



Riverview CofE Primary and Nursery School

Computing Curriculum Overview



Early Learning Goals linked to computing

Understanding the World

Technology: children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes.

Key Stage 1 NC objectives

Pupils should be taught to:

- understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions
- create and debug simple programs
- use logical reasoning to predict the behaviour of simple programs
- use technology purposefully to create, organise, store, manipulate and retrieve digital content
- recognise common uses of information technology beyond school
- use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.

Key Stage 2 NC objectives

Pupils should be taught to:

- design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
- use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
- understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration
- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information
- use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

At Riverview, the computing curriculum has been split into **5 key areas**:

- *Computers and networks*
- *Multimedia*
- *Handling data*
- *Programming/coding*
- *Online safety*

Online Safety will be taught through online safety days each half term so that knowledge and skills are reviewed and updated regularly rather than in one unit. All other units will be covered in the following terms:

Autumn		Spring		Summer	
Computers and networks		Programming/coding		Handling data	
Multimedia		Multimedia		Programming/coding	
<u>Online safety day 1</u> Managing online information		<u>Online safety day 1</u> Safer Internet Day		<u>Online safety day 1</u> Health, wellbeing and lifestyle Self-image and Identity	
<u>Online safety day 2</u> Privacy and security Copyright and ownership		<u>Online safety day 2</u> Online relationships Online reputation		<u>Online safety day 2</u> To be planned by class teacher – address issues which have come into the class or revisit topics chn need.	
Computers, internet and networks					
Year group	Skills		Knowledge		hardware/software used
EYFS	<ul style="list-style-type: none">• Use different digital devices (camera, microphone, phone, music player)• Use a mouse, touchscreen or appropriate access device to target and select options on screen• Add text to a document using the keyboard (where appropriate)		<p>Recognise:</p> <ul style="list-style-type: none">• a range of digital devices• the basic parts of a computer, e.g. mouse, screen, keyboard• key parts of a keyboard, e.g. spacebar, numbers and letters• Understand that information and media can be stored on a digital device, e.g. they ask to view a photo that has been taken on a tablet <p>Begin to:</p>		tablets, cameras, microphones, laptops

		<ul style="list-style-type: none"> recognise how technology is used in different jobs e.g. walkie talkies, phones, computers know how technology helps us with our learning 	
Year 1	<ul style="list-style-type: none"> Use a simple password when logging on, where relevant Recognise and use a range of input devices with some support, e.g. mouse, keyboard, microphone, touchscreen use websites to find information (with some support) 	<ul style="list-style-type: none"> Name a range of digital devices Explain what the basic parts of a computer are used for, e.g. mouse, screen, keyboard begin to identify some of the benefits of using technology Understand that you can find information from a website recognise the ways we use technology in our classroom recognise the ways that technology is used in my home and community 	tablets, microphones, cameras, laptop
Year 2	<ul style="list-style-type: none"> Log on to the school network using their username and password Open and save a files Recognise and independently use a range of input devices, e.g. mouse, keyboard, microphone, touchscreen Recognise and use a range of output devices, e.g. printer, speakers, monitor/screen Know where and how to save and open work 	<ul style="list-style-type: none"> Recognise that a range of devices contain computers, e.g. washing machine, car, laptop Understand that you can share digital content Understand that all devices, programs, websites, apps and games are designed and manufactured by real people to fulfil specific tasks Understand that you can use a search engine to find information using keyword searches 	laptop, tablets, microphone, camera

	<ul style="list-style-type: none"> • use websites to find information 		
Year 3	<ul style="list-style-type: none"> • Open and save a file to a suitable folder • Use right-click, left-click and double-click appropriately on a mouse • Know how to copy text and images into another document • Remember an individual password • use different websites to find out information • Use a search engine to find information using keyword searches 	<ul style="list-style-type: none"> • Understand that school computers are connected (if relevant) • understand that the internet is a network of computers that spreads all over the world • know that websites are written for different purposes • understands that a search engine is a piece of software that is designed to search for information on the World Wide Web 	laptop, tablet,
Year 4	<ul style="list-style-type: none"> • Use suitable file names when saving work • Delete, move and copy files • Use shortcuts to cut, copy and paste between documents • Use a search engine to find specific information • find relevant and useful information on a given website 	<ul style="list-style-type: none"> • Understand you can organise files using folders • talk about some of the pieces of hardware that can be used to create a computer network • give some facts about some services available on the internet e.g. blog services, websites, email, cloud-based software • know that different search engines will find different websites and list them in a different order because they use different search algorithms 	laptop, tablet
Year 5	<ul style="list-style-type: none"> • Create and use a strong password where appropriate • Organise files effectively using folders 	<ul style="list-style-type: none"> • explain the purpose of some services available on the internet • know how a search engine works 	laptop, tablet

