EYFS Computing

Unit	Computing strands/ *substrands*	Early Learning Goals	Key Skills and statements	Key Vocabulary
Video creation and sound  **Autumn term** **Assessment** Formative teacher assessment through observations and questioning.	**IT** *Word Processing and media*	Children recognise that a range of technology is used in places such as homes and schools. They select and use Technology for particular purposes.	• Explore the camera function on iPads *(photo and video)* • record sounds with different resources *(iPads/ talking tins)* • find ways to change your voice *(tube, tin can, shouting to create an echo)* • record sounds/voices in storytelling and explanations *(children independently record themselves story mapping)*	Record, sound, microphone, echo,
Beebots (unplugged)  **Autumn term** **Assessment** Formative teacher assessment through observations and questioning.	**CS** *Coding and Programming*	Playing and Exploring Creative and critical thinking	• learn how digital toys work through exploration (Tinkering) • input a sequence of commands into a programmable toy or simple app • fix things through trial and error (Debugging)	touch screen, Command, Instruction Forward Backward Right left
Word Processing  **https://ictgames.com/mobilePage/literacy.html** **Summer term**	**IT** *Word Processing*	Children recognise that a range of Technology is used in places such as homes and schools. They select and use Technology for particular purposes.	• play on a touch screen game and use computers/keyboards/mouse in role play https://ictgames.com/mobilePage/literacy.html • Type name into a device using the digital keyboard Seesaw • type letters with increasing confidence using an online keyboard.	Keyboard, Device, Tablet, type
Animation  **Spring term** **Assessment** Formative teacher assessment through observations and questioning.	**IT**	Children recognise that a range of Technology is used in places such as homes schools. They select and use Technology for Particular purposes.	• animate a simple image to speak in role using Seesaw recording device. Seesaw • create a simple animation to tell a story including more than one character.	Animation, character, record
Pictogram **Spring term** **Assessment** Formative teacher assessment through observations and	IT *Data Handling*	Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes.	• identify a chart. • sort physical objects, take a picture and discuss what I have done. • present simple data on a digital device.	Chart, sort, data, count, list

questioning.				

Safe, effective and competent use of technology – personal use, devices and safety

Computer science, coding, algorithms and Programming

Using information effectively: personal information, software/ application knowledge

- Awareness of different technologies in and out of school
- Awareness of the cause and effect of technology
- Awareness of digital storage of information- photography, digital writing and research information
- Awareness of input and outputs of devices
- Can use technology to express creatively and constructively

Year 1 Computing

Unit	Computing strands/ *substrands*	Curriculum Objectives	Key Skills and statements	Key Vocabulary
Word Processing **Assessment:** Formative mindmaps to assess pre and post learning of skills, short quiz to determine procedural and vocabulary understanding, and teacher observations/ conversations throughout each unit.	IT Word Processing with Google docs	**Co2/1.4** use technology purposefully to create, organise, store, manipulate and retrieve digital content.	• Recognising and inputting password to log into Chromebook • play on a touch screen game and use computers/keyboards/mouse in role play - TTR/ Spelling Shed, • type letters with increasing confidence using a keyboard and tablet. • dictate short, clear sentences into a digital device. E.g. Voice typing on Docs - AI	Space Bar, Delete, Return Key, Enter, Mouse, Trackpad, arrow keys, cursor, Select,
Storyboard **MrP** **Assessment:** Formative mindmaps to assess pre and post learning of skills, short quiz to determine procedural and vocabulary understanding, and teacher observations/ conversations throughout each unit.	**DL**, **CS** and **IT** *Presentation, Computational thinking and online reputation*	**Co2/1.4** use technology purposefully to create, organise, store, manipulate and retrieve digital content. **Co2/1.5** recognise common uses of information technology beyond school **Co2/1.6** use technology safely and respectfully, keeping personal information private;	• add labels to an image • order images to create a simple storyboard. • create a simple spider diagram. • sequence a series of pictures to explain my understanding of a topic. • 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	Labels, Order, storyboard, sequence, spider diagram, text box, style Trust, permission, respect, trusted adult

