computer	accomplish specific goals, including controlling or	a) I can create algorithms for my programming projects
Science	simulating physical systems; solve problems by	b) I can decompose projects (such as an animation) into steps to create an algorithm
	decomposing them into smaller parts	c) I understand abstraction is focusing on important information
	2. Begin to use sequence, selection, and repetition in	d) I can identify patterns in an algorithm
	programs; work with variables and various forms of	Coding and Programming
	input and output	a) I can design a program
	3. Begin to use logical reasoning to explain how some	b) I can create a program using a design
	simple algorithms work and to detect and correct errors	c) I can create a sequence of code
	in algorithms and programs	d) I can work with different inputs
		e) I can evaluate my program
Concept 2:	Begin to understand computer networks including the	Computer Networks
Information	internet; how they can provide multiple services, such	a) I understand that computers in a school are connected together in a network
Technology	as the world wide web; and the opportunities they offer	b) I understand why computers are networked
reciliology	for communication and collaboration	c) I understand the difference between the Internet and the World Wide Web (WWW)
	2. Begin to use search technologies effectively, appreciate	Word Processing/Typing
	how results are selected and ranked, and be discerning	d) I can use index fingers on keyboard home keys (f/j), use left fingers for a/ s/d/f/g, and use right fingers
	in evaluating digital content	for h/j/k/l
	3. Select, use and combine a small range of software	e) I can edit the style and effect of my text and images to make my document more engaging and eye-
	(including internet services) on a small range of digital	catching. For example, borders and shadows.
	devices to design and create a small range of programs,	f) I can use cut, copy and paste to quickly duplicate and organise text.
	systems and content that accomplish given goals,	Data Handling
	including collecting, analysing, evaluating and	g) I can talk about the different ways data can be organised.
	presenting data and information	h) I can search a ready-made database to answer questions.
		i) I can collect data help me answer a question.
		j) I can add to a database.
		k) I can make a branching database.
		Presentations, web design and eBook creation
		I) I can create an interactive comic with sounds, formatted text and video.
		m) I can annotate an image with videos
		n) I can create a simple web page.
		o) I can create a simple digital timeline/mindmap
		Video Creation
		p) I can trim and cut film clips and add titles and transitions

Concept	Milestone	Learning
		q) I can create my own movie trailer.
		Photography & Digital Art
		r) can confidently take and manipulate photos
		I can create a digital image using a range of tools, pens, brushes and effects.
Concept 3:	1. Use technology safely, respectfully and responsibly;	Self Image and Identity
Digital	recognise acceptable/unacceptable behaviour; identify a	a) I can explain what is meant by the term 'identity'.
Expertise	range of ways to report concerns about content and	b) I can explain how I can represent myself in different ways online.
	contact.	c) I can explain ways in which and why I might change my identity depending on what I am doing online
		(e.g. gaming; using an avatar; social media).
		Online Relationships
		d) I can describe ways people who have similar likes and interests can get together online.
		e) I can give examples of technology-specific forms of communication (e.g. emojis, acronyms, text speak).
		f) I can explain some risks of communicating online with others I don't know well.
		g) I can explain how my and other people's feelings can be hurt by what is said or written online. h) I can explain why I should be careful who I trust online and what information I can trust them with. I
		can explain why I can take back my trust in someone or something if I feel nervous, uncomfortable or
		worried.
		i) I can explain what it means to 'know someone' online and why this might be different from knowing
		someone in real life. I can explain what is meant by 'trusting someone online'. I can explain why this is
		different from 'liking someone online'.
		Online Reputation
) I can search for information about myself online.
		k) I can recognise I need to be careful before I share anything about myself or others online.
		I know who I should ask if I am not sure if I should put something online.
		Online Bullying
		m) I can explain what bullying is and can describe how people may bully others.
		n) I can describe rules about how to behave online and how I follow them.
		Managing Online Information
		o) I can use key phrases in search engines.
		p) I can explain what autocomplete is and how to choose the best suggestion.
		q) I can explain how the internet can be used to sell and buy things
		r) I can explain the difference between a 'belief', an 'opinion' and a 'fact'.
		Health , Wellbeing and Lifestyle
		s) I can explain why spending too much time using technology can sometimes have a negative impact on
		me; I can give some examples of activities where it is easy to spend a lot of time engaged (e.g. games,
		films,
		Privacy and Security

Concept	Milestone	Learning
		t) I can give reasons why I should only share information with people I choose to and can trust. I can
		explain that if I am not sure or I feel pressured, I should ask a trusted adult.
		u) I understand and can give reasons why passwords are important.
		v) I can describe simple strategies for creating and keeping passwords private.
		w) I can describe how connected devices can collect and share information
		Copyright and Ownership
		x) I can explain why copying someone else's work from the internet without permission can cause
		problems.
		y) I can give examples of what those problems might be.

Year 4 Autumn: 'Water, Water Everywhere'

Autumn Sprir	nn Spring Summer		
Concept	Milestone	Learning	
Concept 1:	1. Begin to design, write and debug programs that	Computational Thinking	
Computer		a) I can use abstraction to focus on what's important in my design	
Science		b) I can write more precise algorithms for use when programming	
	decomposing them into smaller parts	c) I can use simple selection and repetition in algorithms	
		d) I can use logical reasoning to detect and correct errors in programs	
		Coding and Programming	
	input and output	e) I can use repetition in programs	
	3. Begin to use logical reasoning to explain how some	f) I can use simple selection in programs	
	simple algorithms work and to detect and correct errors	g) I can work with different output	
	in algorithms and programs	h) I can use logical reasoning to systematically detect and correct errors in programs	
Concept 2:	Begin to understand computer networks including the	<u>Computer Networks</u>	
Information	internet; how they can provide multiple services, such	a) I understand that servers on the Internet are located across the planet	
Technology	as the world wide web; and the opportunities they offer	b) I understand how email is sent across the Internet	
	for communication and collaboration	c) I understand how the Internet enables us to collaborate	
	2. Begin to use search technologies effectively, appreciate	Word Processing/Typing	
	how results are selected and ranked, and be discerning	d) I can combine digital images from different sources, objects, and text to make a variety of documents	
	in evaluating digital content	e.g. posters, documents, , scripts, leaflets.	
	3. Select, use and combine a small range of software	e) I can confidently and regularly use text shortcuts such as cut, copy and paste and delete to organise	
	(including internet services) on a small range of digital	text	
	devices to design and create a small range of programs,	f) I can use font sizes appropriately for audience and purpose.	
	systems and content that accomplish given goals,	g) I can use spell check.	
	including collecting, analysing, evaluating and	Data Handling	
	presenting data and information	h) I can collect data and identify where it could be inaccurate.	
		i) I can plan, create and search a database to answer questions.	
		j) I can choose the best way to present data.	
		Presentations, web design and eBook creation	
		k) I can create an interactive quiz eBook introducing hyperlinks.	
		I) I can create an eBook with text, images and sound.	
		m) I can create a presentation demonstrating my understanding with a range of media.	
		n) I can create a digital timeline/mindmap and include different media - sound and video.	
		<u>Video Creation</u>	
		o) I can add music and sound effects to my films.	
		p) I can add animated titles and transitions.	
		q) I can add simple subtitles to a video clip.	