	<ul style="list-style-type: none"> • Save learning onto a USB stick • search using multiple search criteria to make my web search more effective • evaluate digital content to decide whether it provides me with useful information 		
Year 6	<ul style="list-style-type: none"> • Organise files effectively using folders • identify advantages and disadvantages of using the internet to communicate, collaborate and create and save digital outcomes • search effectively to find appropriate and useful digital content for my purpose • use a range of internet services confidently and effectively to communicate and collaborate with other people 	<ul style="list-style-type: none"> • Understand that different devices can have different operating systems, and can give examples, e.g. Windows, iOS, Android0.6 • Understand the main functions of an operating system • Recognise common file types and extensions (e.g .pdf .doc .jpeg .mp4 .ppt) 	laptop, tablet

Programming/Coding			
Year group	Skills	Knowledge	hardware/software used
EYFS	<ul style="list-style-type: none"> • follow simple instructions • give simple instructions • press the correct buttons on a device/beebot to make it move forwards and backwards 	<ul style="list-style-type: none"> • understand cause and effect e.g. the result of giving an instruction 	remote control toys, beebots

Year 1	<ul style="list-style-type: none"> • give instructions to my friend and follow their instructions to move around • describe what happens when I press buttons on a beebot/device • press the buttons in the correct order to make a beebot/device do what I want • predict what will happen for a short sequence of instructions • use software/apps to create movement and patterns on a screen • spot mistakes in an algorithm 	<p>Understand and use the terms: control, instructions, predict, order</p> <ul style="list-style-type: none"> • Understand that we control computers by giving them instructions 	beebots, beebot software
Year 2	<ul style="list-style-type: none"> • give instructions to a peer (forwards, backwards, turn, etc.) and physically follow their instructions • program a device (beebot/probot) to do a particular task • look at an algorithm and explain what will happen • Debug an error in a simple algorithm or program e.g. for a floor robot • use an on-screen program (Scratch Jr) to make objects move or complete a specific task 	<p>Understand and use the terms: control, predict, order, algorithm, debug,</p> <ul style="list-style-type: none"> • Understand that computers have no intelligence and we have to program them to do things • Understand that the order of instructions in an algorithm is important • Understand that instructions in an algorithm need to be clear and unambiguous 	beebots/beebot software/ probots/scratch junior
Year 3	<ul style="list-style-type: none"> • Recognise and debug errors in code 	<p>Understand and use the terms: algorithm, predict, order, debug, repeat, sequence,</p>	probots/probot software/scratch

	<ul style="list-style-type: none"> • program a device (or use an on-screen program) to complete a given task • Use repetition to make programs more efficient and simplify them 	<ul style="list-style-type: none"> • know how to login into Scratch, access theirs and others work and how to connect coding blocks • Know how to navigate Scratch and begin to recognise where to find coding blocks based on categories • Use and understand diagrams to represent an algorithm, e.g. a flowchart 	
Year 4	<ul style="list-style-type: none"> • Simplify a program by accurately using repeat, If then, and forever loops • Recognise and debug errors in code • Create a program using inputs to control what happens 	<p>Understand and use the terms: algorithm, predict, order, debug, repeat, sequence, inputs, outputs</p> <ul style="list-style-type: none"> • Understand that we can decompose a problem into smaller steps to make it simpler • Know where to find different coding blocks and access these quickly 	probots/probot software/scratch
Year 5	<ul style="list-style-type: none"> • Predict what will happen in a program or algorithm (e.g. change of output) when the input changes (e.g. sensor, data or event) • use a variable within my coding (e.g. scoreboards) • Use two-way selection, i.e. if... then... else... • use logical reasoning to detect and debug mistakes in a problem • use logical thinking, imagination and creativity to create a program 	<p>Understand and use the terms: algorithm, predict, order, debug, repeat, sequence, inputs, outputs, variables, logical</p> <ul style="list-style-type: none"> • know how to decompose a problem into smaller parts to aid writing a program • Understand that different solutions exist for the same problem • Understand different variables in a code (e.g. timers, scoreboards) 	scratch/Go control (microbits)

