Billingshurst Primary School - Computing Curriculum

Computing		
Information Technology	**Computer Science**	**Digital Literacy (E4S)**
Word Processing/ Typing	Computational Thinking	Online content and critical thinking
Data Handling	Coding and Programming	Self-image, mental Health and well being
Animation	Computer Networks	Staying safe online
Video Creation		Online reputation
Photography and Digital Art		Online relationships and cyberbullying
Sound		

The majority of Computing at Billingshurst Primary School should be **embedded across the curriculum**. Information Technology skills can be covered through **project based learning** and in most cases do not need to be taught discreetly. **Computer Science skills are more explicit** and time should be spent in the Computing Suite or on devices to explore, develop and reflect on these skills. **Digital Literacy/ESafety skills are essential** and should be referred to whenever technology is used throughout the year. These skills and knowledge will also be covered in PSHCE (E4S) and will be a school focus on Safer Internet Day.

The Computing Suite/devices should be booked by a class as and when required. This could be for an explicit Computer Science lesson or a "Tinkering Session" – when children are given the opportunity to explore, experiment and familiarise themselves with the different elements and tools of new software before applying them in a more focused approach. Teachers should use a "Tinkering Session" as informative assessment time to assess the children's level of skill prior to a project.

D.A.R.E.S Approach
When children are using new software/apps, the D.A.R.E.S approach should be used to ensure that they have the opportunity to explore, plan, create and reflect on their use of the technology/software. D.A.R.E.S encourages pupils to be critical thinkers, problems solvers and computational thinkers.
When using technology, they should:

D - Design: Children start by discussing the desired outcome for their project and are given time to tinker with the software to explore, experiment and familiarise themselves before planning what they will do to achieve their outcome.
A - Apply: Children are given the opportunity to create, make and produce content using the app or software explored in the design lesson(s)
R - Refine: Children spend time considering ways to modify and improve their projects to get the best results possible. They should also consider their audience and purpose related to the design brief.
E - Evaluate: Upon completing their desired outcome, children are given the opportunity to reflect and consider how effectively they have achieved their goal.
S - Share: Children are given the opportunity to publish and exhibit their work to the world.

Billingshurst Primary School - Computing Curriculum

EYFS – Information Technology			
National Curriculum Objective	**Strand**	**Skills/Knowledge**	**Resources/Apps/Links**
Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes.	**Word Processing/ Typing**	• I can play on a touch screen game and use computers/keyboards/mouse in role play • I can type letters with increasing confidence using a keyboard and tablet • I can dictate short, clear sentences into a digital device	Role play technology Microphone voice recorders BBC Dance Mat
	Data Handling	• I can identify a chart • I can sort physical objects, take a picture and discuss what I have done	Pic Collage 2Simple
	Animation	• I can animate a simple image to speak in role • I can create a simple animation to tell a story including more than one character	Puppetpals ChatterPix Kids I can animate
	Video Creation	• I know the difference between a photography and video • I can record a short film using the camera • I can record and play a film • I can watch films back	Camera iPad Digital cameras
	Photography and Digital Art	• I can take a photograph • I can take a photograph and use it in an app • I can use a painting app and explore the paint and brush tools	iPad Camera and Markup Pic Collage Paint Digital cameras
	Sound	• I can record sounds with different resources • I can find ways to change your voice (tube, tin can, shouting to create an echo) • I can record sounds/voices in storytelling and explanations	Voice Memos Microphone Voice Recorder Voice apps

Billingshurst Primary School - Computing Curriculum

EYFS – Computer Science			
National Curriculum Objective	**Strand**	**Skills/Knowledge**	**Resources/Apps/Links**
Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes.	**Computational Thinking**	• I can follow simple oral instructions • I can spot simple patterns, such as similarities and differences • I can sequence simple familiar tasks	Bee Bot Pro-Bot Daisy the Dinosaur App
	Coding and Programming	• I can use a mouse, touch screen or appropriate access device to target and select options on screen • I can input a simple sequence of commands to control a digital device with support	Bee Bot Pro-Bot Kodable

EYFS – Digital Literacy/ESafety - Education For a Connected World

National Curriculum Objective	Strand	Skills/Knowledge
Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes.	**Online Relationships**	• I can recognise some ways in which the internet can be used to communicate • I can give examples of how I (might) use technology to communicate with people I know
	Identity/Online Reputation	• I can identify ways that I can put information on the internet • I can recognise that I can say 'no' / 'please stop' / 'I'll tell an adult' / '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.
	Online Bullying	• I can describe ways that some people can be unkind online • I can offer examples of how this can make others feel.
	Managing Online Information	• I can talk about how I can use the internet to find things out • I can identify devices I could use to access information on the internet • I can give simple examples of how to find information (e.g. search engine, voice activated searching)
	Health, Wellbeing and Lifestyle	• I can identify rules that help keep us safe and healthy in and beyond the home when using technology • I can give some simple examples.
	Privacy and Security	• I can identify some simple examples of my personal information (e.g. name, address, birthday, age, location) • I can describe the people I can trust and can share this with; I can explain why I can trust them.