Concept	Milestone	Learning
		Photography & Digital Art
		r) I can enhance digital images and photographs using crop, brightness, contrast & resize
		s) I can manipulate shapes to create digital art.
Concept 3:	1. Use technology safely, respectfully and responsibly;	Self Image and Identity
Digital	recognise acceptable/unacceptable behaviour; identify a	a) I can explain how my online identity can be different to the identity I present in 'real life'
Expertise	range of ways to report concerns about content and	b) Knowing this, I can describe the right decisions about how I interact with others and how others
•	contact.	perceive me.
		Online Relationships
		c) I can describe strategies for safe and fun experiences in a range of online social environments
		d) I can give examples of how to be respectful to others online.
		Online Reputation
		e) I can describe how others can find out information about me by looking online.
		f) I can explain ways that some of the information about me online could have been created, copied or
		shared by others.
		Online Bullying
		g) I can identify some online technologies where bullying might take place.
		h) I can describe ways people can be bullied through a range of media (e.g. image, video, text, chat).
		I can explain why I need to think carefully about how content I post might affect others, their feelings
		and how it may affect how others feel about them (their reputation).
		Managing Online Information
		i) I can analyse information and differentiate between 'opinions', 'beliefs' and 'facts'. I understand what
		criteria have to be met before something is a 'fact'.
		k) I can describe how I can search for information within a wide group of technologies (e.g. social media, image sites, video sites).
) I can describe some of the methods used to encourage people to buy things online (e.g. advertising
		offers; in-app purchases, pop-ups) and can recognise some of these when they appear online.
		m) I can explain that some people I 'meet online' (e.g. through social media) may be computer
		programmes pretending to be real people.
		n) I can explain why lots of people sharing the same opinions or beliefs online does not make those
		opinions or beliefs true.
		Health , Wellbeing and Lifestyle
		o) I can explain how using technology can distract me from other things I might do or should be doing.
		p) I can identify times or situations when I might need to limit the amount of time I use technology.
		q) I can suggest strategies to help me limit this time
		Privacy and Security
		r) I can explain what a strong password is.
		s) I can describe strategies for keeping my personal information private, depending on context.
		t) I can explain that others online can pretend to be me or other people, including my friends

Concept	Milestone	Learning
		u) I can suggest reasons why they might do this
		v) I can explain how internet use can be monitored.
		Copyright and Ownership
		w) When searching on the internet for content to use, I can explain why I need to consider who owns it
		and whether I have the right to reuse it.
		I can give some simple examples.

Year 4 Spring: 'Sunshine Islands'

	Autumn	Spring	Summer
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Concept	Milestone	Learning
Concept 1:	1. Begin to design, write and debug programs that	Computational Thinking
Computer	accomplish specific goals, including controlling or	a) I can use abstraction to focus on what's important in my design
Science	simulating physical systems; solve problems by	b) I can write more precise algorithms for use when programming
	decomposing them into smaller parts	c) I can use simple selection and repetition in algorithms
	2. Begin to use sequence, selection, and repetition in	d) I can use logical reasoning to detect and correct errors in programs
	programs; work with variables and various forms of	Coding and Programming
	input and output	e) I can use repetition in programs
	3. Begin to use logical reasoning to explain how some	f) I can use simple selection in programs
	simple algorithms work and to detect and correct errors	g) I can work with different outputs
	in algorithms and programs	h) I can use logical reasoning to systematically detect and correct errors in programs
Concept 2:	Begin to understand computer networks including the	<u>Computer Networks</u>
Information	internet; how they can provide multiple services, such	a) I understand that servers on the Internet are located across the planet
Technology	as the world wide web; and the opportunities they offer	b) I understand how email is sent across the Internet
0,	for communication and collaboration	c) I understand how the Internet enables us to collaborate
	2. Begin to use search technologies effectively, appreciate	Word Processing/Typing
	how results are selected and ranked, and be discerning	d) I can combine digital images from different sources, objects, and text to make a variety of documents
	in evaluating digital content	e.g. posters, documents, , scripts, leaflets.
	3. Select, use and combine a small range of software	e) I can confidently and regularly use text shortcuts such as cut, copy and paste and delete to organise
	(including internet services) on a small range of digital	text
	devices to design and create a small range of programs,	f) I can use font sizes appropriately for audience and purpose.
	systems and content that accomplish given goals,	g) I can use spell check.
	including collecting, analysing, evaluating and presenting	Data Handling
	data and information	h) I can collect data and identify where it could be inaccurate.
		i) I can plan, create and search a database to answer questions.
		j) I can choose the best way to present data.
		<u>Presentations, web design and eBook creation</u>
		k) I can create an interactive quiz eBook introducing hyperlinks.
		I) I can create an eBook with text, images and sound.
		m) I can create a presentation demonstrating my understanding with a range of media.
		n) I can create a digital timeline/mindmap and include different media - sound and video.
		<u>Video Creation</u>
		o) I can add music and sound effects to my films.
		p) I can add animated titles and transitions.
		q) I can add simple subtitles to a video clip.