Year 6	<ul style="list-style-type: none"> decompose a problem into smaller steps Create simple variables, e.g. to keep score or remove lives in a game Combine a variable with relational operators (< = >) to determine when a program changes, e.g. if score > 5, say "well done") Design a physical computing system that uses sensors, e.g. using a flow chart use different inputs to control a device or onscreen action and predict what might happen use logical reasoning to detect and correct errors in algorithms and programs 	<p>Understand and use the terms: algorithm, predict, order, debug, repeat, sequence, inputs, outputs, decompose, sensors</p> <ul style="list-style-type: none"> understand and explain each of the steps in my algorithm recognise when a variable would be appropriate to achieve a desired output evaluate the effectiveness of efficiency of my algorithm while I continually test the programming of that algorithm Understand the difference between and use if... then... and if... then... else... statements 	scratch/ Go control (microbits)
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Multimedia – text, sounds, images			
Dance mat - https://www.bbc.co.uk/bitesize/topics/zf2f9j6/articles/z3c6tfr			
Year group	Skills	Knowledge	hardware/software used
EYFS	<ul style="list-style-type: none"> Use technology to explore and access digital content Operate a digital device with support to fulfil a task Create simple digital content, e.g. digital art Choose a digital device from a selection to complete a specific task 	<ul style="list-style-type: none"> Understand how to use a keyboard to type Understand how technology is used in real life to create pictures, writing and sounds. 	

Year 1	<ul style="list-style-type: none"> • Select media (e.g. images, video, sound) to present information on a topic • Select basic options to change the appearance of digital content – colour, size, • be creative with different technology tools. • Combine media with support to present information, e.g. text and images • use the keyboard or a word bank on a device to enter text. 	<ul style="list-style-type: none"> • Understand how to type and the function of following keys on a keyboard: space, backspace, enter • know how to save information and that it is stored on the computer. • Understand that you can edit and change digital content 	Word, paint
Year 2	<ul style="list-style-type: none"> • Plan out digital content • Present ideas and information by combining media independently – pictures, text, clipart, shapes, sounds • edit digital content to achieve a specific effect • make improvements to my learning <p>Font – bold, underline, size, colour, style Insert shapes, pictures/clipart PPT – animations, slide transitions</p>	<ul style="list-style-type: none"> • Understand the function of following keys on a keyboard: space, backspace, enter, delete, shift (to type capital letters and symbols ? !) • Understand how to use the mouse to type on different places on the page • Understand and talk about what makes digital content good or bad 	Word, PowerPoint, paint
Year 3	<ul style="list-style-type: none"> • Apply knowledge of keyboard functions to their work. • Type using both hands • Evaluate existing and their own digital content • Design and create digital content for a specific purpose <p>Layout – portrait, landscape</p>	<ul style="list-style-type: none"> • Understand the function of following keys on a keyboard: space, backspace, enter, delete, shift (to type capital letters and symbols ? !), arrow keys (to navigate text), home, end • Begin to understand the importance of making choices for the audience of a piece of work 	Word, PowerPoint, Publisher, photo editing software