		identify where to go for help and support when they have concerns about material on the internet or other online technologies	how to speak to an adult I can trust.	
Beebots app/ unplugged **Assessment:** Formative mindmaps to assess pre and post learning of skills, short quiz to determine procedural and vocabulary understanding, and teacher observations/ conversations throughout each unit.	**CS** *Computational thinking, Programming*	**Co2/1.1** understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions **Co2/1.2** create and debug simple programs **Co2/1.3** use logical reasoning to predict the behaviour of simple programs	• Build confidence with navigating device through and around a map/ maze (link with a topic) • I understand what algorithms are • write simple algorithms • I understand the sequence of algorithms is important • debug simple algorithms • create a simple program on a digital device e.g. Bee Bot or tablet • use sequence in programs • locate and fix bugs in my program	Algorithm, sequence, order, bug, fix, precise
Pictogram **Assessment:** Formative mindmaps to assess pre and post learning of skills, short quiz to determine procedural and vocabulary understanding, and teacher observations/ conversations throughout each unit.	IT *Data handling*	**Co2/1.4** use technology purposefully to create, organise, store, manipulate and retrieve digital content.	• sort images or text into two or more categories on a digital device. • collect data on a topic. • create a tally chart and pictogram. • record myself explaining what I have done and what it shows me.	Sort, background, data, Emoji, image, Edit, Shape, table, resize, Drag, Save. Columns, category, tally chart, pictograms, explain,
AI around us **Assessment:** Formative mindmaps to assess pre and post learning of skills, short quiz to determine procedural and vocabulary understanding, and teacher observations/ conversations throughout each unit.	IT *Artificial Intelligence (AI)*	**Co2/1.5** recognise common uses of information technology beyond school	• use simple AI technology and can talk about what it does • I know that data is used by computers to store and process information.	Program, algorithm, Data, AI, Technology, voice assistant, text, recognise

Key stage 1

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.

Year 2 Computing

Unit	Computing strands/ *substrands*	Curriculum Objectives	Key Skills and statements	Key Vocabulary
Word Processing **Assessment:** Formative mindmaps to assess pre and post learning of skills, short quiz to determine procedural and vocabulary understanding, and teacher observations/ conversations throughout each unit.	**IT** *Word Processing with Google Docs*	**Co2/1.4** use technology purposefully to create, organise, store, manipulate and retrieve digital content.	• Using Docs, type complete sentences onto the page with greater accuracy • Know the combination of buttons to input punctuation • Save a document, and give it a title/ retrieve the saved document to edit • use the space bar only once between words and use touch to navigate to words letter to edit • copy and paste images and text • use caps locks for capital letters. • add images alongside text in a word processed document. • dictate longer passages into a digital device with accurate punctuation.	Cut copy paste Caps Lock Insert Image Question mark return Save editing Highlight Drag and drop
StopMotion Animation https://cloudstopmotion.com/en-GB **Assessment:** Formative mindmaps to	**CS, IT** *Computational thinking and Animation*	**Co2/1.3** use logical reasoning to predict the behaviour of simple programs **Co2/1.4** use technology purposefully to create, organise, store,	• create a simple stop motion animation. • • explain how an animation/flip book works Computational Thinking • write algorithms for everyday tasks • use logical reasoning to predict the outcome of algorithms • I understand decomposition is	Record camera layers Image mask timeline erase Resize trim

assess pre and post learning of skills, short quiz to determine procedural and vocabulary understanding, and teacher observations/ conversations throughout each unit.		manipulate and retrieve digital content. **Co2/1.5** recognise common uses of information technology beyond school	breaking objects/ processes down • debug algorithms	onion skin Transition cartoon
Knock Knock with Scratch Jr **Assessment:** Formative mindmaps to assess pre and post learning of skills, short quiz to determine procedural and vocabulary understanding, and teacher observations/ conversations throughout each unit.	**CS** *Coding and Programming*	**Co2/1.1** understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions **Co2/1.2** create and debug simple programs **Co2/1.3** use logical reasoning to predict the behaviour of simple programs	• I understand decomposition is breaking objects/processes down • debug algorithms Coding/Programming • I understand programs follow precise instructions • create programs using different digital devices E.g. Bee Bot or ScratchJr on a tablet • debug programs of increasing complexity • use logical reasoning to predict the outcome of simple programs	Decomposition debug breakdown, Precise prediction Debug sequence
Artificial Intelligence **Assessment:** Formative mindmaps to assess pre and post learning of skills, short quiz to determine procedural and vocabulary understanding, and teacher observations/ conversations throughout each unit.	**IT, CS** *AI, Video Creation, Presentation*	**Co2/1.1** design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts **Co2/1.2** use sequence, selection, and repetition in programs; work with variables and various forms of input and output **Co2/1.3** use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs **Co2/1.4** 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	• I can use tools to add effects to a video • I can select images and record a voiceover. • I can highlight and zoom into images as I record.	AI, technology, voice assistant, text, recognise
Algorithms with Beebots https://beebot.terrapinlogo.com/ **Assessment:**	**CS** *Computational thinking, Coding and Programming*	**Co2/1.1** understand what algorithms are; how they are implemented as programs on digital devices; and that programs	• WIth increasing accuracy, navigate device through a maze with obstacles • Begin to record algorithms on a white board • use logical reasoning to predict the outcome of algorithms	Bee Bot app program code Algorithm sequence

