




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
<p>Computer Science</p> 	<p>Information Technology</p> 	<p>Digital Expertise</p> 
<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • Can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems 	<ul style="list-style-type: none"> • Are responsible, competent, confident and creative users of information and communication technology.

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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)	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • Use technology safely.
Milestone 2 (Yr 1/2)	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • Use technology purposefully to create, organise, store, manipulate and retrieve digital content • Recognise common uses of information technology beyond school 	<ul style="list-style-type: none"> • 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)	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

<p>Milestone 4 (Yr 5/6)</p>	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; confidently identify an increasing range of ways to report concerns about content and contact.
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COMPUTING Learning - Nursery

Concept	Milestone	Learning
Concept 1: Computer Science	<ul style="list-style-type: none"> 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 	<u>Computational Thinking</u> a) I can follow simple oral instructions b) I can spot simple patterns c) I can sequence simple familiar tasks <u>Coding and Programming</u> a) I can use a touch screen to select options on screen
Concept 2: Information Technology	<ul style="list-style-type: none"> <i>Complete a simple program on a computer</i> <i>Use ICT hardware to interact with age-appropriate computer software</i> <i>Recognise that a range of technology is used in places such as homes and schools</i> <i>They select and use technology for particular purposes</i> 	<u>Word Processing/Typing</u> a) I can play on a touch screen game and use computers/keyboards/mouse in role play b) I can record my voice into a digital device <u>Data Handling</u> c) I can sort physical objects and take a picture <u>Animation</u> d) I can play a simple animation online <u>Video Creation</u> e) I know the difference between a photography and video. <u>Photography and Digital Art</u> 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: Digital Expertise	<ul style="list-style-type: none"> <i>Use technology safely</i> 	<u>Self-Image and Identity</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 something that makes me feel sad, embarrassed or upset <u>Online Bullying</u> b) I can tell someone if something I see online makes me feel sad <u>Managing online information</u> 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. <u>Health, Wellbeing and Lifestyle</u> e) I can use technology safely at Nursery <u>Privacy and security</u> f) I can identify my name and age g) I can describe some people who are special to me <u>Copyright and Ownership</u> h) I know that work I create belongs to me.

COMPUTING Learning - Reception

Concept	Milestone	Learning
Concept 1: Computer Science	<ul style="list-style-type: none"> • 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 	<u>Computational Thinking</u> a) I can follow simple oral algorithms b) I can spot simple patterns c) I can sequence simple familiar tasks
		<u>Coding and Programming</u> 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: Information Technology	<ul style="list-style-type: none"> • <i>Complete a simple program on a computer</i> • <i>Use ICT hardware to interact with age-appropriate computer software</i> • <i>Recognise that a range of technology is used in places such as homes and schools</i> • <i>They select and use technology for particular purposes</i> 	<u>Word Processing/Typing</u> a) I can play on a touch screen game and use computers/keyboards/mouse in role play b) I can type letters with increasing confidence using a keyboard and tablet. c) I can dictate short, clear sentences into a digital device
		<u>Data Handling</u> d) I can identify a chart. 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.
		<u>Presentations, web design and eBook creation</u> 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
		<u>Animation</u> 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.
		<u>Video Creation</u> l) 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
		<u>Photography and Digital Art</u> 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
		<u>Augmented reality and Virtual reality</u> s) I can scan a QR code t) I can explore a 360 image u) I can talk about AR objects in my class

		<p><u>Sound</u></p> <p>v) I can record sounds with different resources</p> <p>w) I can find ways to change your voice (tube, tin can, shouting to create an echo)</p> <p>x) I can record sounds/voices in storytelling and explanations</p>
<p>Concept 3: Digital Expertise</p>	<ul style="list-style-type: none"> • <i>Use technology safely</i> 	<p><u>Self-Image and Identity</u></p> <p>a) I can recognise that I can say 'no' / 'please stop' / 'I'll tell' / 'I'll ask' to somebody who asks me to do something that makes me feel sad, embarrassed or upset.</p> <p>b) I can explain how this could be either in real life or online</p> <p><u>Online Relationships</u></p> <p>c) I can recognise some ways in which the internet can be used to communicate.</p> <p>d) I can give examples of how I (might) use technology to communicate with people I know</p> <p><u>Online Reputation</u></p> <p>e) I can identify ways that I can put information on the internet.</p> <p><u>Online Bullying</u></p> <p>f) I can describe ways that some people can be unkind online.</p> <p>g) I can offer examples of how this can make others feel.</p> <p><u>Managing online information</u></p> <p>h) I can talk about how I can use the internet to find things out.</p> <p>i) I can identify devices I could use to access information on the internet.</p> <p>j) I can give simple examples of how to find information (e.g. search engine, voice activated searching)</p> <p><u>Health, Wellbeing and Lifestyle</u></p> <p>k) I can identify rules that help keep us safe and healthy in and beyond the home when using technology.</p> <p>l) I can give some simple examples.</p> <p><u>Privacy and security</u></p> <p>m) I can identify some simple examples of my personal information (e.g. name, address, birthday, age, location).</p> <p>n) I can describe the people I can trust and can share this with; I can explain why I can trust them.</p> <p><u>Copyright and Ownership</u></p> <p>o) I know that work I create belongs to me.</p> <p>p) I can name my work so that others know it belongs to me.</p>