	Font – highlight, align (left, right, centre) bullet points Insert text box – fill and line colour, shapes – fill and line colour		
Year 4	<ul style="list-style-type: none"> • Apply knowledge of keyboard functions to their work. • Type using all fingers – both hands • Collect, organise and present information effectively using a range of media • Use a range of tools to edit and enhance media for a particular effect • Edit existing media to make new content with an awareness of copyright • Edit digital content to improve it according to feedback • Confidently use a keyboard and make use of spell checking Layout - margins Insert table – fill and line colour, hyperlinks Insert shapes – fill, order and group Insert sound, images, videos PPT – animations, slide transitions	<ul style="list-style-type: none"> • Understand the function of following keys on a keyboard: space, backspace, enter, delete, shift (to type capital letters and symbols ? !), arrow keys (to navigate text), home, end, print screen, shortcuts: copy – Ctrl + C paste – Ctrl + V • Beginning to understand copyright laws - understand how to check who owns photos, text or clip art. • Understand how to create a hyperlink • Understand how choices need to be made for a specific audience and purpose of a piece of work. • Know how to use tool bars in a range of programs. 	Word, PowerPoint, Publisher, Excel, photo editing software
Year 5	<ul style="list-style-type: none"> • Apply knowledge of keyboard functions to their work. • Use the keyboard confidently (with two hands) to type at a suitable pace 	<ul style="list-style-type: none"> • Understand the function of following keys on a keyboard: space, backspace, enter, delete, shift (to type capital letters and symbols ? !), arrow keys (to navigate text), home, end, print screen, shortcuts: copy – Ctrl + C paste – Ctrl + V, cut – Ctrl + X, select all – Ctrl + A 	Word, PowerPoint, Publisher, Excel, audacity, photo editing software, movie software

	<ul style="list-style-type: none"> • use appropriate hardware and software to fulfil a specific task • select, use and combine the appropriate tools to create impactful work • Recognise the audience when designing and creating digital content • Include hyperlinks in my learning where appropriate <p>Wrap text View options – 100%, whole page, fit width Format painter Insert header and footer Insert symbols PPT – transition timings</p>	<ul style="list-style-type: none"> • Identify different software and understand what these program are used for • Understand how to import media across into and across applications. • Understand the benefits of using technology to collaborate with others • Understand copyright laws and what they need to do to abide by them 	
Year 6	<ul style="list-style-type: none"> • Use the keyboard (with two hands) confidently to type at a suitable pace • Apply a wide range of work processing skills and use keyboard functions independently • Choose and use appropriate hardware and software to fulfil a specific task • choose , use and combine a wide range of media to complete a task • Identify success criteria for creating digital content for a given purpose and audience • Evaluate their own content against success criteria and make improvements accordingly 	<ul style="list-style-type: none"> • talk about audience, atmosphere and structure when planning a particular outcome 	<p>Word, PowerPoint, Publisher, Excel, audacity, photo editing software, movie software</p>

Handling Data

<https://www.stem.org.uk/system/files/elibrary-resources/2016/11/DatabasesUnplugged-Version2.pdf>

Year group	Skills	Knowledge	hardware/software used
EYFS	<ul style="list-style-type: none"> Sort familiar objects into 1 or more categories Answer basic questions about information displayed in images, e.g. more or less Collect simple data (e.g. likes/dislikes) on a topic 	<ul style="list-style-type: none"> Understand differences between different data: text, image, video and audio content 	
Year 1	<ul style="list-style-type: none"> sort different kinds of information. add information to a pictograph and talk about what I have found out. 	<ul style="list-style-type: none"> Recognise charts, tables or branching databases and understand why we use them Explain information shown in a simple chart, pictogram 	https://www.topmarks.co.uk/Interactive.aspx?cat=18
Year 2	<ul style="list-style-type: none"> make and save a chart or graph using the data I collect. talk about the data that is shown in my chart or graph. With support - Create a branching database Find an error in a branching database. Answer questions using my data 	<ul style="list-style-type: none"> know about the different ways I use technology to collect information, including a camera, microscope or sound recorder. start to understand a branching database. tell you what kind of information I could use to help me investigate a question 	http://code-it.co.uk/databases-2/ https://www.topmarks.co.uk/Interactive.aspx?cat=18 Twinkl – branching databases http://www.cleo.net.uk/resources/displayframe.php?src=841/files/Bird_Box/branchdb.html