Concept	Milestone	Learning
		Photography & Digital Art
		r) I can enhance digital images and photographs using crop, brightness, contrast & resize
		s) I can manipulate shapes to create digital art.
Concept 3:	 Use technology safely, respectfully and responsibly; 	Self Image and Identity
Digital	recognise acceptable/unacceptable behaviour; identify	a) I can explain how my online identity can be different to the identity I present in 'real life'
Expertise	a range of ways to report concerns about content and	b) Knowing this, I can describe the right decisions about how I interact with others and how others
•	contact.	perceive me.
		Online Relationships
		c) I can describe strategies for safe and fun experiences in a range of online social environments
		d) I can give examples of how to be respectful to others online.
		Online Reputation
		e) I can describe how others can find out information about me by looking online.
		f) I can explain ways that some of the information about me online could have been created, copied or
		shared by others.
		Online Bullying
		g) I can identify some online technologies where bullying might take place.
		h) I can describe ways people can be bullied through a range of media (e.g. image, video, text, chat).
		I can explain why I need to think carefully about how content I post might affect others, their feelings
		and how it may affect how others feel about them (their reputation). Managing Online Information
		i) I can analyse information and differentiate between 'opinions', 'beliefs' and 'facts'. I understand what
		criteria have to be met before something is a 'fact'.
		k) I can describe how I can search for information within a wide group of technologies (e.g. social media,
		image sites, video sites).
) I can describe some of the methods used to encourage people to buy things online (e.g. advertising
		offers; in-app purchases, pop-ups) and can recognise some of these when they appear online.
		m) I can explain that some people I 'meet online' (e.g. through social media) may be computer
		programmes pretending to be real people.
		n) I can explain why lots of people sharing the same opinions or beliefs online does not make those
		opinions or beliefs true.
		Health , Wellbeing and Lifestyle
		o) I can explain how using technology can distract me from other things I might do or should be doing.
		p) I can identify times or situations when I might need to limit the amount of time I use technology.
		q) I can suggest strategies to help me limit this time.
		Privacy and Security
		r) I can explain what a strong password is.
		s) I can describe strategies for keeping my personal information private, depending on context.
		t) I can explain that others online can pretend to be me or other people, including my friends

Concept	Milestone	Learning
		u) I can suggest reasons why they might do this
		v) I can explain how internet use can be monitored.
		Copyright and Ownership
		w) When searching on the internet for content to use, I can explain why I need to consider who owns it
		and whether I have the right to reuse it.
		x) I can give some simple examples.

Year 4 Summer: 'On The Home Front'

Autumn	Spring	Summer
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Concept	Milestone	Learning
Concept 1:	1. Begin to design, write and debug programs that	Computational Thinking
Computer	accomplish specific goals, including controlling or	a) I can use abstraction to focus on what's important in my design
Science	simulating physical systems; solve problems by	b) I can write more precise algorithms for use when programming
	decomposing them into smaller parts	c) I can use simple selection and repetition in algorithms
	2. Begin to use sequence, selection, and repetition in	d) I can use logical reasoning to detect and correct errors in programs
	programs; work with variables and various forms of	Coding and Programming
	input and output	e) I can use repetition in programs
	3. Begin to use logical reasoning to explain how some	f) I can use simple selection in programs
	simple algorithms work and to detect and correct errors	g) I can work with different outputs
	in algorithms and programs	h) I can use logical reasoning to systematically detect and correct errors in programs
Concept 2:	1. Begin to understand computer networks including the	<u>Computer Networks</u>
Information	internet; how they can provide multiple services, such	a) I understand that servers on the Internet are located across the planet
Technology	as the world wide web; and the opportunities they offer	b) I understand how email is sent across the Internet
, , , , , , , , , , , , , , , , , , , ,	for communication and collaboration	c) I understand how the Internet enables us to collaborate
	2. Begin to use search technologies effectively, appreciate	Word Processing/Typing
	how results are selected and ranked, and be discerning	d) I can combine digital images from different sources, objects, and text to make a variety of documents
	in evaluating digital content	e.g. posters, documents, , scripts, leaflets.
	3. Select, use and combine a small range of software	e) I can confidently and regularly use text shortcuts such as cut, copy and paste and delete to organise
	(including internet services) on a small range of digital	text
	devices to design and create a small range of programs,	f) I can use font sizes appropriately for audience and purpose.
	systems and content that accomplish given goals,	g) I can use spell check.
	including collecting, analysing, evaluating and	<u>Data Handling</u>
	presenting data and information	h) I can collect data and identify where it could be inaccurate.
		i) I can plan, create and search a database to answer questions.
		j) I can choose the best way to present data.
		Presentations, web design and eBook creation
		k) I can create an interactive quiz eBook introducing hyperlinks.
		l) I can create an eBook with text, images and sound.
		m) I can create a presentation demonstrating my understanding with a range of media.
		n) I can create a digital timeline/mindmap and include different media - sound and video.
		<u>Video Creation</u>
		o) I can add music and sound effects to my films.
		p) I can add animated titles and transitions.
		q) I can add simple subtitles to a video clip

Concept	Milestone	Learning
		Photography & Digital Art
		r) I can enhance digital images and photographs using crop, brightness, contrast & resize
		s) I can manipulate shapes to create digital art.
Concept 3:	Use technology safely, respectfully and responsibly;	Self Image and Identity
Digital	recognise acceptable/unacceptable behaviour; identify	y) I can explain how my online identity can be different to the identity I present in 'real life'
Expertise	a range of ways to report concerns about content and	z) Knowing this, I can describe the right decisions about how I interact with others and how others
	contact.	perceive me.
		Online Relationships
		aa) I can describe strategies for safe and fun experiences in a range of online social environments
		bb)I can give examples of how to be respectful to others online.
		Online Reputation
		cc) I can describe how others can find out information about me by looking online.
		dd)I can explain ways that some of the information about me online could have been created, copied or
		shared by others.
		Online Bullying ee) I can identify some online technologies where bullying might take place.
		ff) I can describe ways people can be bullied through a range of media (e.g. image, video, text, chat).
		gg) I can explain why I need to think carefully about how content I post might affect others, their feelings
		and how it may affect how others feel about them (their reputation).
		Managing Online Information
		hh)I can analyse information and differentiate between 'opinions', 'beliefs' and 'facts'. I understand what
		criteria have to be met before something is a 'fact'.
		ii) I can describe how I can search for information within a wide group of technologies (e.g. social media,
		image sites, video sites).
		jj) I can describe some of the methods used to encourage people to buy things online (e.g. advertising
		offers; in-app purchases, pop-ups) and can recognise some of these when they appear online.
		kk) I can explain that some people I 'meet online' (e.g. through social media) may be computer
		programmes pretending to be real people.
		II) I can explain why lots of people sharing the same opinions or beliefs online does not make those
		opinions or beliefs true.
		Health ,Wellbeing and Lifestyle
		mm) I can explain how using technology can distract me from other things I might do or should be
		doing.
		nn)I can identify times or situations when I might need to limit the amount of time I use technology.
		oo)I can suggest strategies to help me limit this time
		Privacy and Security
		pp)I can explain what a strong password is.
		qq)I can describe strategies for keeping my personal information private, depending on context.