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

Autumn Spring Summer

Concept	Milestone	Learning
Concept 1: Computer Science	1. Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions 2. Create and debug simple programs 3. Use logical reasoning to predict the behaviour of simple programs	<u>Computational Thinking</u> a) I understand what algorithms are b) I can write simple algorithms c) I understand the sequence of algorithms is important d) I can debug simple algorithms
		<u>Coding and Programming</u> 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: Information Technology	1. Use technology purposefully to create, organise, store, manipulate and retrieve digital content 2. Recognise common uses of information technology beyond school	<u>Logging On</u> a) I can log on and off a computer using a shared login. b) I can log on and off a computer using an individual login. c) I can begin to use a mouse with increasing control.
		<u>Word Processing/Typing</u> 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
		<u>Presentations, web design and eBook creation</u> 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> l) I can record a film using the camera app. m) I can highlight and zoom into images as I record.
		<u>Photography & Digital Art</u> 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: Digital Expertise	1. 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.	<u>Self-Image and Identity</u> a) I can recognise that there may be people online who could make me feel sad, embarrassed or upset. b) If something happens that makes me feel sad, worried, uncomfortable or frightened I can give examples of when and how to speak to an adult I can trust.
		<u>Online Relationships</u> 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>Online Reputation</u> 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.
		<u>Online Bullying</u> g) I can describe how to behave online in ways that do not upset others and can give examples.
		<u>Managing Online Information</u> 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.
		<u>Health , Wellbeing and Lifestyle</u> k) I can explain rules to keep us safe when we are using technology both in and beyond the home. l) I can give examples of some of these rules.
		<u>Privacy and Security</u> 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.
		<u>Copyright and Ownership</u> 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).

COMPUTING Learning
Year 1 Spring: 'Island Destinations'

Autumn Spring Summer

Concept	Milestone	Learning
Concept 1: Computer Science	1. Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions 2. Create and debug simple programs 3. Use logical reasoning to predict the behaviour of simple programs	<u>Computational Thinking</u> a) I understand what algorithms are b) I can write simple algorithms c) I understand the sequence of algorithms is important d) I can debug simple algorithms
		<u>Coding and Programming</u> 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: Information Technology	1. Use technology purposefully to create, organise, store, manipulate and retrieve digital content 2. Recognise common uses of information technology beyond school	<u>Word Processing/Typing</u> a) I can confidently type words quickly and correctly on a digital device. b) I can use the space bar to make space and delete to delete letters/ words c) I can make a new line using enter/return
		<u>Data Handling</u> d) I can collect data on a topic. I can create a tally chart and pictogram
		<u>Presentations, web design and eBook creation</u> 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.
		<u>Photography & Digital Art</u> j) I can take a photo using a camera. k) I can edit a photo with simple tools. l) I can use a paint/drawing app to create a digital image.
		<u>Self Image and Identity</u> a) I can recognise that there may be people online who could make me feel sad, embarrassed or upset. b) If something happens that makes me feel sad, worried, uncomfortable or frightened I can give examples of when and how to speak to an adult I can trust.
Concept 3: Digital Expertise	1. 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.	<u>Online Relationships</u> c) I can use the internet with adult support to communicate with people I know.

Concept	Milestone	Learning
		d) I can explain why it is important to be considerate and kind to people online.
		<u>Online Reputation</u>
		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.
		<u>Online Bullying</u>
		g) I can describe how to behave online in ways that do not upset others and can give examples.
		<u>Managing Online Information</u>
		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.	
	<u>Health ,Wellbeing and Lifestyle</u>	
	k) I can explain rules to keep us safe when we are using technology both in and beyond the home.	
	l) I can give examples of some of these rules.	
	<u>Privacy and Security</u>	
	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.	
	<u>Copyright and Ownership</u>	
	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).	

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

Autumn Spring Summer

Concept	Milestone	Learning
Concept 1: Computer Science	1. Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions 2. Create and debug simple programs 3. Use logical reasoning to predict the behaviour of simple programs	<u>Computational Thinking</u> a) I understand what algorithms are b) I can write simple algorithms c) I understand the sequence of algorithms is important d) I can debug simple algorithms
		<u>Coding and Programming</u> 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: Information Technology	1. Use technology purposefully to create, organise, store, manipulate and retrieve digital content 2. Recognise common uses of information technology beyond school	<u>Word Processing/Typing</u> a) I can confidently type words quickly and correctly on a digital device. b) I can use the space bar to make space and delete to delete letters/ words c) I can make a new line using enter/return
		<u>Data Handling</u> d) I can collect data on a topic. I can create a tally chart and pictogram
		<u>Presentations, web design and eBook creation</u> 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.
		<u>Photography & Digital Art</u> j) I can take a photo using a camera. k) I can edit a photo with simple tools. l) I can use a paint/drawing app to create a digital image.
Concept 3: Digital Expertise	1. 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.	<u>Self Image and Identity</u> a) I can recognise that there may be people online who could make me feel sad, embarrassed or upset. If something happens that makes me feel sad, worried, uncomfortable or frightened I can give examples of when and how to speak to an adult I can trust.
		<u>Online Relationships</u> 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.

Concept	Milestone	Learning
		<u>Online Reputation</u> 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
		<u>Online Bullying</u> g) I can describe how to behave online in ways that do not upset others and can give examples.
		<u>Managing Online Information</u> 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.
		<u>Health ,Wellbeing and Lifestyle</u> k) I can explain rules to keep us safe when we are using technology both in and beyond the home. l) I can give examples of some of these rules.
		<u>Privacy and Security</u> 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.
		<u>Copyright and Ownership</u> 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).