Year 3	<ul style="list-style-type: none"> • Search ready-made databases to answer questions • Add data to a database • Independently create a branching database 	<ul style="list-style-type: none"> • Know when databases are useful and give suggestions as to how else they could be used. <p>Examples of databases in real life</p> <ul style="list-style-type: none"> • Mobile phone address book • School student database • YouTube • Library database of books • Sky TV programme planner • Netflix database of films • Email contact list 	https://www.bbc.co.uk/bitesize/topics/zf2f9j6/articles/z8yk87h https://www.topmarks.co.uk/Interactive.aspx?cat=18 https://www.mathsisfun.com/data/data-graph.php Excel
Year 4	<ul style="list-style-type: none"> • Organise data in different ways – table, graphs • Plan, create and search a database to answer a question. (Design a questionnaire and collect a range of data on a theme) • Recognise inaccuracies in data • Manipulate data to display meaningful results. E.g. how to create graphs 	<p>I know how to accurately input data into a database and why this is useful.</p> <p>Examples of databases in real life</p> <ul style="list-style-type: none"> • Mobile phone address book • School student database • YouTube • Library database of books • Sky TV programme planner • Netflix database of films • Email contact list 	https://www.bbc.co.uk/bitesize/topics/zf2f9j6/articles/z8yk87h https://nces.ed.gov/ipeds/datacenter/ipedsdata/datawarehouse/ipedsdatacenter/createagraph/default.aspx?ID=a5d4e28033484a3e9609d63f41f74a09 https://www.mathsisfun.com/data/data-graph.php Excel
Year 5	<ul style="list-style-type: none"> • use a spreadsheet and database to collect and record data. 	<ul style="list-style-type: none"> • I can talk about mistakes in data and suggest how it could be checked. 	Excel

	<ul style="list-style-type: none"> choose an appropriate method to help the collection of data. search a database using different operators. (and or sort) use formulas to calculate (sum = + - * /) 	Examples of databases in real life <ul style="list-style-type: none"> Mobile phone address book School student database YouTube Library database of books Sky TV programme planner Netflix database of films Email contact list 	https://nces.ed.gov/nceskids/createagraph/default.aspx?ID=a5d4e28033484a3e9609d63f41f74a09 https://www.mathsisfun.com/data/data-graph.php
Year 6	<ul style="list-style-type: none"> plan what I need to do to complete an investigation select the most effective tool to collect data for my investigation Use a range of skills to complete my investigation independently: <ul style="list-style-type: none"> - Use formulas to help me complete a task efficiently. - check data I collect for accuracy and plausibility - present data clearly - interpret the data I collect 	<ul style="list-style-type: none"> I know how to present data in an appropriate way. Examples of databases in real life <ul style="list-style-type: none"> Mobile phone address book School student database YouTube Library database of books Sky TV programme planner Netflix database of films Email contact list 	Excel https://nces.ed.gov/nceskids/createagraph/default.aspx?ID=a5d4e28033484a3e9609d63f41f74a09 https://www.mathsisfun.com/data/data-graph.php

We use the Education for a Connected World document to support our teaching of Online Safety, which is divided into the following units:



Self-image and identity

This strand explores the differences between online and offline identity beginning with self-awareness, shaping online identities and how media impacts on gender and stereotypes. It identifies effective routes for reporting and support and explores the impact of online technologies on self-image and behaviour.



Online relationships

This strand explores how technology shapes communication styles and identifies strategies for positive relationships in online communities. It offers opportunities to discuss relationships and behaviours that may lead to harm and how positive online interaction can empower and amplify voice.



Online reputation

This strand explores the concept of reputation and how others may use online information to make judgements. It offers opportunities to develop strategies to manage personal digital content effectively and capitalise on technology's capacity to create effective positive profiles.



Online bullying

This strand explores bullying and other online aggression and how technology impacts those issues. It offers strategies for effective reporting and intervention and considers how bullying and other aggressive behaviour relates to legislation.



Managing online information

This strand explores how online information is found, viewed and interpreted. It offers strategies for effective searching, critical evaluation and ethical publishing.



Health, well-being and lifestyle

This strand explores the impact that technology has on health, well-being and lifestyle. It also includes understanding negative behaviours and issues amplified and sustained by online technologies and the strategies for dealing with them.



Privacy and security

This strand explores how personal online information can be used, stored, processed and shared. It offers both behavioural and technical strategies to limit impact on privacy and protect data and systems against compromise.



Copyright and ownership

This strand explores the concept of ownership of online content. It explores strategies for protecting personal content and crediting the rights of others as well as addressing potential consequences of illegal access, download and distribution.