Formative mindmaps to assess pre and post learning of skills, short quiz to determine procedural and vocabulary understanding, and teacher observations/ conversations throughout each unit.		execute by following precise and unambiguous instructions **Co2/1.2** create and debug simple programs **Co2/1.3** use logical reasoning to predict the behaviour of simple programs	• debug algorithms Coding/Programming • I understand programs follow precise instructions • create programs using different digital devices E.g. Bee Bot or ScratchJr on a tablet • debug programs of increasing complexity	

Key stage 1

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.

Year 3 Computing

Unit	Computing strands/ *substrands*	Curriculum Objectives	Key Skills and statements	Key Vocabulary
Word Processing https://www.typingclub.com/sportal/program-3.game **Assessment:** Formative mindmaps to assess pre and post	**IT** Word Processing with Google Docs/ Typing	**Co2/1.6** 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,	• Begin to use skills such as formatting text and applying images • 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 • edit the style and effect of my text and images to make my document more engaging and eye-catching. For example,	Touch type Edit Name document Font Size borders shadows Duplicate Organize undo Redo

learning of skills, short quiz to determine procedural and vocabulary understanding, and teacher observations/ conversations throughout each unit.		analyzing, evaluating and presenting data and information.	borders and shadows. • use cut, copy and paste to quickly duplicate and organize text	autocorrect clipart
Interactive Story Graphs  **Assessment:** Formative mindmaps to assess pre and post learning of skills, short quiz to determine procedural and vocabulary understanding, and teacher observations/ conversations throughout each unit.	**IT** Data Handling	**Co2/1.6** 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.	• create my own sorting diagram and complete a data handling activity with it using images and text. • create a feelings chart exploring a story or character's feelings.	Line graph axis line shape background upload Record label pen tool Emotions Trajectory
Programming Microbits  https://makecode.microbit.org/ **Assessment:** Formative mindmaps to assess pre and post learning of skills, short quiz to determine procedural and vocabulary understanding, and teacher observations/ conversations throughout each unit.	**CS** *Computational Thinking and Coding and Programming*	**Co2/1.1** design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts **Co2/1.2** use sequence, selection, and repetition in programs; work with variables and various forms of input and output **Co2/1.3** use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and Programs **Co2/1.4** 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	• Create algorithms for a computer device. • I can design a program • I can create a program using a design • I can create a sequence of code • I can work with a variety of outputs • I can evaluate my program	Micro:bit program code algorithm problem decompose sequence LED output
Computer Networks 	**CS** *Networks*	**Co2/1.4** Understand computer networks including the internet; how they can	• Understand that the computers in a school are connected together in a network • Understand why computers are	Network server client

Assessment: Formative mindmaps to assess pre and post learning of skills, short quiz to determine procedural and vocabulary understanding, and teacher observations/ conversations throughout each unit.		provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration **Co2/1.5** Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content	• networked Video Creation • sequence clips of mixed media in a timeline and record a voiceover	LAN (Local Area Network) switch
Digital Comic Book Book Creator - https://bookcreator.com/	IT Word Processing and Presentation	**Co2/1.6** 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.	• I can create an interactive comic with sounds, formatted text and video. • I know how to edit the style and effect of my text and images to make my document more engaging and eye-catching. For example, borders and shadows.	Project, template, layout, multimedia, format, import, media, background, audio recording,

Key stage 2

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.