Concept	Milestone	Learning
		rr) I can explain that others online can pretend to be me or other people, including my friends
		ss) I can suggest reasons why they might do this
		tt) I can explain how internet use can be monitored.
		Copyright and Ownership
		uu) When searching on the internet for content to use, I can explain why I need to consider who owns it
		and whether I have the right to reuse it.
		vv) I can give some simple examples.

COMPUTING Learning

Year 5 Autumn: 'Humans Vs Nature'

Concept	Milestone	Learning
Concept 1:	 Confidently design, write and debug 	Computational Thinking
Computer	programs that accomplish specific goals,	a) I can solve problems by decomposing them into smaller parts.
Science	including controlling or simulating physical	b) I can use selection in algorithms
	systems; solve problems by decomposing	c) I can use logical reasoning to explain how a variety of algorithms work
		d) I can evaluate the effectiveness of algorithms
	2. Confidently use sequence, selection, and	Coding and Programming
	repetition in programs; work with variables	e) I can create programs by decomposing them into smaller parts
	and various forms of input and output	f) I can use a variety of selection commands in programs
	3. Confidently use logical reasoning to explain	g) I can use conditions in repetition commands
	how some simple algorithms work and to	h) I can work with variables
	detect and correct errors in algorithms and	i) I can evaluate my work and identify errors
	programs	
Concept 2:	1. Understand computer networks including the	<u>Computer Networks</u>
Information	internet; how they can provide multiple	a) I understand how we view web pages on the Internet
Technology	services, such as the world wide web; and the	b) I use search technologies effectively
	opportunities they offer for communication	c) I understand that web spiders index the web for search engines
	and collaboration	d) I appreciate how pages are ranked in a search engine
	2. Use search technologies effectively,	Word Processing
	appreciate how results are selected and	e) I can start to apply other useful effects to my documents such as hyperlinks
	ranked, and be discerning in evaluating digital	f) I can import sounds to accompany and enhance the text in my document.
	content	g) I can organise and reorganise text on screen to suit a purpose
	3. Select, use and combine a variety of software	<u>Data Handling</u>
	(including internet services) on a range of	h) I can use a spreadsheet and database to collect and record data.
	digital devices to design and create a range of	i) I can present data in an appropriate way.
	programs, systems and content that	j) I can search a database using different operators to refine my search.
	accomplish given goals, including collecting,	k) I can talk about mistakes in data and suggest how it could be checked.
	analysing, evaluating and presenting data and	Presentations, Web Design and Ebook Creation
	information	I) I can create an interactive presentation including a variety of media, animations, transitions and other effects.
		m) I can create a webpage and embed video.
		<u>Video Creation</u>
		n) I can crop and resize tools and explore creative ways to present a video.
		o) I can explore a range of video tools and evaluate them to explain my understanding.
		Photography and Digital Art
		p) I can enhance digital photos and images using crop, brightness and resize tools

Concept	Milestone	Learning
		q) I can explain how to photoshop images and how this is used in the media.
Concept 3:	 Use technology safely, respectfully and 	Self Image and Identity
Digital	responsibly; recognise	a) I can explain how identity online can be copied, modified or altered.
Expertise	acceptable/unacceptable behaviour;	b) I can demonstrate responsible choices about my online identity, depending on context.
•	confidently identify an increasing range of	Online Relationships
	ways to report concerns about content and	c) I can explain that there are some people I communicate with online who may want to do me or my friends harm.
	contact.	d) I can describe some of the communities in which I am involved and describe how I collaborate with others
		positively.
		Online Reputation
		e) I can search for information about an individual online and create a summary report of the information I find.
		f) I can describe ways that information about people online can be used by others to make judgments about an individual.
		Online Bullying
		g) I can describe how to get help for someone that is being bullied online and assess when I need to do or say
		something or tell someone.
		h) I can explain how to block abusive users and how I would report online bullying on the apps and platforms that I
		use.
		i) I can describe the helpline services who can support me and what I would say and do if I needed their help (e.g.
		Childline).
		Managing Online Information
		j) I can explain key concepts including: data, information, fact, opinion belief, true, false, valid, reliable and evidence.
		k) I understand the difference between online mis-information (inaccurate information distributed by accident) and
		dis-information (inaccurate information deliberately distributed and intended to mislead).
		I) I can explain why I need to think carefully before I forward anything online.
		m) I can explain why some information I find online may not be honest, accurate or legal.
		n) I can explain why information that is on a large number of sites may still be inaccurate or untrue. I can assess how
		this might happen (e.g. the sharing of misinformation either by accident or on purpose).
		Privacy and Security
		 o) I can create and use strong and secure passwords. p) I can explain how many free apps or services may read and share my private information (e.g. friends, contacts,
		likes, images, videos, voice, messages, geolocation) with others.
		Copyright and Ownership
		q) I can assess and justify when it is acceptable to use the work of others.
		r) I can give examples of content that is permitted to be reused.

COMPUTING Learning Year 5 Spring: 'Fit For Life'

Concept	Milestone	Learning
Concept 1:	1. Confidently design, write and debug	Computational Thinking
Computer	programs that accomplish specific	a) I can solve problems by decomposing them into smaller parts.
Science	goals, including controlling or	b) I can use selection in algorithms .
	simulating physical systems; solve	c) I can use logical reasoning to explain how a variety of algorithms work
	problems by decomposing them into	d) I can evaluate the effectiveness of algorithms
	smaller parts	Coding and Programming
	2. Confidently use sequence, selection,	e) I can use a variety of selection commands in programs
	and repetition in programs; work with	f) I can use conditions in repetition commands
	variables and various forms of input	g) I can work with variables
	and output	h) I can create programs that control or simulate physical systems
	3. Confidently use logical reasoning to	i) I can evaluate my work and identify errors
	explain how some simple algorithms	
	work and to detect and correct errors	
	in algorithms and programs	
Concept 2:	Understand computer networks	<u>Computer Networks</u>
Information	including the internet; how they can	a) I understand how we view web pages on the Internet
Technology	provide multiple services, such as the	b) I use search technologies effectively
	world wide web; and the	c) I understand that web spiders index the web for search engines
	opportunities they offer for	d) I appreciate how pages are ranked in a search engine
	communication and collaboration	Word Processing
	2. Use search technologies effectively,	e) I can start to apply other useful effects to my documents such as hyperlinks
	appreciate how results are selected	f) I can import sounds to accompany and enhance the text in my document.
	and ranked, and be discerning in	g) I can organise and reorganise text on screen to suit a purpose
	evaluating digital content	Data Handling
	3. Select, use and combine a variety of	h) I can use a spreadsheet and database to collect and record data.
	software (including internet services)	i) I can present data in an appropriate way.
	on a range of digital devices to design	j) I can search a database using different operators to refine my search.
	and create a range of programs,	k) I can talk about mistakes in data and suggest how it could be checked.
	systems and content that accomplish	Presentations, Web Design and Ebook Creation
	given goals, including collecting,	I) I can create an interactive presentation including a variety of media, animations, transitions and other effects.
	analysing, evaluating and presenting	m) I can create a webpage and embed video.
	data and information	Video Creation
		n) I can crop and resize tools and explore creative ways to present a video.
		o) I can explore a range of video tools and evaluate them to explain my understanding.