Resources linked to these units can be found on the Project EVOLVE website:

<https://projectevolve.co.uk/toolkit/>

AUTUMN TERM		
MANAGING ONLINE INFORMATION		
EYFS	YEAR 1	YEAR 2

I can talk about how I can use the internet to find things out.	I can use the internet to find things out.	I can use keywords in search engines.
I can identify devices I could use to access information on the internet.	I can use simple keywords in search engines .	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).
I can give simple examples of how to find information (e.g. search engine, voice activated searching).	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.	I can explain what voice activated searching is and how it might be used (e.g. Alexa, Google Now, Siri).
		I can explain the difference between things that are imaginary, 'made up' or 'make believe' and things that are 'true' or 'real'.
		I can explain why some information I find online may not be true.

YEAR 3	YEAR 4	YEAR 5	YEAR 6
I can use key phrases in search engines.	I can analyse information and differentiate between 'opinions', 'beliefs' and 'facts'. I understand what criteria have to be met before something is a 'fact'.	I can use different search technologies.	I can use search technologies effectively.
I can explain what autocomplete is and how to choose the best suggestion.		I can evaluate digital content and can explain how I make choices from search results.	I can explain how search engines work and how results are selected and ranked.
I can explain how the internet can be used to sell and buy things.	I can describe how I can search for information within a wide group of technologies (e.g. social media, image sites, video sites).	I can explain key concepts including: data, information, fact, opinion belief, true, false, valid, reliable and evidence.	I can demonstrate the strategies I would apply to be discerning in evaluating digital content.
I can explain the difference between a 'belief', an 'opinion' and a 'fact'.	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.	I understand the difference between online mis-information (inaccurate information distributed by accident) and dis-information (inaccurate information deliberately distributed and intended to mislead).	I can describe how some online information can be opinion and can offer examples.
	I can explain that some people I 'meet online' (e.g. through social media) may be computer programmes pretending to be real people.	I can explain what is meant by 'being sceptical'. I can give examples of when and why it is important to be 'sceptical'.	I can explain how and why some people may present 'opinions' as 'facts'.
	I can explain why lots of people sharing the same opinions or beliefs online does not make those opinions or beliefs true.	I can explain what is meant by a ' hoax '. I can explain why I need to think carefully before I forward anything online.	I can define the terms 'influence', 'manipulation' and 'persuasion' and explain how I might encounter these online (e.g. advertising and 'ad targeting').
		I can explain why some information I find online may not be honest, accurate or legal.	I can demonstrate strategies to enable me to analyse and evaluate the validity of 'facts' and I can explain why using these strategies are important.
		I can 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).	I can identify, flag and report inappropriate content.

COPYRIGHT AND OWNERSHIP

EYFS	YEAR 1	YEAR 2
I know that work I create belongs to me.	I can explain why work I create using technology belongs to me.	I can describe why other people's work belongs to them.
I can name my work so that others know it belongs to me.	I can say why it belongs to me (e.g. 'it is my idea' or 'I designed it').	I can recognise that content on the internet may belong to other people.
	I can save my work so that others know it belongs to me (e.g. filename, name on content).	

YEAR 3	YEAR 4	YEAR 5	YEAR 6
I can explain why copying someone else's work from the internet without permission can cause problems.	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 assess and justify when it is acceptable to use the work of others.	I can demonstrate the use of search tools to find and access online content which can be reused by others.
I can give examples of what those problems might be.	I can give some simple examples.	I can give examples of content that is permitted to be reused.	I can demonstrate how to make references to and acknowledge sources I have used from the internet.

PRIVACY AND SECURITY

EYFS	YEAR 1	YEAR 2
I can identify some simple examples of my personal information (e.g. name, address, birthday, age, location).	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).	I can describe how online information about me could be seen by others.
I can describe the people I can trust and can share this with; I can explain why I can trust them.	I can explain why I should always ask a trusted adult before I share any information about myself online.	I can describe and explain some rules for keeping my information private.
	I can explain how passwords can be used to protect information and devices.	I can explain what passwords are and can use passwords for my accounts and devices.