Year 4 Computing

Unit	Computing strands/ *substrands*	Curriculum Objectives	Key Skills and statements	Key Vocabulary
Word Processing  **Assessment:** Formative mindmaps to assess pre and post learning of skills, short quiz to determine procedural and vocabulary understanding, and teacher observations/ conversations throughout each unit.	**IT** *Word Processing with Google Docs and Slides*	**Co2/1.6** 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.	• combine digital images from different sources, objects, and text to make a final piece of a variety of tasks: posters, documents, eBooks, scripts, leaflets. • • confidently and regularly use text shortcuts such as cut, copy and paste and delete to organise text • use font sizes appropriately for audience and purpose. Use spell check and thesaurus including through Siri and other AI technology	Group crop source posters CTRL spell check, thesaurus record Header - footer Convert to PDF Voice to text
eBook Quiz Book Creator  **https://bookcreator.com/** **Assessment:** Formative mindmaps to assess pre and post learning of skills, short quiz to determine procedural and vocabulary understanding, and teacher observations/ conversations throughout each unit.	**IT** *Presentations*	**Co2/1.6** 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.	• create an interactive quiz eBook introducing hyperlinks. • create an eBook with text, images and sound. • create a presentation demonstrating my understanding with a range of media. • create a digital timeline/mindmap and include different media - sound and video.	Animation Visuals design, template effects multimedia eBook ePub Export hyperlinks
Microbit: Get off my stuff!  **https://makecode.microbit.org/** **Assessment:** Formative mindmaps to assess pre and post learning of skills, short quiz to determine procedural and vocabulary understanding, and teacher observations/ conversations throughout each unit.	**CS** *Programming and Computational Thinking*	**Co2/1.1** design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts **Co2/1.2** use sequence, selection, and repetition in programs; work with variables and various forms of input and output **Co2/1.3** use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs **Co2/1.4** understand computer	• use abstraction to focus on what's important in my design • write more precise algorithms for use when programming • use logical reasoning to detect and correct errors in programs • use simple selection and repetition in algorithms, programs • use logical reasoning to detect and correct errors in programs Coding/Programming • work with a variety of inputs and outputs	Repetition loop forever loop count controlled loop selection condition systematic Code blocks Algorithm Instruction

		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		
AI - Teachable machine **Teachable Machine - https://teachablemachine.withgoogle.com/train** **Assessment:** Formative mindmaps to assess pre and post learning of skills, short quiz to determine procedural and vocabulary understanding, and teacher observations/ conversations throughout each unit.	**IT** *Artificial Intelligence and Computational Thinking*	**Co2/1.1** design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts **Co2/1.2** use sequence, selection, and repetition in programs; work with variables and various forms of input and output **Co2/1.3** use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs **Co2/1.4** 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 **Co2/1.5** Use search technologies effectively, appreciate how results are selected and ranked, and be	• I can train an AI model and explore how more data makes it more accurate • I know how to use abstraction to focus on what's important in my design • I know how to write more precise algorithms for use when programming • I know how to use simple selection and repetition in algorithms • I know how to use logical reasoning to detect and correct errors in programs	Data, train, model, image, class, Pattern Algorithm
Understanding the Internet **Assessment:** Formative mindmaps to assess pre and post learning of skills, short quiz to determine procedural and vocabulary understanding, and teacher observations/ conversations throughout each unit.	**IT** and **CS** Computer Networks and Video Creation	**Co2/1.4** 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 **Co2/1.5** Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content	• I understand that servers on the Internet are located across the planet • I understand the difference between the Internet and WWW • I understand how web pages are viewed across the internet • Understand the Internet is a worldwide network • Understand how web pages are viewed across the Internet • Understand the difference between the Internet and the world wide web Video Creation • use green screen adding animated backgrounds.	Internet router data web page submarine cable World Wide Web Network

		Co2/1.6 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.		

Key stage 2

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.