COMPUTING Learning
Year 2 Autumn: 'Fame, Fortune and Fire'

Autumn Spring Summer

Concept	Milestone	Learning
Concept 1: Computer Science	1. Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions 2. Create and debug simple programs 3. Use logical reasoning to predict the behaviour of simple programs	<u>Computational Thinking</u> a) I can write algorithms for everyday tasks b) I can use logical reasoning to predict the outcome of algorithms c) I understand decomposition is breaking objects/processes down d) I can debug algorithms <hr/> <u>Coding and Programming</u> e) I understand programs follow precise instructions 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: Information Technology	1. Use technology purposefully to create, organise, store, manipulate and retrieve digital content 2. Recognise common uses of information technology beyond school
<u>Data Handling</u> 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.		
<u>Presentations, web design and eBook creation</u> j) I can add a voice recording to a storyboard. (Could use Usu jit5 – animate or PowerPoint and use the Audio feature) k) I can add speech bubbles to an image to show what a character thinks. l) 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/		
<u>Photography & Digital Art</u> 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: Digital Expertise	1. 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.	<u>Self Image and Identity</u> a) I can explain how other people’s identity online can be different to their identity in real life. b) I can describe ways in which people might make themselves look different online. 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.
		<u>Online Relationships</u> 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.
		<u>Online Reputation</u> 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.
		<u>Online Bullying</u> 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.
		<u>Managing Online Information</u> k) I can use keywords in search engines. l) 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.
		<u>Health ,Wellbeing and Lifestyle</u> 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.
		<u>Privacy & Security</u> 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.
		<u>Copyright and Ownership</u> 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'

Autumn Spring Summer

Concept	Milestone	Learning
Concept 1: Computer Science	1. Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions	<u>Computational Thinking</u> a) I can write algorithms for everyday tasks b) I can use logical reasoning to predict the outcome of algorithms c) I understand decomposition is breaking objects/processes down d) I can debug algorithms
	2. Create and debug simple programs 3. Use logical reasoning to predict the behaviour of simple programs	<u>Coding and Programming</u> e) I understand programs follow precise instructions 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: Information Technology	1. Use technology purposefully to create, organise, store, manipulate and retrieve digital content 2. Recognise common uses of information technology beyond school	<u>Word Processing/Typing</u> a) I can use the space bar only once between words. b) I can copy and paste images and text. c) I can use caps locks for capital letters. d) I can add images alongside text in a word processed document.
		<u>Data Handling</u> 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.
		<u>Presentations, web design and eBook creation</u> 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. l) 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.
		<u>Photography & Digital Art</u> 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: Digital Expertise	1. 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.	<u>Self Image and Identity</u> a) I can explain how other people’s identity online can be different to their identity in real life. b) I can describe ways in which people might make themselves look different online. 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.
		<u>Online Relationships</u> 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.
		<u>Online Reputation</u> 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.
		<u>Online Bullying</u> 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.
		<u>Managing Online Information</u> k) I can use keywords in search engines. l) 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.
		<u>Health ,Wellbeing and Lifestyle</u> 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.
		<u>Privacy & Security</u> 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.
		<u>Copyright and Ownership</u> 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!'

Autumn Spring Summer

Concept	Milestone	Learning
Concept 1: Computer Science	1. Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions	<u>Computational Thinking</u> a) I can write algorithms for everyday tasks b) I can use logical reasoning to predict the outcome of algorithms c) I understand decomposition is breaking objects/processes down d) I can debug algorithms
	2. Create and debug simple programs 3. Use logical reasoning to predict the behaviour of simple programs	<u>Coding and Programming</u> e) I understand programs follow precise instructions 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: Information Technology	1. Use technology purposefully to create, organise, store, manipulate and retrieve digital content	<u>Word Processing/Typing</u> a) I can use the space bar only once between words. b) I can copy and paste images and text. c) I can use caps locks for capital letters. d) I can add images alongside text in a word processed document.
	2. Recognise common uses of information technology beyond school	<u>Data Handling</u> 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. l) I can use tools to add effects to a video.
		<u>Photography & Digital Art</u> 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 respectfully, keeping personal information private; identify	<u>Self Image and Identity</u> a) I can explain how other people's identity online can be different to their identity in real life. b) I can describe ways in which people might make themselves look different online.

Concept	Milestone	Learning
Digital Expertise	where to go for help and support when they have concerns about content or contact on the internet or other online technologies.	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.
		<u>Online Relationships</u> 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.
		<u>Online Reputation</u> 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.
		<u>Online Bullying</u> 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.
		<u>Managing Online Information</u> k) I can use keywords in search engines. l) 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.
		<u>Health ,Wellbeing and Lifestyle</u> 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.
		<u>Privacy & Security</u> 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.
		<u>Copyright and Ownership</u> 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 3 Autumn: 'Life Forces'

Autumn Spring Summer

Concept	Milestone	Learning
Concept 1: Computer Science	<p>1. 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</p> <p>2. Begin to use sequence, selection, and repetition in programs; work with variables and various forms of input and output</p> <p>3. Begin to use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p>	<p><u>Computational Thinking</u></p> <p>a) I can create algorithms for my programming projects</p> <p>b) I can decompose projects (such as an animation) into steps to create an algorithm</p> <p>c) I understand abstraction is focusing on important information</p> <p>d) I can identify patterns in an algorithm</p>
		<p><u>Coding and Programming</u></p> <p>a) I can design a program</p> <p>b) I can create a program using a design</p> <p>c) I can create a sequence of code</p> <p>d) I can work with different inputs</p> <p>e) I can evaluate my program</p>
Concept 2: Information Technology	<p>1. 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</p> <p>2. Begin to use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</p> <p>3. 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</p>	<p><u>Computer Networks</u></p> <p>a) I understand that computers in a school are connected together in a network</p> <p>b) I understand why computers are networked</p> <p>c) I understand the difference between the Internet and the World Wide Web (WWW)</p>
		<p><u>Word Processing/Typing</u></p> <p>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 for h/j/k/l</p> <p>e) I can edit the style and effect of my text and images to make my document more engaging and eye-catching. For example, borders and shadows.</p> <p>f) I can use cut, copy and paste to quickly duplicate and organise text.</p>
		<p><u>Data Handling</u></p> <p>g) I can talk about the different ways data can be organised.</p> <p>h) I can search a ready-made database to answer questions.</p> <p>i) I can collect data help me answer a question.</p> <p>j) I can add to a database.</p> <p>k) I can make a branching database.</p>
		<p><u>Presentations, web design and eBook creation</u></p> <p>l) I can create an interactive comic with sounds, formatted text and video.</p> <p>m) I can annotate an image with videos</p> <p>n) I can create a simple web page.</p> <p>o) I can create a simple digital timeline/mindmap</p>
		<p><u>Video Creation</u></p> <p>p) I can trim and cut film clips and add titles and transitions.</p>