YEAR 3	YEAR 4	YEAR 5	YEAR 6
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.	I can explain what a strong password is.	I can create and use strong and secure passwords.	I use different passwords for a range of online services.
I understand and can give reasons why passwords are important.	I can describe strategies for keeping my personal information private, depending on context.	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.	I can describe effective strategies for managing those passwords (e.g. password managers , acronyms, stories).
I can describe simple strategies for creating and keeping passwords private.	I can explain that others online can pretend to be me or other people, including my friends.	I can explain how and why some apps may request or take payment for additional content (e.g. in-app purchases) and explain why I should seek permission from a trusted adult before purchasing.	I know what to do if my password is lost or stolen.
I can describe how connected devices can collect and share my information with others.	I can suggest reasons why they might do this.		I can explain what app permissions are and can give some examples from the technology or services I use.
	I can explain how internet use can be monitored.		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; I can describe strategies to help me identify such content (e.g. scams , phishing).

ONLINE BULLYING – These objectives are covered in the Relationship unit of PSHE

EYFS		YEAR 1		YEAR 2			
YEAR 3		YEAR 4		YEAR 5		YEAR 6	

I can describe ways that some people can be unkind online.	I can describe how to behave online in ways that do not upset others and can give examples.	I can give examples of bullying behaviour and how it could look online.
I can offer examples of how this can make others feel.		I understand how bullying can make someone feel.
		I can talk about how someone can/would get help about being bullied online or offline.

I can explain what bullying is and can describe how people may bully others.	I can identify some online technologies where bullying might take place.	I can recognise when someone is upset, hurt or angry online.	I can describe how to capture bullying content as evidence (e.g screen-grab , URL , profile) to share with others who can help me.
I can describe rules about how to behave online and how I follow them.	I can describe ways people can be bullied through a range of media (e.g. image, video, text, chat).	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.	I can identify a range of ways to report concerns both in school and at home about online bullying.
	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).	I can explain how to block abusive users.	
		I can explain how I would report online bullying on the apps and platforms that I use.	
		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).	

SPRING TERM 1 - Safer Internet Day

SPRING TERM 2

ONLINE REPUTATION

EYFS	YEAR 1	YEAR 2
I can identify ways that I can put information on the internet.	I can recognise that information can stay online and could be copied.	I can explain how information put online about me can last for a long time.
	I can describe what information I should not put online without asking a trusted adult first.	I know who to talk to if I think someone has made a mistake about putting something online.

YEAR 3	YEAR 4	YEAR 5	YEAR 6
I can search for information about myself online.	I can describe how others can find out information about me by looking online.	I can search for information about an individual online and create a summary report of the information I find.	I can explain how I am developing an online reputation which will allow other people to form an opinion of me.
I can recognise I need to be careful before I share anything about myself or others online.	I can explain ways that some of the information about me online could have been created, copied or shared by others.	I can describe ways that information about people online can be used by others to make judgments about an individual.	I can describe some simple ways that help build a positive online reputation.
I know who I should ask if I am not sure if I should put something online.			

ONLINE RELATIONSHIPS

EYFS	YEAR 1	YEAR 2
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I can recognise some ways in which the internet can be used to communicate.	I can use the internet with adult support to communicate with people I know.	I can use the internet to communicate with people I don't know well (e.g. email a penpal in another school/ country).
I can give examples of how I (might) use technology to communicate with people I know.	I can explain why it is important to be considerate and kind to people online.	I can give examples of how I might use technology to communicate with others I don't know well.

YEAR 3	YEAR 4	YEAR 5	YEAR 6
I can describe ways people who have similar likes and interests can get together online.	I can describe strategies for safe and fun experiences in a range of online social environments.	I can explain that there are some people I communicate with online who may want to do me or my friends harm. I can recognise that this is not my/our fault.	I can show I understand my responsibilities for the well-being of others in my online social group.
I can give examples of technology-specific forms of communication (e.g. emojis, acronyms, text speak).	I can give examples of how to be respectful to others online.	I can make positive contributions and be part of online communities.	I can explain how impulsive and rash communications online may cause problems (e.g. flaming, content produced in live streaming).
I can explain some risks of communicating online with others I don't know well.		I can describe some of the communities in which I am involved and describe how I collaborate with others positively.	I can demonstrate how I would support others (including those who are having difficulties) online.
I can explain why I should be careful who I trust online and what information I can trust them with.			I can demonstrate ways of reporting problems online for both myself and my friends.
I can explain how my and other people's feelings can be hurt by what is said or written online.			
I can explain why I can take back my trust in someone or something if I feel nervous, uncomfortable or worried.			
I can explain what it means to 'know someone' online and why this might be different from knowing someone in real life.			
I can explain what is meant by 'trusting someone online'. I can explain why this is different from 'liking someone online'.			