Year 5 Computing

Unit	Computing strands/ *substrands*	Curriculum Objectives	Key Skills and statements	Key Vocabulary
Word Processing	**IT** Word Processing	**Co2/1.6** select, use and combine a variety of software (including internet services) on a range of	• apply other useful effects to my documents such as hyperlinks. • import sounds to accompany and enhance the text in my document.	Import export hyperlinks Italics

Assessment: Formative mindmaps to assess pre and post learning of skills, short quiz to determine procedural and vocabulary understanding, and teacher observations/ conversations throughout each unit.	with Google Docs and Slides	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.	• organise and reorganise text on screen to suit a purpose	format bold arrange Text wrap Highlight Align left center and right
AI - teaching a machine 2 **https://teachablemachine.withgoogle.com/train** **Assessment:** Formative mindmaps to assess pre and post learning of skills, short quiz to determine procedural and vocabulary understanding, and teacher observations/ conversations throughout each unit.	**CS** and **IT** *Artificial Intelligence and Computational Thinking*	**Co2/1.1** design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts **Co2/1.2** use sequence, selection, and repetition in programs; work with variables and various forms of input and output **Co2/1.3** use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs **Co2/1.4** 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 **Co2/1.5** Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content	• create and train an AI invention using image recognition Computational Thinking • solve problems by decomposing them into smaller parts • use selection in algorithms • use logical reasoning to explain how a variety of algorithms work • evaluate the effectiveness of algorithms	Data train Model Image Class Algorithm Processing Input output Pattern recognition Variation
Search Engines **Assessment:** Formative mindmaps to assess pre and post learning of skills, short quiz to determine procedural and vocabulary understanding, and teacher observations/ conversations throughout each unit.	**CS** *Networks*	**Co2/1.4** 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 **Co2/1.5** Use search technologies effectively, appreciate how results are selected	• Understand that web spiders index the web for search engines • Appreciate how pages are ranked in a search engine Presentations, web design and eBook Creation • create and export an interactive presentation including a variety of media, animations, transitions and other effects. Photography and Digital Art • enhance digital photos and images using crop, brightness and resize tools	Search engine spiders index ranked ranking algorithm keyword

		and ranked, and be discerning in evaluating digital content		
Google Sheets **Assessment:** Formative mindmaps to assess pre and post learning of skills, short quiz to determine procedural and vocabulary understanding, and teacher observations/ conversations throughout each unit.	**IT** *Data Handling*	**Co2/1.6** 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 simple formulae to solve calculations including =sum • edit and format different cells in a spreadsheet. • write spreadsheet formulas to solve more challenging maths problems. • create and publish my own online questionnaire and analyse the results. • use simple formulae to solve calculations including =sum and other statistical functions	Spreadsheet cell row Column formula Sum data value calculation
Scratch Quiz **Assessment:** Formative mindmaps to assess pre and post learning of skills, short quiz to determine procedural and vocabulary understanding, and teacher observations/ conversations throughout each unit.	**CS** *Programming and Coding, and Computational Thinking*	**Co2/1.1** design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts **Co2/1.2** use sequence, selection, and repetition in programs; work with variables and various forms of input and output **Co2/1.3** use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs **Co2/1.4** 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	• solve problems by decomposing them into smaller parts • use selection in algorithms Coding/Programming • create programs by decomposing them into smaller parts • use a variety of selection commands in programs • use conditions in repetition commands • work with variables • create programs that control or simulate physical systems • evaluate my work and identify errors • use logical reasoning to explain how a variety of algorithms work • evaluate the effectiveness of algorithms	Evaluation, effectiveness complexity data prediction condition memory variables value initialisation control simulate physical system

Key stage 2

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.

Year 6 Computing

Unit	Computing strands/ *substrands*	Curriculum Objectives	Key Skills and statements	Key Vocabulary
Word Processing **Assessment:** Formative mindmaps to assess pre and post learning of skills, short quiz to determine procedural and vocabulary understanding, and teacher observations/ conversations throughout each unit.	*Word Processing with Google Docs, Forms and Slides*	**Co2/1.6** 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.	• confidently choose the best application to demonstrate my learning. • format text to suit a purpose. • publish my documents online regularly and discuss the audience and purpose of my content.	Alignment, application, tabs, Sharing, toolbar, build order, layout, shift key, PDF, columns, orientation Headings, Transparent,