Concept	Milestone	Learning
		Photography and Digital Art
		p) I can enhance digital photos and images using crop, brightness and resize tools
		q) I can explain how to photoshop images and how this is used in the media.
Concept 3:	1. Use technology safely, respectfully	Self Image and Identity
Digital	and responsibly; recognise	a) I can explain how identity online can be copied, modified or altered.
Expertise	acceptable/unacceptable behaviour;	b) I can demonstrate responsible choices about my online identity, depending on context.
·	confidently identify an increasing	Online Relationships
	range of ways to report concerns	c) I can explain that there are some people I communicate with online who may want to do me or my friends harm.
	about content and contact.	d) I can describe some of the communities in which I am involved and describe how I collaborate with others positively.
		Online Reputation
		e) I can search for information about an individual online and create a summary report of the information I find.
		f) I can describe ways that information about people online can be used by others to make judgments about an individual.
		Online Bullying
		g) I can describe how to get help for someone that is being bullied online and assess when I need to do or say something or
		tell someone.
		h) I can explain how to block abusive users and how I would report online bullying on the apps and platforms that I use.
		i) I can describe the helpline services who can support me and what I would say and do if I needed their help (e.g. Childline).
		Managing Online Information
		j) I can use different search technologies.
		k) I can evaluate digital content and can explain how I make choices from search results.
		I) I can explain key concepts including: data, information, fact, opinion belief, true, false, valid, reliable and evidence.
		m) I understand the difference between online mis-information (inaccurate information distributed by accident) and dis-
		information (inaccurate information deliberately distributed and intended to mislead).
		n) I can explain why I need to think carefully before I forward anything online.
		o) I can explain why some information I find online may not be honest, accurate or legal. p) I can explain why information that is on a large number of sites may still be inaccurate or untrue. I can assess how this
		might happen (e.g. the sharing of misinformation either by accident or on purpose).
		Privacy and Security
		q) I can create and use strong and secure passwords.
		r) I can explain how many free apps or services may read and share my private information (e.g. friends, contacts, likes,
		images, videos, voice, messages, geolocation) with others.
		Copyright and Ownership
		s) I can assess and justify when it is acceptable to use the work of others.
		t) I can give examples of content that is permitted to be reused.
		ty rearrange examples of content that is permitted to be reused.

COMPUTING Learning

Year 5 Summer: 'Innovation & Inspiration'

Concept	Milestone	Learning
Concept 1:	1. Confidently design, write and debug	Computational Thinking
Computer	programs that accomplish specific	a) I can solve problems by decomposing them into smaller parts.
Science	goals, including controlling or	b) I can use selection in algorithms.
	simulating physical systems; solve	c) I can use logical reasoning to explain how a variety of algorithms work
	problems by decomposing them into	d) I can evaluate the effectiveness of algorithms
	smaller parts	Coding and Programming
	2. Confidently use sequence, selection,	e) I can create programs by decomposing them into smaller parts
	and repetition in programs; work	f) I can use a variety of selection commands in programs
	with variables and various forms of	g) I can use conditions in repetition commands
	input and output	h) I can work with variables
	3. Confidently use logical reasoning to	i) I can create programs that control or simulate physical systems
	explain how some simple algorithms	j) I can evaluate my work and identify error
	work and to detect and correct	
	errors in algorithms and programs	
Concept 2:	Understand computer networks	<u>Computer Networks</u>
Information	including the internet; how they can	a) understand how we view web pages on the Internet
Technology	provide multiple services, such as	b) I use search technologies effectively
0,	the world wide web; and the	c) I understand that web spiders index the web for search engines
	opportunities they offer for	d) I appreciate how pages are ranked in a search engine
	communication and collaboration	Word Processing
	2. Use search technologies effectively,	e) I can start to apply other useful effects to my documents such as hyperlinks
	appreciate how results are selected	f) I can import sounds to accompany and enhance the text in my document.
	and ranked, and be discerning in	g) I can organise and reorganise text on screen to suit a purpose
	evaluating digital content	Data Handling
	3. Select, use and combine a variety of	h) I can use a spreadsheet and database to collect and record data.
	software (including internet services)	i) I can present data in an appropriate way.
	on a range of digital devices to	j) I can search a database using different operators to refine my search.
	design and create a range of	k) I can talk about mistakes in data and suggest how it could be checked.
	programs, systems and content that	Presentations, Web Design and Ebook Creation
	accomplish given goals, including	I) I can create an interactive presentation including a variety of media, animations, transitions and other effects.
	collecting, analysing, evaluating and	m) I can create a webpage and embed video.
	presenting data and information	<u>Video Creation</u>
		n) I can crop and resize tools and explore creative ways to present a video.
		o) I can explore a range of video tools and evaluate them to explain my understanding.