Concept	Milestone	Learning
		<p><u>Photography & Digital Art</u></p> <p>q) I can confidently take and manipulate photos.</p> <p>r) I can create a digital image using a range of tools, pens, brushes and effects</p>
<p>Concept 3: Digital Expertise</p>	<p>1. Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p>	<p><u>Self Image and Identity</u></p> <p>a) I can explain what is meant by the term 'identity'.</p> <p>b) I can explain how I can represent myself in different ways online.</p> <p>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).</p>
		<p><u>Online Relationships</u></p> <p>d) I can describe ways people who have similar likes and interests can get together online.</p> <p>e) I can give examples of technology-specific forms of communication (e.g. emojis, acronyms, text speak).</p> <p>f) I can explain some risks of communicating online with others I don't know well.</p> <p>g) I can explain how my and other people's feelings can be hurt by what is said or written online.</p> <p>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.</p> <p>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'.</p>
		<p><u>Online Reputation</u></p> <p>j) I can search for information about myself online.</p> <p>k) I can recognise I need to be careful before I share anything about myself or others online.</p> <p>l) I know who I should ask if I am not sure if I should put something online.</p>
		<p><u>Online Bullying</u></p> <p>m) I can explain what bullying is and can describe how people may bully others.</p> <p>n) I can describe rules about how to behave online and how I follow them.</p>
		<p><u>Managing Online Information</u></p> <p>o) I can use key phrases in search engines.</p> <p>p) I can explain what autocomplete is and how to choose the best suggestion.</p> <p>q) I can explain how the internet can be used to sell and buy things</p> <p>r) I can explain the difference between a 'belief', an 'opinion' and a 'fact'.</p>
		<p><u>Health ,Wellbeing and Lifestyle</u></p> <p>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,</p>
		<p><u>Privacy and Security</u></p> <p>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.</p>

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
		<u>Copyright and Ownership</u> 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 Spring Summer

Concept	Milestone	Learning
Concept 1: Computer Science	1. 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 2. Begin to use sequence, selection, and repetition in programs; work with variables and various forms of input and output 3. Begin to use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs	<u>Computational Thinking</u> a) I can create algorithms for my programming projects b) I can decompose projects (such as an animation) into steps to create an algorithm c) I understand abstraction is focusing on important information d) I can identify patterns in an algorithm
		<u>Coding and Programming</u> i) I can design a program j) I can create a program using a design k) I can create a sequence of code l) I can work with different inputs m) I can evaluate my program
Concept 2: Information Technology	1. 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 2. Begin to use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content 3. 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	<u>Computer Networks</u> a) I understand that computers in a school are connected together in a network b) I understand why computers are networked c) I understand the difference between the Internet and the World Wide Web (WWW)
		<u>Word Processing/Typing</u> 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 for h/j/k/l e) I can edit the style and effect of my text and images to make my document more engaging and eye-catching. For example, borders and shadows. f) I can use cut, copy and paste to quickly duplicate and organise text.
		<u>Data Handling</u> g) I can talk about the different ways data can be organised. 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.
		<u>Presentations, web design and eBook creation</u> l) 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>p) I can trim and cut film clips and add titles and transitions.</p> <p>q) I can create my own movie trailer</p>
		<p><u>Photography & Digital Art</u></p> <p>r) I can confidently take and manipulate photos</p> <p>I can create a digital image using a range of tools, pens, brushes and effects.</p>
<p>Concept 3: Digital Expertise</p>	<p>1. Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p>	<p><u>Self Image and Identity</u></p> <p>a) I can explain what is meant by the term 'identity'.</p> <p>b) I can explain how I can represent myself in different ways online.</p> <p>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).</p>
		<p><u>Online Relationships</u></p> <p>d) I can describe ways people who have similar likes and interests can get together online.</p> <p>e) I can give examples of technology-specific forms of communication (e.g. emojis, acronyms, text speak).</p> <p>f) I can explain some risks of communicating online with others I don't know well.</p> <p>g) I can explain how my and other people's feelings can be hurt by what is said or written online.</p> <p>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.</p> <p>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'.</p>
		<p><u>Online Reputation</u></p> <p>j) I can search for information about myself online.</p> <p>k) I can recognise I need to be careful before I share anything about myself or others online.</p> <p>l) I know who I should ask if I am not sure if I should put something online.</p>
		<p><u>Online Bullying</u></p> <p>m) I can explain what bullying is and can describe how people may bully others.</p> <p>n) I can describe rules about how to behave online and how I follow them.</p>
		<p><u>Managing Online Information</u></p> <p>o) I can use key phrases in search engines.</p> <p>p) I can explain what autocomplete is and how to choose the best suggestion.</p> <p>q) I can explain how the internet can be used to sell and buy things</p> <p>r) I can explain the difference between a 'belief', an 'opinion' and a 'fact'.</p>
		<p><u>Health ,Wellbeing and Lifestyle</u></p> <p>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,</p>