HTML **Assessment:** Formative mindmaps to assess pre and post learning of skills, short quiz to determine procedural and vocabulary understanding, and teacher observations/ conversations throughout each unit.	**CS** *Computer Networks*	**Co2/1.4** 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 **Co2/1.5** Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content	• I understand what HTML is and recognize HTML tags • know a range of HTML tags and can remix a web page • create a webpage using HTML	HTML (HyperText Markup Language), opening tag, closing tag, code
Design a game in Scratch **Assessment:** Formative mindmaps to assess pre and post learning of skills, short quiz to determine procedural and vocabulary understanding, and teacher observations/ conversations throughout each unit.	**CS** *Programming*	**Co2/1.1** design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts **Co2/1.2** use sequence, selection, and repetition in programs; work with variables and various forms of input and output **Co2/1.3** use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs **Co2/1.4** 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 a range of sequence, selection and repetition commands to implement my design • identify the need for, and work with, variables • create procedures to hide complexity in programs • critically evaluate my work and suggest improvements • decompose a design or code to focus on specific parts • use abstraction to hide complexity in my design or code • recognise and make use of patterns in my design and code • critically evaluate my work and suggest improvements Coding/Programming	Procedure, abstraction, conditional loop, Logic, operator, implement Repeated loop, Algorithm, Generalisation, pattern, reuse, modify, critical,
Microbit sensors **https://makecode.microbit.org/** **Assessment:** Formative mindmaps to assess pre and post learning of skills, short quiz to determine procedural and vocabulary understanding, and teacher observations/ conversations throughout each unit.	***CS*** *Programming*	**Co2/1.1** design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts **Co2/1.2** use sequence, selection, and repetition in programs; work with variables and various forms of input and output **Co2/1.3**	• decompose a design or code to focus on specific parts • critically evaluate my work and suggest improvements Coding/Programming • identify the need for, and work with, variables • use a range of sequence, selection and repetition commands to implement my design	Micro:bit, program, Code, algorithm, problem, sensor, temperature, light, Input, output

		use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs **Co2/1.4** 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		
AI - Teachable machine 3 https://machinelearningforkids.co.uk/ **Assessment:** Formative mindmaps to assess pre and post learning of skills, short quiz to determine procedural and vocabulary understanding, and teacher observations/ conversations throughout each unit.	IT Artificial Intelligence and Computational Thinking	**Co2/1.1** design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts **Co2/1.2** use sequence, selection, and repetition in programs; work with variables and various forms of input and output **Co2/1.3** use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs **Co2/1.4** 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 **Co2/1.6** 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.	• I can train an AI model and use it within a program • I know how to decompose a design or code to focus on specific parts • I know how to use abstraction to hide complexity in my design or code • I know how to recognise and make use of patterns in my design and code • I know how to critically evaluate my work and suggest improvements	Data, train, Model, image, Class, pattern, selection, condition Accuracy, Variation,

Key stage 2

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.

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EYFS	**Video creation/ sound**	**Beebots/ unplugged**	**Word Processing**	**Animation**	**Data Pictogram**	
Online Safety	**Media Balance and Well-Being** Supporting Resource: Smartie the Penguin Story A	**Cyberbullying** Big Duck's famous friend	**News and Media Literacy** Digiduck Masks Detective Digiduck	**Relationships and Communication** Digiduck's Big Decision	**Privacy and Security** Barefoot Computing: Safety Snakes	
Year 1	**Word Processing**	**Animation Storyboard**	**Data Pictogram**	**Beebots Digital/ app**	**Artificial Intelligence**	**Enhancing the Curriculum**
Online Safety	**Media Balance and Well-Being** CS Lesson: Pause for People Supporting Resource: Jessie & Friends: Episode 1		**News and Media Literacy** CS Lesson: Media Balance Is Important Supporting Resource: Fact Detectives! Detective Digiduck		**Privacy and Security** CS Lesson: Safety in my neighbourhood Supporting Resource: Jessie & Friends: Episode 2	
Year 2	**Word Processing**	**Animation Stop-Motion**	**Artificial Intelligence**	**Beebots Unplugged**	**Scratch**	**Enhancing the Curriculum**

