





Computing and Online Safety Long Term Plan

<u>EYFS - Computing in EYFS develops children's foundational digital skills, confidence, and problem-solving, providing a smooth transition into Key Stage 1 and supporting learning across the curriculum. These units are designed to support EYFS practitioners in providing a range of ICT/computing opportunities and experiences for children in the Foundation Stage that provide continuity and stepping stones into the KS1 curriculum. Early Years computing assessment is based on pupils having the initial skills in place to progress them to the expected attainment at the end of KS1.</u>

Computing Strand Colour Codes:

Computer Scien Information Technol Digital Lacy Online ty
Skills

Year	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2	
Group							
EYFS	Technolog	gy & Me	Talking Te	echnology	Nursery Rhyme Coding		
	The children will get to experie equipment, including digital can microscopes and so	neras, iPads, video cameras,	The children will learn how to take photos, record video and record audio.		Using the theme of traditional tales, this activity develops computational thinking such as sequencing and promotes core technology skills.		
				with technology <mark>(IT)</mark>			
		echnology in the world around	I can u	ise a camera <mark>(IT)</mark>	l can explain sequencing <mark>(CS).</mark>		
	I can do the basics with	ne. <mark>(DL)</mark>			I can explain sequencing (CS). I can give instructions to a programable toy (CS).		
Online Safety (One day per term)	Smartie the Penguin (Story A) (os)		Online Safety Day <mark>(os)</mark>		Smartie the Penguin (Story B) (os)		
Year 1	Modern Tales What is a		Animate	Mini Beasts	My Friend the	Drawing Maths	
	Using the vehicle of the children's stories, the children will learn to navigate the rules of online safety and communication. The children will make animations based on an online situation they may encounter.	computer? Children will learn about the different parts of a computer and iPad. They will learn new skills, tips and tricks. The children will be able to see	Chatterpix <u>Curriculum Link</u> Children will learn the basic skills of stop frame animation and produce a simple animated movie.	Use technology to classify minibeasts. gathering and presenting information in a nature documentary. I can do the basics with technology [MS]	Robot Children will learn all about computational thinking and problem solving with a variety of unplugged activities and online coding games.	The children will master an art app while exploring shape, numbers and problem solving. Art and maths.	



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	I can do the basics with technology MS I can recognise the ways we use technology in our classroom, my home and community (DL) I can use a search engine (DL) I understand something online may upset and know where to find help it anything does (DL) (OS) I can communicate politely via the internet (DL) (OS)	the inner workings of a computer and build their own. I can use logical reasoning to predict the outcome of simple programs (CS) I can recognise the ways we use technology in our classroom, my home and community (DL) I can use a search engine (DL)	I can do the basics with technology [MS] I can use technology to create and present my ideas [IT] I can organise and store my digital work [IT].	I can take a good quality photograph and video on an iPad/digital camera MS I can use technology to create and present my ideas (IT). I can collect and sort data (IT)	I can follow a simple algorithm and create a simple sequence algorithm using symbols that solve a problem (CS) I can create algorithms that can be turned into a program using a robot or digital device (CS). I can independently debug simple sequence errors in a program (CS)	I can use technology to create and present my ideas (IT) I can organise and store my digital work (IT)
Online Safety (One day per term)	Modern T	ales <mark>(os)</mark>	Online Safe	ety Day <mark>(os)</mark>		
Year 2	Online buddies This activity will explore what friendship means online. The children will learn about the do's and don'ts of communicating over the internet. I can give examples of how technology is used to communicate beyond school (DL) I can use online services to communicate safely (DL) (OS) I understand that once something it posted you lose control if it and know how to get help if I need to (DL) (OS) I can give examples of online bullying behaviour, I understand the impact it may have and I know where to go for support (DL) (OS)	Making Games Using Scratch the children will create a hero versus villain game. They will create sprites and learn the basics of using Scratch coding. I can save, share and retrieve my digital work MS I can create a simple repeat loop (CS) I can create a simple game program (CS) I can predict the outcome of a sequence of blocks in Scratch (CS)	Typing Curriculum Link The children will learn to use presentation software and develop their keyboard skills. I can save, share and retrieve my digital work MS I can use technology to organise and present my ideas MS I can create with technology. E.g. Video, animation, 3D (IT) I can collect and record data purposefully (IT)	Story Land To create illustrations for their story and record them self-reading it in order to create an audiobook to publish online. I can save, share and retrieve my digital work [MS] I can use technology to organise and present my ideas [MS] I can create with technology. E.g. Video, animation, 3D [IT]	Code a Story To write a basic story with illustrations, animated story using visual coding. The activity will introduce new concepts such as conditional language, repeat loops and debugging. I can save, share and retrieve my digital work [MS] I can plan out an algorithm with a sequence of commands to carry out specific tasks [CS] I can identify 'bugs' in computer programs and use the term debug in context [CS] I can predict the outcome of a sequence of blocks in Scratch (CS)	Maths Madness The children take part in a maths scavenger hunt and then create their own version by creating QR codes and maths videos. I can save, share and retrieve my digital work [MS] I can use technology to organise and present my ideas [MS] I can create with technology. E.g. Video, animation, 3D [IT] I can collect and record data purposefully [IT]