Concept	Milestone	Learning
		<u>Privacy and Security</u> 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
		<u>Copyright and Ownership</u> 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 Summer: 'Our Local World'

Autumn Spring Summer

Concept	Milestone	Learning
Concept 1: Computer Science	1. 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 2. Begin to use sequence, selection, and repetition in programs; work with variables and various forms of input and output 3. Begin to use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs	<u>Computational Thinking</u> a) I can create algorithms for my programming projects b) I can decompose projects (such as an animation) into steps to create an algorithm c) I understand abstraction is focusing on important information d) I can identify patterns in an algorithm
		<u>Coding and Programming</u> a) I can design a program b) I can create a program using a design c) I can create a sequence of code d) I can work with different inputs e) I can evaluate my program
Concept 2: Information Technology	1. 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 2. Begin to use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content 3. 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	<u>Computer Networks</u> a) I understand that computers in a school are connected together in a network b) I understand why computers are networked c) I understand the difference between the Internet and the World Wide Web (WWW)
		<u>Word Processing/Typing</u> 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 for h/j/k/l e) I can edit the style and effect of my text and images to make my document more engaging and eye-catching. For example, borders and shadows. f) I can use cut, copy and paste to quickly duplicate and organise text.
		<u>Data Handling</u> g) I can talk about the different ways data can be organised. 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.
		<u>Presentations, web design and eBook creation</u> l) 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
		q) I can create my own movie trailer.
		<u>Photography & Digital Art</u> r) can confidently take and manipulate photos I can create a digital image using a range of tools, pens, brushes and effects.
Concept 3: Digital Expertise	1. Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	<u>Self Image and Identity</u> a) I can explain what is meant by the term 'identity'. b) I can explain how I can represent myself in different ways online. 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).
		<u>Online Relationships</u> 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'.
		<u>Online Reputation</u> j) 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. l) I know who I should ask if I am not sure if I should put something online.
		<u>Online Bullying</u> 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.
		<u>Managing Online Information</u> 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'.
		<u>Health ,Wellbeing and Lifestyle</u> 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,
		<u>Privacy and Security</u>

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

COMPUTING Learning
Year 4 Autumn: 'Water, Water Everywhere'

Autumn Spring Summer

Concept	Milestone	Learning
Concept 1: Computer Science	1. 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 2. Begin to use sequence, selection, and repetition in programs; work with variables and various forms of input and output 3. Begin to use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs	<u>Computational Thinking</u> a) I can use abstraction to focus on what's important in my design b) I can write more precise algorithms for use when programming c) I can use simple selection and repetition in algorithms d) I can use logical reasoning to detect and correct errors in programs
		<u>Coding and Programming</u> e) I can use repetition in programs f) I can use simple selection in programs g) I can work with different output h) I can use logical reasoning to systematically detect and correct errors in programs
Concept 2: Information Technology	1. 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 2. Begin to use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content 3. 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	<u>Computer Networks</u> a) I understand that servers on the Internet are located across the planet b) I understand how email is sent across the Internet c) I understand how the Internet enables us to collaborate
		<u>Word Processing/Typing</u> d) I can combine digital images from different sources, objects, and text to make a variety of documents e.g. posters, documents, , scripts, leaflets. e) I can confidently and regularly use text shortcuts such as cut, copy and paste and delete to organise text f) I can use font sizes appropriately for audience and purpose. g) I can use spell check.
		<u>Data Handling</u> 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. 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
		<p><u>Photography & Digital Art</u></p> <p>r) I can enhance digital images and photographs using crop, brightness, contrast & resize</p> <p>s) I can manipulate shapes to create digital art.</p>
<p>Concept 3: Digital Expertise</p>	<p>1. Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p>	<p><u>Self Image and Identity</u></p> <p>a) I can explain how my online identity can be different to the identity I present in 'real life'</p> <p>b) Knowing this, I can describe the right decisions about how I interact with others and how others perceive me.</p> <p><u>Online Relationships</u></p> <p>c) I can describe strategies for safe and fun experiences in a range of online social environments</p> <p>d) I can give examples of how to be respectful to others online.</p> <p><u>Online Reputation</u></p> <p>e) I can describe how others can find out information about me by looking online.</p> <p>f) I can explain ways that some of the information about me online could have been created, copied or shared by others.</p> <p><u>Online Bullying</u></p> <p>g) I can identify some online technologies where bullying might take place.</p> <p>h) I can describe ways people can be bullied through a range of media (e.g. image, video, text, chat).</p> <p>i) 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).</p> <p><u>Managing Online Information</u></p> <p>j) I can analyse information and differentiate between 'opinions', 'beliefs' and 'facts'. I understand what criteria have to be met before something is a 'fact'.</p> <p>k) I can describe how I can search for information within a wide group of technologies (e.g. social media, image sites, video sites).</p> <p>l) 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.</p> <p>m) I can explain that some people I 'meet online' (e.g. through social media) may be computer programmes pretending to be real people.</p> <p>n) I can explain why lots of people sharing the same opinions or beliefs online does not make those opinions or beliefs true.</p> <p><u>Health ,Wellbeing and Lifestyle</u></p> <p>o) I can explain how using technology can distract me from other things I might do or should be doing.</p> <p>p) I can identify times or situations when I might need to limit the amount of time I use technology.</p> <p>q) I can suggest strategies to help me limit this time</p> <p><u>Privacy and Security</u></p> <p>r) I can explain what a strong password is.</p> <p>s) I can describe strategies for keeping my personal information private, depending on context.</p> <p>t) I can explain that others online can pretend to be me or other people, including my friends</p>

Concept	Milestone	Learning
		u) I can suggest reasons why they might do this v) I can explain how internet use can be monitored.
		<u>Copyright and Ownership</u> 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.