Concept	Milestone	Learning
		Photography and Digital Art
		p) I can enhance digital photos and images using crop, brightness and resize tools
		q) I can explain how to photoshop images and how this is used in the media.
Concept 3:	1. Use technology safely, respectfully	Self Image and Identity
Digital	and responsibly; recognise	a) I can explain how identity online can be copied, modified or altered.
Expertise	acceptable/unacceptable behaviour;	b) I can demonstrate responsible choices about my online identity, depending on context.
	confidently identify an increasing	Online Relationships
	range of ways to report concerns	c) I can explain that there are some people I communicate with online who may want to do me or my friends harm.
	about content and contact.	d) I can describe some of the communities in which I am involved and describe how I collaborate with others positively.
		Online Reputation
		e) I can search for information about an individual online and create a summary report of the information I find.
		f) I can describe ways that information about people online can be used by others to make judgments about an individual.
		Online Bullying
		g) I can describe how to get help for someone that is being bullied online and assess when I need to do or say something or
		tell someone.
		h) I can explain how to block abusive users and how I would report online bullying on the apps and platforms that I use.
		i) I can describe the helpline services who can support me and what I would say and do if I needed their help (e.g. Childline).
		Managing Online Information
		j) I can use different search technologies.
		k) I can evaluate digital content and can explain how I make choices from search results.
		I) I can explain key concepts including: data, information, fact, opinion belief, true, false, valid, reliable and evidence.
		m) I understand the difference between online mis-information (inaccurate information distributed by accident) and dis-
		information (inaccurate information deliberately distributed and intended to mislead).
		n) I can explain why I need to think carefully before I forward anything online.
		o) I can explain why some information I find online may not be honest, accurate or legal.
		p) I can explain why information that is on a large number of sites may still be inaccurate or untrue. I can assess how this
		might happen (e.g. the sharing of misinformation either by accident or on purpose).
		Privacy and Security
		q) I can create and use strong and secure passwords.
		r) I can explain how many free apps or services may read and share my private information (e.g. friends, contacts, likes,
		images, videos, voice, messages, geolocation) with others.
		Copyright and Ownership
		s) I can assess and justify when it is acceptable to use the work of others.
		t) I can give examples of content that is permitted to be reused

COMPUTING Learning Year 6 Autumn: 'Think Green'

Concept	Milestone	Learning
Concept 1:	 Confidently design, write and debug 	Computational Thinking
Computer	programs that accomplish specific	a) I can write precise algorithms for use when programming.
Science	goals, including controlling or	b) I can decompose a design or code to focus on specific parts.
	simulating physical systems; solve	c) I can use abstraction to hide complexity in my design or code.
	problems by decomposing them into	d) I can recognise and make use of patterns in my design and code.
	smaller parts	e) I can critically evaluate my work and suggest improvements.
	2. Confidently use sequence, selection,	Coding and Programming
	and repetition in programs; work with	f) I can use a range of sequence, selection and repletion commands to implement my design
	variables and various forms of input	g) I can identify the need for, and work with, variables
	and output	h) I can create procedures to hide complexity in programs
	3. Confidently use logical reasoning to	i) I can identify and write generic code for use across multiple projects
	explain how some simple algorithms	j) can critically evaluate my work and suggest improvements
	work and to detect and correct errors	
	in algorithms and programs	
Concept 2:	Understand computer networks	Computer Networks
Information	including the internet; how they can	a) I understand what HTML is and recognize HTML tags
Technology	provide multiple services, such as	b) I can create a webpage using HTML.
0,	the world wide web; and the	Word Processing
	opportunities they offer for	c) I can confidently choose the best program to demonstrate my learning.
	communication and collaboration	d) I can format text to suit a purpose.
	2. Use search technologies effectively,	e) I can discuss the audience and purpose of my content.
	appreciate how results are selected	<u>Data Handling</u>
	and ranked, and be discerning in	f) I can select the most effective tool to collect data for an investigation e.g. spreadsheet, questionnaire, quiz
	evaluating digital content	g) I can check the data I collect for accuracy and plausibility.
	3. Select, use and combine a variety of	h) I can interpret the data I collect.
	software (including internet services)	i) I can present the data I collect in an appropriate way.
	on a range of digital devices to design	Presentations, web design and eBook Creation
	and create a range of programs,	j) I can create a website which includes a variety of media.
	systems and content that accomplish	k) I can evaluate my own content and consider ways to make improvements.
	given goals, including collecting,	<u>Video Creation</u>
	analysing, evaluating and presenting	I can add animated subtitles to my film to further enhance my creation.
	data and information	m) I can create videos using a range of media - screen, animations, film and image.
		Photography and Digital Art
		n) I can edit a picture to remove items, add backgrounds.

Concept 3: **Digital Expertise**

1. Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; confidently identify an increasing range of ways to report concerns about content and contact.

o) I can evaluate and discuss images explaining effects and filters that have been used to enhance the media.

Self Image and Identity

- a) I can describe ways in which media can shape ideas about gender.
- b) I can identify messages about gender roles and make judgements based on them.
- c) I can challenge and explain why it is important to reject inappropriate messages about gender online.
- d) I can describe issues online that might make me or others feel sad, worried, uncomfortable or frightened. I know and can give examples of how I might get help, both on and offline.
- e) I can explain why I should keep asking until I get the help I need

Online Relationships

- f) I can show I understand my responsibilities for the well-being of others in my online social group.
- g) I can explain how impulsive and rash communications online may cause problems (e.g. flaming, content produced in live streaming).
- h) I can demonstrate how I would support others (including those who are having difficulties) online. I) I can demonstrate ways of reporting problems online for both myself and my friends.

Online Reputation

- i) I can explain how I am developing an online reputation which will allow other people to form an opinion of me.
- j) can describe some simple ways that help build a positive online reputation.

Online Bullying

- k) I can describe how to capture bullying content as evidence (e.g screengrab, URL, profile) to share with others who can help me.
- can identify a range of ways to report concerns both in school and at home about online bullying.

Managing Online Information

- m) I can describe how some online information can be opinion and can offer examples.
- n) I can explain how and why some people may present 'opinions' as 'facts'. I can define the terms 'influence', 'manipulation' and 'persuasion' and explain how I might encounter these online (e.g. advertising and 'ad targeting').
- o) I can demonstrate strategies to enable me to analyse and evaluate the validity of 'facts' and I can explain why using these strategies are important.
- p) I can identify, flag and report inappropriate content. I can use search technologies effectively.
- q) I can explain how search engines work and how results are selected and ranked.
- r) I can demonstrate the strategies I would apply to be discerning in evaluating digital content.
- s) I can describe how some online information can be opinion and can offer examples.
- t) I can explain how and why some people may present 'opinions' as 'facts'. I can define the terms 'influence', 'manipulation' and 'persuasion' and explain how I might encounter these online (e.g. advertising and 'ad targeting').
- u) I can demonstrate strategies to enable me to analyse and evaluate the validity of 'facts' and I can explain why using these strategies are important.
- v) I can identify, flag and report inappropriate content.