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Online Safety (One day per term)	Online Bud	ldies <mark>(os)</mark>	Online Safety Day (os)			
Year 3	Mastering the art of advanced internet searching. They will learn new tricks to improve their searches while they try to solve puzzles and challenges. I know how to use the internet (DL) I can analyse information and make accurate searches (DL) I can use advanced search tools (IT) I can explain how the internet works (CS) I can explain how a search engine works (CS)	Using some of Scratch Jr's more advanced coding blocks to create their own interactive dancing robot game. The children will learn the important skills of critical thinking, problem solving and debugging. I can plan, create and debug programs (CS) I can use decomposition to help me solve computing problems (CS) I can work with various forms of input and output (CS) I can use logical reasoning to predict and correct errors in algorithms and programs (CS) I can troubleshoot when something doesn't appear to be working with my device	Rainforests Explore rainforests through new Virtual Reality (VR) apps. They will also use Augmented Reality (AR) to create their own learning games for younger children to play. I can improve the quality and presentation of my work (IT) I can create with technology. E.g. Video, animation, 3D (IT) I can troubleshoot when something doesn't appear to be working with my device (MS) I can discuss different types of digital content and file types (MS)	Be Digitally Awesome Ensuring the children possess core skills with word processing, spreadsheet and presentation apps. I can improve the quality and presentation of my work IT I can create with technology. E.g. Video, animation, 3D IT I can use advanced search tools IT I can troubleshoot when something doesn't appear to be working with my device IMS I can discuss different types of digital content and file types IMS	Programming Robots In this unit the children explore the history of robots and then get to program a robot around a maze. I can plan, create and debug programs (CS) I can use sequence, selection, repetition and variables in programs (CS) I can work with various forms of input and output (CS) I can use logical reasoning to predict and correct errors in algorithms and programs (CS) I can troubleshoot when something doesn't appear to be working with my device	T-shirt Designer The children will become illustrators and design their own t-shirts. I can improve the quality and presentation of my work (IT) I can create with technology. E.g. Video, animation, 3D (IT) I can troubleshoot when something doesn't appear to be working with my device (MS) I can discuss different types of digital content and file types (MS)
Online Safety (One day per term)	Online Detectives (os)		Online Safety Day (os)			
Year 4	Fake or Real Learn how they can sort the truth from the lies. Making videos to show what they have found out.	Hour of code Sign up for Hour of Code and work through various challenges. The class can also choose to take part in global coding events.	Dinosaurs Children will make their own summer blockbuster. They will learn all about filming techniques and storytelling skills.	Endangered Animals Learn online research skills, create illustrations and posters. Make a class film about how making small changes can help	Games Designer All about the career of games designer. They will play games, write reviews and then design and prototype their own game. They will pitch their game idea to the class.	Minecraft Challenges Who is the best at building? The children take part in a series of maths/Minecraft challenges.



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I can evaluate information presented to me to make informed choices about what is Fake News (DL)
I understand that people may

have a different online identity to that in real life and am able to interact with others. (Self Image)

I can understand the different methods of communication using the internet (CS)
I can use a search engine and I am aware that not everything I read online is correct. (Online Bullying) (CS) (DL) (OS)

I can solve an open-ended problem by breaking it up into smaller parts (CS)
I can design and write a program for a given purpose including specific programming features (CS)
I can test existing programs to see how they could be improved (CS)

I can improve the quality and presentation of my work using editing and formatting techniques (IT)
I can create with technology. E.g. Video, animation, 3D (IT)
I can explain common file types (MS)

e.g. air pollution and turning off your engines.

I can improve the quality and presentation of my work using editing and formatting techniques (IT)
I can create with technology. E.g. Video, animation, 3D (IT)
I can collaborate online to create digital content (DL)
I can explain common file types (MS)

I can design an algorithm to simulate a real-life situation

I can solve an open-ended problem by breaking it up into smaller parts (CS)
I can design and write a program for a given purpose including specific programming features (CS)
I can test existing programs to see how they could be improved (CS)
I can label the different types of input connections on devices (MS)

I can create with technology. E.g. Video, animation, 3D (IT)
I can collaborate online to create digital content (DL)

Online Safety (One day per term)

Real or Fake (os)

Online Safety Day (os)

Year 5

YouTuber

Learn about what that means, the positives and negatives, safety tips and they will create their own video blog (vlog).

I can use a search engine and I am aware that not everything I read online is correct (IT)
I can film and produce a short video (MS)
I can create a subject specific vlog and understand the potential risks of sharing content online (DL)
I can collaborate to develop &

improve work (DL)

Web Designer

Learn about the history of the web, basic HTML, how to create their own graphics and how to publish their own website.