COMPUTING Learning
Year 4 Spring: 'Sunshine Islands'

Autumn Spring Summer

Concept	Milestone	Learning
Concept 1: Computer Science	1. 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 2. Begin to use sequence, selection, and repetition in programs; work with variables and various forms of input and output 3. Begin to use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs	<u>Computational Thinking</u> a) I can use abstraction to focus on what's important in my design b) I can write more precise algorithms for use when programming c) I can use simple selection and repetition in algorithms d) I can use logical reasoning to detect and correct errors in programs
		<u>Coding and Programming</u> e) I can use repetition in programs f) I can use simple selection in programs g) I can work with different outputs h) I can use logical reasoning to systematically detect and correct errors in programs
Concept 2: Information Technology	1. 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 2. Begin to use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content 3. 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	<u>Computer Networks</u> a) I understand that servers on the Internet are located across the planet b) I understand how email is sent across the Internet c) I understand how the Internet enables us to collaborate
		<u>Word Processing/Typing</u> d) I can combine digital images from different sources, objects, and text to make a variety of documents e.g. posters, documents, , scripts, leaflets. e) I can confidently and regularly use text shortcuts such as cut, copy and paste and delete to organise text f) I can use font sizes appropriately for audience and purpose. g) I can use spell check.
		<u>Data Handling</u> 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. 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
		<p><u>Photography & Digital Art</u></p> <p>r) I can enhance digital images and photographs using crop, brightness, contrast & resize</p> <p>s) I can manipulate shapes to create digital art.</p>
<p>Concept 3: Digital Expertise</p>	<p>1. Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p>	<p><u>Self Image and Identity</u></p> <p>a) I can explain how my online identity can be different to the identity I present in ‘real life’</p> <p>b) Knowing this, I can describe the right decisions about how I interact with others and how others perceive me.</p> <p><u>Online Relationships</u></p> <p>c) I can describe strategies for safe and fun experiences in a range of online social environments</p> <p>d) I can give examples of how to be respectful to others online.</p> <p><u>Online Reputation</u></p> <p>e) I can describe how others can find out information about me by looking online.</p> <p>f) I can explain ways that some of the information about me online could have been created, copied or shared by others.</p> <p><u>Online Bullying</u></p> <p>g) I can identify some online technologies where bullying might take place.</p> <p>h) I can describe ways people can be bullied through a range of media (e.g. image, video, text, chat).</p> <p>i) 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).</p> <p><u>Managing Online Information</u></p> <p>j) I can analyse information and differentiate between ‘opinions’, ‘beliefs’ and ‘facts’. I understand what criteria have to be met before something is a ‘fact’.</p> <p>k) I can describe how I can search for information within a wide group of technologies (e.g. social media, image sites, video sites).</p> <p>l) 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.</p> <p>m) I can explain that some people I ‘meet online’ (e.g. through social media) may be computer programmes pretending to be real people.</p> <p>n) I can explain why lots of people sharing the same opinions or beliefs online does not make those opinions or beliefs true.</p> <p><u>Health ,Wellbeing and Lifestyle</u></p> <p>o) I can explain how using technology can distract me from other things I might do or should be doing.</p> <p>p) I can identify times or situations when I might need to limit the amount of time I use technology.</p> <p>q) I can suggest strategies to help me limit this time.</p> <p><u>Privacy and Security</u></p> <p>r) I can explain what a strong password is.</p> <p>s) I can describe strategies for keeping my personal information private, depending on context.</p> <p>t) I can explain that others online can pretend to be me or other people, including my friends</p>

Concept	Milestone	Learning
		u) I can suggest reasons why they might do this v) I can explain how internet use can be monitored.
		<u>Copyright and Ownership</u> 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.

COMPUTING Learning
Year 4 Summer: 'On The Home Front'

Autumn Spring Summer

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

Concept	Milestone	Learning
		<p><u>Photography & Digital Art</u></p> <p>r) I can enhance digital images and photographs using crop, brightness, contrast & resize</p> <p>s) I can manipulate shapes to create digital art.</p>
<p>Concept 3: Digital Expertise</p>	<p>1. Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p>	<p><u>Self Image and Identity</u></p> <p>y) I can explain how my online identity can be different to the identity I present in ‘real life’</p> <p>z) Knowing this, I can describe the right decisions about how I interact with others and how others perceive me.</p>
		<p><u>Online Relationships</u></p> <p>aa) I can describe strategies for safe and fun experiences in a range of online social environments</p> <p>bb) I can give examples of how to be respectful to others online.</p>
		<p><u>Online Reputation</u></p> <p>cc) I can describe how others can find out information about me by looking online.</p> <p>dd) I can explain ways that some of the information about me online could have been created, copied or shared by others.</p>
		<p><u>Online Bullying</u></p> <p>ee) I can identify some online technologies where bullying might take place.</p> <p>ff) I can describe ways people can be bullied through a range of media (e.g. image, video, text, chat).</p> <p>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).</p>
		<p><u>Managing Online Information</u></p> <p>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’.</p> <p>ii) I can describe how I can search for information within a wide group of technologies (e.g. social media, image sites, video sites).</p> <p>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.</p> <p>kk) I can explain that some people I ‘meet online’ (e.g. through social media) may be computer programmes pretending to be real people.</p> <p>ll) I can explain why lots of people sharing the same opinions or beliefs online does not make those opinions or beliefs true.</p>
		<p><u>Health ,Wellbeing and Lifestyle</u></p> <p>mm) I can explain how using technology can distract me from other things I might do or should be doing.</p> <p>nn) I can identify times or situations when I might need to limit the amount of time I use technology.</p> <p>oo) I can suggest strategies to help me limit this time</p>
		<p><u>Privacy and Security</u></p> <p>pp) I can explain what a strong password is.</p> <p>qq) I can describe strategies for keeping my personal information private, depending on context.</p>