Health Wellbeing and Lifestyle

w) I can assess and action different strategies to limit the impact of technology on my health (e.g. nightshift mode, regular breaks, correct posture, sleep, diet and exercise).

x) I can explain the importance of selfregulating my use of technology; I can demonstrate the strategies I use to do this (e.g. monitoring my time online, avoiding accidents).

Privacy and Security

- y) I use different passwords for a range of online services.
- z) I can describe effective strategies for managing those passwords (e.g. password managers, acronyms, stories).
- aa) I know what to do if my password is lost or stolen.
- bb) I can explain what app permissions are and can give some examples from the technology or services I use.
- cc) I can describe simple ways to increase privacy on apps and services that provide privacy settings. I can describe ways in which some online content targets people to gain money or information illegally;
- dd) I can describe strategies to help me identify such content (e.g. scams, phishing).

Copyright and ownership

- ee) I can demonstrate the use of search tools to find and access online content which can be reused by others.
- ff) I can demonstrate how to make references to and acknowledge sources I have used from the internet

COMPUTING Learning Year 6 Spring: 'Save The Planet'

Concept	Milestone	Learning
Concept 1:	1. Confidently design, write and debug	Computational Thinking
Computer	programs that accomplish specific	a) I can write precise algorithms for use when programming.
Science	goals, including controlling or	b) I can decompose a design or code to focus on specific parts.
55.5.1.55	simulating physical systems; solve	c) I can use abstraction to hide complexity in my design or code. d) can recognise and make use of patterns in my design and
	problems by decomposing them into	code.
	smaller parts	d) I can critically evaluate my work and suggest improvements.
	2. Confidently use sequence, selection,	Coding and Programming
	and repetition in programs; work	e) I can use a range of sequence, selection and repletion commands to implement my design
	with variables and various forms of	f) I can identify the need for, and work with, variables
	input and output	g) I can create procedures to hide complexity in programs
	3. Confidently use logical reasoning to	h) I can identify and write generic code for use across multiple projects
	explain how some simple algorithms	i) I can critically evaluate my work and suggest improvements
	work and to detect and correct	
	errors in algorithms and programs	
Concept 2:	1. Understand computer networks	<u>Computer Networks</u>
Information	including the internet; how they can	a) I understand what HTML is and recognize HTML tags
Technology	provide multiple services, such as	b) I can create a webpage using HTML.
	the world wide web; and the	Word Processing
	opportunities they offer for	c) I can confidently choose the best program to demonstrate my learning.
	communication and collaboration	d) I can format text to suit a purpose.
	2. Use search technologies effectively,	e) I can discuss the audience and purpose of my content.
	appreciate how results are selected	Data Handling
	and ranked, and be discerning in	f) I can select the most effective tool to collect data for an investigation e.g. quiz, questionairre, spreadsheet
	evaluating digital content	g) I can check the data I collect for accuracy and plausibility.
	3. Select, use and combine a variety of software (including internet	h) I can interpret the data I collect.
	services) on a range of digital	i) I can present the data I collect in an appropriate way.
	devices to design and create a range	Presentations, web design and eBook Creation
	of programs, systems and content	j) I can create a web site which includes a variety of media.
	that accomplish given goals,	k) I can evaluate my own content and consider ways to make improvements.
	including collecting, analysing,	<u>Video Creation</u>
	evaluating and presenting data and	l) I can add animated subtitles to my film to further enhance my creation.
	information	m) I can create videos using a range of media - green screen, animations, film and image.
	o.	Photography and Digital Art
		n) I can edit a picture to remove items, add backgrounds.
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Concept	Milestone	Learning
		I can evaluate and discuss images explaining effects and filters that have been used to enhance the media.
Concept 3: Digital Expertise	Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; confidently identify an increasing range of ways to report concerns about content and contact.	 Self Image and Identity a) I can describe ways in which media can shape ideas about gender. b) I can identify messages about gender roles and make judgements based on them. c) I can challenge and explain why it is important to reject inappropriate messages about gender online. d) I can describe issues online that might make me or others feel sad, worried, uncomfortable or frightened. I know and can give examples of how I might get help, both on and offline. e) I can explain why I should keep asking until I get the help I need Online Relationships
		 f) I can show I understand my responsibilities for the well-being of others in my online social group. g) I can explain how impulsive and rash communications online may cause problems (e.g. flaming, content produced in live streaming). h) I can demonstrate how I would support others (including those who are having difficulties) online. I) I can demonstrate ways of reporting problems online for both myself and my friends.
		Online Reputation i) I can explain how I am developing an online reputation which will allow other people to form an opinion of me. j) I can describe some simple ways that help build a positive online reputation Online Bullying
		 k) I can describe how to capture bullying content as evidence (e.g screengrab, URL, profile) to share with others who can help me. l) I can identify a range of ways to report concerns both in school and at home about online bullying
		 Managing Online Information m) I can describe how some online information can be opinion and can offer examples. n) I can explain how and why some people may present 'opinions' as 'facts'. I can define the terms 'influence', 'manipulation' and 'persuasion' and explain how I might encounter these online (e.g. advertising and 'ad targeting'). o) I can demonstrate strategies to enable me to analyse and evaluate the validity of 'facts' and I can explain why using these strategies are important.
		 p) I can identify, flag and report inappropriate content. I can use search technologies effectively. q) I can explain how search engines work and how results are selected and ranked. r) I can demonstrate the strategies I would apply to be discerning in evaluating digital content. s) I can describe how some online information can be opinion and can offer examples. t) I can explain how and why some people may present 'opinions' as 'facts'. I can define the terms 'influence', 'manipulation' and 'persuasion' and explain how I might encounter these online (e.g. advertising and 'ad targeting'). u) I can demonstrate strategies to enable me to analyse and evaluate the validity of 'facts' and I can explain why using these strategies are important.
		v) I can identify, flag and report inappropriate content. <u>Health Wellbeing and Lifestyle</u>

Concept	Milestone	Learning
		w) I can assess and action different strategies to limit the impact of technology on my health (e.g. nightshift mode, regular breaks, correct posture, sleep, diet and exercise).
		x) I can explain the importance of selfregulating my use of technology; I can demonstrate the strategies I use to do this (e.g. monitoring my time online, avoiding accidents).
		Privacy and Security
		y) I use different passwords for a range of online services.
		z) I can describe effective strategies for managing those passwords (e.g. password managers, acronyms, stories). aa) I know what to do if my password is lost or stolen.
		bb)I can explain what app permissions are and can give some examples from the technology or services I use.
		cc) I can describe simple ways to increase privacy on apps and services that provide privacy settings. I can describe ways in which some online content targets people to gain money or information illegally;
		dd)I can describe strategies to help me identify such content (e.g. scams, phishing)
		Copyright and ownership
		ee) I can demonstrate the use of search tools to find and access online content which can be reused by others.
		ff) I can demonstrate how to make references to and acknowledge sources I have used from the internet

COMPUTING Learning Year 6 Summer: 'Eureka!'