I can explore networks and internet traffic (CS)
I can create a basic web page using HTML (CS)
I can record and produce a podcast / audio clips (IT)
I can use unfamiliar technology to create content

I can improve the quality and presentation of my work (IT)

Making AR Games

The world of Augmented Reality (AR). They will then be set the task of designing and creating a game that uses AR.

I can use unfamiliar technology to create content [IT]
I can improve the quality and presentation of my work [IT]
I can make a QR codes that links to my own work

(MS)

Girls v Boys

Series of creative STEM challenges. They will tackle code, maths, art, DT and lots of problem solving.

I can use unfamiliar technology to create content (IT)
I can decompose a problem, design an algorithm and use this to write a program (CS)
I can use logical reasoning to detect & debug a program (CS)

Binary Messages

Introduces binary code. It explains what binary code is and how it is used. The children then challenge each other to solve word problems by using binary code.

I can explore networks and internet traffic (CS)
I can translate binary numbers to decimal (CS)
I can create a basic web page using HTML (CS)
I can use a spreadsheet to collect and record data (IT)

Podcaster

Produce your own podcast and share your work with audiences over the internet to promote and celebrate.

I can record and produce a podcast / audio clips (IT)
I can use unfamiliar technology to create content (IT)
I can improve the quality and presentation of my work (IT)
I can use a spreadsheet to

I can use a spreadsheet to collect and record data IT I can use a search engine and I am aware that not



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		I can use a search engine and I am aware that not everything I read online is correct (IT) I can create a subject specific vlog and understand the potential risks of sharing content online (DL) I can collaborate to develop & improve work (DL) I can make a QR codes that links to my own work (MS) I can film and produce a short video (MS)	I can film and produce a short video [MS]	I can film and produce a short video [MS]	I can access school email and can send emails to classmates and teacher (DL) I can make a QR codes that links to my own work (MS)	everything I read online is correct (IT)
Online Safety (One day per term)	YouTub	er <mark>(os)</mark>	Online Safe	ety Day <mark>(os)</mark>		
Year 6	Online Safety	Chicken Run –	Quiz Show Host	Money	Coding Playground	Maths Solve IT
	Online safety ambassadors. Modern day dilemmas -dilemmas that children face every day online. Produce a series of "what to do" videos to explain how to cope online I can collaborate to create digital content [MS] I can create a consistent design for my presentation, and present to others [MS] I can use a search engine and I am aware that not everything I read online is correct and that other people may be attempting to influence my opinions [IT] I can create a digital storyboard to plan a project or investigation	Crossy Roads Create their own version of the popular app Crossy Roads using visual coding. They will learn about decomposition and how to evaluate games. I can design, plan & create a complex programs (CS) I can test, debug and modify a program to improve it (CS) I can use logical reasoning to detect and correct errors in algorithms and programs (CS)	The children will research questions and create quizzes using a variety of online apps. Present their quiz show to the class. I can create and combine a range of media in order to produce digital content (IT) I can improve the quality and presentation of my work using editing and formatting techniques (IT) I can create a digital storyboard to plan a project or investigation (IT) I can collaborate to create digital content (MS)	Explore money, stocks and shares through a series of challenges and games. Creating a spreadsheet and digital book to explain the importance of understanding how money works I can create and combine a range of media in order to produce digital content (IT) I can improve the quality and presentation of my work using editing and formatting techniques (IT) I can create a digital storyboard to plan a project or investigation (IT) I can create a consistent design for my	Children will be introduced to text-based programming and how apps are made. They will complete self-paced programming challenges. Explore connecting programable toys and drones. I can test, debug and modify a program to improve it (CS) I can write a program using a text-based programming language (CS) I can use logical reasoning to detect and correct errors in algorithms and programs (CS)	Produce their own digital guide to being a maths genius. Making videos and animations showing how to solve various maths problems. This is an opportunity to connect with other schools. I can create and combine a range of media in order to produce digital content [IT] I can improve the quality and presentation of my work using editing and formatting techniques [IT] I can create a digital storyboard to plan a project or investigation [IT] I can collaborate to create digital content [MS]

design for my





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	I can explain how to protect my computer or device from harm on the Internet (DL) I understand the need for copyright and the consequences of ignoring it (DL) I understand the impact technology can have on my health, well being and lifestyle (DL)			presentation, and present to others (MS)	I can create a consistent design for my presentation, and present to others MS
Online Safety (One day per term)	Online Safety D	Dilemmas <mark>(os)</mark>	Online Safe	ety Day <mark>(os)</mark>	





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Curriculum Coverage Overview

	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Mandatory Skills							
Computational Thinking							
Controlling Robots							
STEM Activities							
Programming / Coding							
IT Concepts / Hardware / Networks							
Game Design							
Typing / Word Processing / Presenting							
Digital Storytelling							
Multimedia / Creative Apps							
Data Handling							
2D & 3D Modelling							
Animation							
Photography / Film Making							
Digital Literacy (Websites / Searching / Communication)							
Online Safety							