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.
		<u>Copyright and Ownership</u> 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'

Autumn Spring Summer

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

Concept	Milestone	Learning
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.	q) I can explain how to photoshop images and how this is used in the media.
		<u>Self Image and Identity</u> a) I can explain how identity online can be copied, modified or altered. b) I can demonstrate responsible choices about my online identity, depending on context.
		<u>Online Relationships</u> c) I can explain that there are some people I communicate with online who may want to do me or my friends harm. d) I can describe some of the communities in which I am involved and describe how I collaborate with others positively.
		<u>Online Reputation</u> 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.
		<u>Online Bullying</u> 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).
		<u>Managing Online Information</u> 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). l) 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).
		<u>Privacy and Security</u> 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.
		<u>Copyright and Ownership</u> 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'

Autumn Spring Summer

Concept	Milestone	Learning
Concept 1: Computer Science	1. Confidently design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts	<u>Computational Thinking</u> a) I can solve problems by decomposing them into smaller parts. b) I can use selection in algorithms . 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 repetition in programs; work with variables and various forms of input and output 3. Confidently use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs	<u>Coding and Programming</u> e) I can use a variety of selection commands in programs f) I can use conditions in repetition commands g) I can work with variables h) I can create programs that control or simulate physical systems i) I can evaluate my work and identify errors
Concept 2: Information Technology	1. 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	<u>Computer Networks</u> a) I understand how we view web pages on the Internet b) I use search technologies effectively c) I understand that web spiders index the web for search engines d) I appreciate how pages are ranked in a search engine
	2. Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content	<u>Word Processing</u> e) I can start to apply other useful effects to my documents such as hyperlinks f) I can import sounds to accompany and enhance the text in my document. g) I can organise and reorganise text on screen to suit a purpose
	3. 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	<u>Data Handling</u> h) I can use a spreadsheet and database to collect and record data. i) I can present data in an appropriate way. j) I can search a database using different operators to refine my search. k) I can talk about mistakes in data and suggest how it could be checked.
		<u>Presentations, Web Design and Ebook Creation</u> l) 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.

Concept	Milestone	Learning
		<p><u>Photography and Digital Art</u></p> <p>p) I can enhance digital photos and images using crop, brightness and resize tools</p> <p>q) I can explain how to photoshop images and how this is used in the media.</p>
<p>Concept 3: Digital Expertise</p>	<p>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.</p>	<p><u>Self Image and Identity</u></p> <p>a) I can explain how identity online can be copied, modified or altered.</p> <p>b) I can demonstrate responsible choices about my online identity, depending on context.</p> <p><u>Online Relationships</u></p> <p>c) I can explain that there are some people I communicate with online who may want to do me or my friends harm.</p> <p>d) I can describe some of the communities in which I am involved and describe how I collaborate with others positively.</p> <p><u>Online Reputation</u></p> <p>e) I can search for information about an individual online and create a summary report of the information I find.</p> <p>f) I can describe ways that information about people online can be used by others to make judgments about an individual.</p> <p><u>Online Bullying</u></p> <p>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.</p> <p>h) I can explain how to block abusive users and how I would report online bullying on the apps and platforms that I use.</p> <p>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).</p> <p><u>Managing Online Information</u></p> <p>j) I can use different search technologies.</p> <p>k) I can evaluate digital content and can explain how I make choices from search results.</p> <p>l) I can explain key concepts including: data, information, fact, opinion belief, true, false, valid, reliable and evidence.</p> <p>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).</p> <p>n) I can explain why I need to think carefully before I forward anything online.</p> <p>o) I can explain why some information I find online may not be honest, accurate or legal.</p> <p>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).</p> <p><u>Privacy and Security</u></p> <p>q) I can create and use strong and secure passwords.</p> <p>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.</p> <p><u>Copyright and Ownership</u></p> <p>s) I can assess and justify when it is acceptable to use the work of others.</p> <p>t) I can give examples of content that is permitted to be reused.</p>

COMPUTING Learning
Year 5 Summer: 'Innovation & Inspiration'

Autumn Spring Summer

Concept	Milestone	Learning
Concept 1: Computer Science	1. Confidently design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts	<u>Computational Thinking</u> a) I can solve problems by decomposing them into smaller parts. b) I can use selection in algorithms. 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 repetition in programs; work with variables and various forms of input and output 3. Confidently use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs	<u>Coding and Programming</u> e) I can create programs by decomposing them into smaller parts f) I can use a variety of selection commands in programs g) I can use conditions in repetition commands h) I can work with variables i) I can create programs that control or simulate physical systems j) I can evaluate my work and identify error
Concept 2: Information Technology	1. 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	<u>Computer Networks</u> a) understand how we view web pages on the Internet b) I use search technologies effectively c) I understand that web spiders index the web for search engines d) I appreciate how pages are ranked in a search engine
	2. Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content	<u>Word Processing</u> e) I can start to apply other useful effects to my documents such as hyperlinks f) I can import sounds to accompany and enhance the text in my document. g) I can organise and reorganise text on screen to suit a purpose
	3. 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	<u>Data Handling</u> h) I can use a spreadsheet and database to collect and record data. i) I can present data in an appropriate way. j) I can search a database using different operators to refine my search. k) I can talk about mistakes in data and suggest how it could be checked.
		<u>Presentations, Web Design and Ebook Creation</u> l) 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.