Concept	Milestone	Learning
Concept 1:	1. Confidently design, write and debug	Computational Thinking
Computer	programs that accomplish specific	a) I can write precise algorithms for use when programming.
Science	goals, including controlling or	b) I can decompose a design or code to focus on specific parts.
	simulating physical systems; solve	c) I can use abstraction to hide complexity in my design or code. d) can recognise and make use of patterns in my design and
	problems by decomposing them into	code.
	smaller parts	d) I can critically evaluate my work and suggest improvements.
	2. Confidently use sequence, selection,	Coding and Programming
	and repetition in programs; work	e) I can use a range of sequence, selection and repletion commands to implement my design
	with variables and various forms of	f) I can identify the need for, and work with, variables
	input and output	g) I can create procedures to hide complexity in programs
	3. Confidently use logical reasoning to	h) I can identify and write generic code for use across multiple projects
	explain how some simple algorithms	i) I)I can critically evaluate my work and suggest improvements
	work and to detect and correct	
	errors in algorithms and programs	
Concept 2:	1. Understand computer networks	<u>Computer Networks</u>
Information	including the internet; how they can	a) I understand what HTML is and recognize HTML tags
Technology	provide multiple services, such as	b) I can create a webpage using HTML.
· ·	the world wide web; and the	Word Processing
	opportunities they offer for	c) I can confidently choose the best program to demonstrate my learning.
	communication and collaboration	d) I can format text to suit a purpose.
	2. Use search technologies effectively,	e) I can discuss the audience and purpose of my content.
	appreciate how results are selected	<u>Data Handling</u>
	and ranked, and be discerning in	f) I can select the most effective tool to collect data for an investigation e.g. quiz, questionairre, speadsheet
	evaluating digital content	g) I can check the data I collect for accuracy and plausibility.
	3. Select, use and combine a variety of	h) I can interpret the data I collect.
	software (including internet services)	i) I can present the data I collect in an appropriate way.
	on a range of digital devices to	Presentations, web design and eBook Creation
	design and create a range of	j) I can create a web site which includes a variety of media.
	programs, systems and content that	k) I can evaluate my own content and consider ways to make improvements.
	accomplish given goals, including	<u>Video Creation</u>
	collecting, analysing, evaluating and	I) I can add animated subtitles to my film to further enhance my creation.
	presenting data and information	m) I can create videos using a range of media - green screen, animations, film and image.
		Photography and Digital Art
		n) I can edit a picture to remove items, add backgrounds.

o) I can evaluate and discuss images explaining effects and filters that have been used to enhance the media. 1. Use technology safely, respectfully Self Image and Identity Concept 3: and responsibly; recognise I can describe ways in which media can shape ideas about gender. **Digital** acceptable/unacceptable behaviour; I can identify messages about gender roles and make judgements based on them. b) **Expertise** confidently identify an increasing I can challenge and explain why it is important to reject inappropriate messages about gender online. range of ways to report concerns d) I can describe issues online that might make me or others feel sad, worried, uncomfortable or frightened. I know and about content and contact. can give examples of how I might get help, both on and offline. e) I can explain why I should keep asking until I get the help I need Online Relationships I can show I understand my responsibilities for the well-being of others in my online social group. I can explain how impulsive and rash communications online may cause problems (e.g. flaming, content produced in live streaming). h) I can demonstrate how I would support others (including those who are having difficulties) online. I) I can demonstrate ways of reporting problems online for both myself and my friends. Online Reputation I can explain how I am developing an online reputation which will allow other people to form an opinion of me. I can describe some simple ways that help build a positive online reputation Online Bullying k) I can describe how to capture bullying content as evidence (e.g screengrab, URL, profile) to share with others who can help me. I can identify a range of ways to report concerns both in school and at home about online bullying **Managing Online Information** m) I can describe how some online information can be opinion and can offer examples. n) I can explain how and why some people may present 'opinions' as 'facts'. I can define the terms 'influence', 'manipulation' and 'persuasion' and explain how I might encounter these online (e.g. advertising and 'ad targeting'). I can demonstrate strategies to enable me to analyse and evaluate the validity of 'facts' and I can explain why using these strategies are important. I can identify, flag and report inappropriate content. I can use search technologies effectively. I can explain how search engines work and how results are selected and ranked. I can demonstrate the strategies I would apply to be discerning in evaluating digital content. I can describe how some online information can be opinion and can offer examples. I can explain how and why some people may present 'opinions' as 'facts'. I can define the terms 'influence', 'manipulation' and 'persuasion' and explain how I might encounter these online (e.g. advertising and 'ad targeting'). I can demonstrate strategies to enable me to analyse and evaluate the validity of 'facts' and I can explain why using these strategies are important.

Health Wellbeing and Lifestyle

I can identify, flag and report inappropriate content.

w)	I can assess and action different strategies to limit the impact of technology on my health (e.g. nightshift mode, regular
	breaks, correct posture, sleep, diet and exercise).

I can explain the importance of selfregulating my use of technology; I can demonstrate the strategies I use to do this (e.g. monitoring my time online, avoiding accidents).

Privacy and Security

- y) I use different passwords for a range of online services.
- z) I can describe effective strategies for managing those passwords (e.g. password managers, acronyms, stories).
- aa) I know what to do if my password is lost or stolen.
- bb) I can explain what app permissions are and can give some examples from the technology or services I use.
- cc) I can describe simple ways to increase privacy on apps and services that provide privacy settings. I can describe ways in which some online content targets people to gain money or information illegally;
- dd) I can describe strategies to help me identify such content (e.g. scams, phishing)

Copyright and ownership

- ee) I can demonstrate the use of search tools to find and access online content which can be reused by others.
- ff) I can demonstrate how to make references to and acknowledge sources I have used from the internet