Online Safety ☑	**Media Balance and Well-Being** CS Lesson: Pause and thunk		**Media Balance and Well-Being** CS Lesson: How technology makes you feel		**Privacy and Security** CS Lesson: Internet Traffic Light Supporting Resource: Lee and Kim: Lesson 2 PANTS: The Underwear Rule	**Relationships and Communication** PSHE - Safety and the changing body: Lesson 2 Being safe, including online
Year 3	**Word Processing**	**Programming Microbits**	**Interactive Story Graphs**	**Computer Networks**	**Digital comic books**	**Enhancing the Curriculum**
Online Safety ☑	**Media Balance and Well-Being** CS Lesson: We the digital citizens Supporting Resource: Interland: Reality River	**Cyberbullying** PSHE - safety and the changing body - Lesson 4 - cyberbullying	**News and Media Literacy** CS Lesson: Let's give credit	**Privacy and Security** CS Lesson That's Private! Supporting Resource:: Interland: Tower of Treasure	**Digital Footprint and Identity** CS Lesson: Digital trails Supporting Resource: BBC Own It: Where Are Your Photos Going?	**Relationships and Communication** CS Lesson: Who Is In Your Online Community? Supporting Resource: Band Runner: Share
Year 4	**Word Processing**	**Microbits: get off my stuff**	**eBook Quiz Book Creator**	**Understanding the Internet**	**Artificial Intelligence**	**Enhancing the Curriculum**
Online Safety ☑	**Media Balance and Well-Being** CS Lesson: Your Rings of Responsibility Supporting Resource: The Adventures of Kara, Winston and the SMART Crew: Chapter 1	**Cyberbullying** CS Lesson: The Power of words Digital Passport: E-volve Supporting Resource: Band Runner: Like	**News and Media Literacy** CS Lesson: Is Seeing Believing? Supporting Resource: All The Adverts All About Explorers	**Privacy and Security** PSHE - Safety and the changing body - Age restrictions - Lesson 1	**Digital Footprint and Identity** CS Lesson: This Is Me Supporting Resource: The Adventures of Kara, Winston and the SMART Crew: Chapter 4	**Relationships and Communication** CS Lesson: Our Digital Citizenship Pledge Supporting Resource: Band Runner: Chat Minecraft Education: Becoming Digital Citizens
Year 5	**Word Processing**	**AI - Teachable Machine**	**Google Sheets**	**Networks - search engines**	**Scratch - Quiz**	**Enhancing the Curriculum choice**
Online Safety ☑	**Media Balance and Well-Being** CS Lesson: My Media Choices Supporting Resource:	**Cyberbullying** CS Lesson: Be a Super Digital Citizen Digital Passport:	**News and Media Literacy** CS Lesson: A Creator's Rights and Responsibilities	**Privacy and Security** CS Lesson: Private and Personal Information	**Digital Footprint and Identity** CS Lesson: Our Online Tracks	**Relationships and Communication** PSHE - Safety and the changing body - Lesson 1 -

	Net Aware: Social Networks, Apps and Games	E-volve Supporting Resource: BBC Own It: Cyberbullying Quiz	Supporting Resource: Explorers Spotting Fake News	Digital Passport: Share Jumper Supporting Resource: Band Runner: Lock ICO: Resources for Schools	Supporting Resource: Digital footprint	Online friendships PSHE - Safety and the changing body - Lesson 2 - Staying safe online
Year 6	Word Processing	Scratch project game	App prototype	HTML website designs	Microbit Sensors	Enhancing the Curriculum choice
Online Safety ☑	**Media Balance and Well-Being** PSHE - Safety and the changing body - Lesson 3 - social media	**Cyberbullying** CS Lesson: Is it Cyberbullying? Digital Passport: E-volve Supporting Resource: Net Aware: Social Networks, Apps and Games	**News and Media Literacy** CS Lesson: Reading News Online Supporting Resource: BBC Young Reporter: Fake or Real BBC Own It: Fake News Childnet: Trust Me Lessons	**Privacy and Security** CS Lesson: You Won't Believe This! Digital Passport: Mix-n-Mash Supporting Resource: Website Cookies Explained	**Digital Footprint and Identity** CS Lesson: Beyond Gender Stereotypes Supporting Resource: Are You Living an Insta Lie? Social Media Vs. Reality	**Relationships and Communication** CS Lesson: Digital Friendships Supporting Resource: The Guardian: Fake News Lessons

Online Safety:

https://www.commonsense.org/education/collections/digital-citizenship-for-early-years-and-primary-learners-uk

Safer Internet Day: Tuesday 11th February 2025

Theme: "**Inspiring change? Making a difference, managing influence and navigating change online**".

Resources for SID:
https://www.teachwire.net/news/safer-internet-day-teaching-resources/