Concept	Milestone	Learning
		<p><u>Photography and Digital Art</u></p> <p>p) I can enhance digital photos and images using crop, brightness and resize tools</p> <p>q) I can explain how to photoshop images and how this is used in the media.</p>
<p>Concept 3: Digital Expertise</p>	<p>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.</p>	<p><u>Self Image and Identity</u></p> <p>a) I can explain how identity online can be copied, modified or altered.</p> <p>b) I can demonstrate responsible choices about my online identity, depending on context.</p>
		<p><u>Online Relationships</u></p> <p>c) I can explain that there are some people I communicate with online who may want to do me or my friends harm.</p> <p>d) I can describe some of the communities in which I am involved and describe how I collaborate with others positively.</p>
		<p><u>Online Reputation</u></p> <p>e) I can search for information about an individual online and create a summary report of the information I find.</p> <p>f) I can describe ways that information about people online can be used by others to make judgments about an individual.</p>
		<p><u>Online Bullying</u></p> <p>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.</p> <p>h) I can explain how to block abusive users and how I would report online bullying on the apps and platforms that I use.</p> <p>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).</p>
		<p><u>Managing Online Information</u></p> <p>j) I can use different search technologies.</p> <p>k) I can evaluate digital content and can explain how I make choices from search results.</p> <p>l) I can explain key concepts including: data, information, fact, opinion belief, true, false, valid, reliable and evidence.</p> <p>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).</p> <p>n) I can explain why I need to think carefully before I forward anything online.</p> <p>o) I can explain why some information I find online may not be honest, accurate or legal.</p> <p>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).</p>
		<p><u>Privacy and Security</u></p> <p>q) I can create and use strong and secure passwords.</p> <p>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.</p>
		<p><u>Copyright and Ownership</u></p> <p>s) I can assess and justify when it is acceptable to use the work of others.</p> <p>t) I can give examples of content that is permitted to be reused</p>

COMPUTING Learning
Year 6 Autumn: 'Think Green'

Autumn Spring Summer

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

<p>Concept 3: Digital Expertise</p>	<p>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.</p>	<p>o) I can evaluate and discuss images explaining effects and filters that have been used to enhance the media.</p> <p><u>Self Image and Identity</u></p> <p>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</p> <p><u>Online Relationships</u></p> <p>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.</p> <p><u>Online Reputation</u></p> <p>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.</p> <p><u>Online Bullying</u></p> <p>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) can identify a range of ways to report concerns both in school and at home about online bullying.</p> <p><u>Managing Online Information</u></p> <p>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.</p> <p><u>Health Wellbeing and Lifestyle</u></p> <p>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).</p>
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	<p>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).</p>
	<p><u>Privacy and Security</u></p> <p>y) I use different passwords for a range of online services.</p> <p>z) I can describe effective strategies for managing those passwords (e.g. password managers, acronyms, stories).</p> <p>aa) I know what to do if my password is lost or stolen.</p> <p>bb) I can explain what app permissions are and can give some examples from the technology or services I use.</p> <p>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;</p> <p>dd) I can describe strategies to help me identify such content (e.g. scams, phishing).</p>
	<p><u>Copyright and ownership</u></p> <p>ee) I can demonstrate the use of search tools to find and access online content which can be reused by others.</p> <p>ff) I can demonstrate how to make references to and acknowledge sources I have used from the internet</p>

COMPUTING Learning
Year 6 Spring: 'Save The Planet'

Autumn Spring Summer

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

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	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.	<u>Self Image and Identity</u> 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
		<u>Online Relationships</u> 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.
		<u>Online Reputation</u> 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
		<u>Online Bullying</u> 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
		<u>Managing Online Information</u> 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
		<p>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).</p> <p>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).</p>
		<p><u>Privacy and Security</u></p> <p>y) I use different passwords for a range of online services.</p> <p>z) I can describe effective strategies for managing those passwords (e.g. password managers, acronyms, stories).</p> <p>aa) I know what to do if my password is lost or stolen.</p> <p>bb) I can explain what app permissions are and can give some examples from the technology or services I use.</p> <p>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;</p> <p>dd) I can describe strategies to help me identify such content (e.g. scams, phishing)</p>
		<p><u>Copyright and ownership</u></p> <p>ee) I can demonstrate the use of search tools to find and access online content which can be reused by others.</p> <p>ff) I can demonstrate how to make references to and acknowledge sources I have used from the internet</p>

COMPUTING Learning
Year 6 Summer: 'Eureka!'

Autumn Spring Summer

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

	<p>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).</p> <p>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).</p>
	<p><u>Privacy and Security</u></p> <p>y) I use different passwords for a range of online services.</p> <p>z) I can describe effective strategies for managing those passwords (e.g. password managers, acronyms, stories).</p> <p>aa) I know what to do if my password is lost or stolen.</p> <p>bb) I can explain what app permissions are and can give some examples from the technology or services I use.</p> <p>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;</p> <p>dd) I can describe strategies to help me identify such content (e.g. scams, phishing)</p>
	<p><u>Copyright and ownership</u></p> <p>ee) I can demonstrate the use of search tools to find and access online content which can be reused by others.</p> <p>ff) I can demonstrate how to make references to and acknowledge sources I have used from the internet</p>