SUMMER TERM 1		
HEALTH, WELL-BEING AND LIFESTYLE		
EYFS	YEAR 1	YEAR 2

I can identify rules that help keep us safe and healthy in and beyond the home when using technology.	I can explain rules to keep us safe when we are using technology both in and beyond the home.	I can explain simple guidance for using technology in different environments and settings.
I can give some simple examples.	I can give examples of some of these rules.	I can say how those rules/guides can help me.

YEAR 3	YEAR 4	YEAR 5	YEAR 6
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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, videos).	I can explain how using technology can distract me from other things I might do or should be doing.	I can describe ways technology can affect healthy sleep and can describe some of the issues.	I can describe common systems that regulate age-related content (e.g. PEGI , BBFC , parental warnings) and describe their purpose.
	I can identify times or situations when I might need to limit the amount of time I use technology.	I can describe some strategies, tips or advice to promote healthy sleep with regards to technology.	I can assess and action different strategies to limit the impact of technology on my health (e.g. night-shift mode , regular breaks, correct posture, sleep, diet and exercise).
	I can suggest strategies to help me limit this time.		I can explain the importance of self-regulating my use of technology; I can demonstrate the strategies I use to do this (e.g. monitoring my time online, avoiding accidents).

SELF-IMAGE AND IDENTITY

EYFS

YEAR 1

YEAR 2

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.

I can explain how this could be either in real life or online.

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.

I can explain how other people's identity online can be different to their identity in real life.

I can describe ways in which people might make themselves look different online.

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.

YEAR 3

YEAR 4

YEAR 5

YEAR 6

I can explain what is meant by the term 'identity'.

I can explain how I can represent myself in different ways online.

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).

I can explain how my online identity can be different to the identity I present in 'real life'.

Knowing this, I can describe the right decisions about how I interact with others and how others perceive me.

I can explain how identity online can be copied, modified or altered.

I can demonstrate responsible choices about my online identity, depending on context.

I can describe ways in which media can shape ideas about gender.

I can identify messages about gender roles and make judgements based on them.

I can challenge and explain why it is important to reject inappropriate messages about gender online.

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.

I can explain why I should keep asking until I get the help I need.

SUMMER TERM 2 – revisit unit - to be planned by class teachers using knowledge of children

Computing Vocabulary 2020

	Computers and Networks	Programming/ coding	Multimedia	Handling Data	Online Safety
EYFS	mouse computer screen printer keyboard letters numbers	instructions control	type draw pictures writing sounds	sort questions	safe rules unkind
Year 1	website username password microphone touchscreen internet search	control algorithm predict order	spacebar backspace enter colour size text image	pictogram graph table	internet personal information trust
Year 2	open save file folder app search engine devices	debug error	delete shift clipart shapes font bold underline colour style insert animation slide transition	database branching database	search engine voice-activated search account private public cyberbullying
Year 3	right-click	repeat	arrow keys	data	autocomplete

	left-click cut copy paste move network search	sequence	home end layout portrait landscape highlight align – left, centre, right bullet points text box fill border line colour	search	permission communicate emojis acronyms text speak identity avatar
Year 4	blog email cloud	input output	print screen Shortcuts Table Crop border Ctrl+C (copy) Ctrl+V (paste) margins hyperlinks order group format	questionnaire inaccuracies bar chart present	in-app purchases monitored media report
Year 5	USB stick evaluate software hardware	variable logical selection	wrap text view – 100%, whole page, fit width header footer symbols transition timings shortcuts Ctrl+X (cut)	spreadsheet formula sum add subtract multiply divide	fact opinion true/false valid reliable evidence misinformation dis-information hoax

			Ctrl+A (select all) format painter		profile online communities
Year 6	operating system file extension pdf jpeg mp4 ppt doc	sensors decompose	(Use and apply all vocab from previous years)	(Use and apply all vocab from previous years)	scams phishing influence manipulation persuasion flag/report password managers online reputation age-related content (PEGI/BBFC)