Billingshurst Primary School - Computing Curriculum

		Year 1 – Information Technology	
National Curriculum Objective	**Strand**	**Skills/Knowledge**	**Resources/Apps/Links**
Co2/1.4 use technology purposefully to create, organise, store, manipulate and retrieve digital content.	**Word Processing/ Typing**	• I can confidently type words quickly and correctly on a digital device • I can use the space bar to make space and delete to delete letters/words • I can make a new line using enter/return • I can dictate into a digital device more accurately and with punctuation	BBC Dance Mat Typing Microsoft Word Notes Microphone voice recorders
	Data Handling	• I can sort images or text into two or more categories on a digital device • I can collect data on a topic • I can create a tally chart and pictogram	Pic Collage 2Simple
	Animation	• I can create an animation to tell a story with more than one scene • I can add my own pictures to my story animation	Puppetpals ChatterPix Kids I can animate
	Video Creation	• I can record a film using a camera/camera app • I can select images and record a voiceover • I can highlight and zoom into images as I record on an iPad	Camera iMovie Shadow Puppets Edu Digital cameras
	Photography and Digital Art	• I can edit a photo with simple tools • I can use a paint/drawing app to create a digital image • I can begin to cut out an image to layer on another image	iPad Camera and Markup Notes Pic Collage Paint Snipping tool Digital cameras
	Sound	• I can create a sequence of sounds (instruments, apps/software) • I can explore short and long sounds. • I can record my voice and add different effects.	Voice Memos Microphone Voice Recorder

Billingshurst Primary School - Computing Curriculum

Year 1 – Computer Science			
National Curriculum Objective	**Strand**	**Skills/Knowledge**	**Resources/Apps/Links**
• 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	**Computational Thinking**	• I understand what algorithms are • I can write simple algorithms • I understand the sequence of algorithms is important • I can debug simple algorithms (PROBLEM SOLVE)	Bee Bot Pro-Bot Kodable Rugged Robot Tactile Coder iPad coding apps Code.org (Course A)
	Coding and Programming	• I can create a simple program on a digital device e.g. Bee Bot/Pro-Bot • I can use sequence in programs • I can locate and fix bugs in my program (PROBLEM SOLVE)	Bee Bot Pro-Bot Kodable Rugged Robot Tactile Coder iPad coding apps Code.org (Course A)

Billingshurst Primary School - Computing Curriculum

Year 1 – Digital Literacy (E4S)		
National Curriculum Objective	**Strand**	**Skills/Knowledge**
• Co2/1.5 recognise common uses of information technology beyond school • Co2/1.6 use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about material on the internet or other online technologies	**Online content and critical thinking**	• Know how to safely access information online • Use key terms when describing actions and information – true, real, believe, made up etc
	Self-image, mental Health and well being	• Understand the different ways we can go 'online' • To consider why other people go online • To identify what is positive about self and others
	Staying safe online	• Identify what information is personal • Consider what information should not be shared online
	Online reputation	• Understand that the information I put online leaves a digital footprint • Understand that my digital footprint can be big or small, helpful or hurtful, depending on I manage it
	Online relationships and cyberbullying	• Use the internet with adult support to communicate with people I know

Billingshurst Primary School - Computing Curriculum

	Year 2 – Information Technology		
National Curriculum Objective	**Strand**	**Skills/Knowledge**	**Resources/Apps/Links**
Co2/1.4 use technology purposefully to create, organise, store, manipulate and retrieve digital content.	**Word Processing/ Typing**	• I can use the space bar only once between words and use touch to navigate to words letter to edit • I can copy and paste images and text • Use caps locks for capital letters • I can add images alongside text in a word processed document • I can dictate longer passages into a digital device with accurate punctuation	BBC Dance Mat Typing Microsoft Word Microsoft PowerPoint Microphone voice recorders
	Data Handling	• I can sort digital objects into a range of charts such as Venn diagrams, carroll diagrams and bar charts using different apps and software • I can orally record myself explaining what the data shows me • I can create a branching database using questions	Microsoft Excel Plickers Pic Collage
	Animation	• I can create a simple stop motion animation • I can explain how an animation/flip book works	Puppetpals ChatterPix Kids I can animate
	Video Creation	• I can use tools to add effects to a video • I can begin to use green screen techniques with support	Windows Movie Maker iMovie Doink Greenscreen Shadow Puppets Edu Digital cameras
	Photography and Digital Art	• I can edit a photo (crop, filters, mark up etc) • I can select and use tools to create digital imagery - controlling the pen/brush and using the fill tool • I can cut images with accuracy to layer on other images.	iPad Camera and Markup Notes Pic Collage Paint Photobooth Digital cameras
	Sound	• I can record my own sound effects and use them to retell a story	Voice Memos Microphone Voice Recorder

Billingshurst Primary School - Computing Curriculum

Year 2 – Computer Science			
National Curriculum Objective	**Strand**	**Skills/Knowledge**	**Resources/Apps/Links**
• 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	**Computational Thinking**	• I can write algorithms for everyday tasks • I can use logical reasoning to predict the outcome of algorithms • I understand decomposition is breaking objects/processes down • I can debug algorithms	Bee Bot Scratch Kodable Code.org (Course B) Code club Rugged Robot Tactile Coder iPad coding apps
	Coding and Programming	• I understand programs follow precise instructions • I can create programs using different digital devices E.g. Bee Bot/Pro-Bot or Scratch on a tablet • I can debug programs of increasing complexity (SOLVE PROBLEMS) • I can use logical reasoning to predict the outcome of simple programs	Bee Bot Pro-Bot Scratch Kodable Code.org (Course B) Code club Rugged Robot Tactile Coder iPad coding apps

Year 2 – Digital Literacy (E4S)

National Curriculum Objective	Strand	Skills/Knowledge
• Co2/1.5 recognise common uses of information technology beyond school • Co2/1.6 use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about material on the internet or other online technologies	**Online content and critical thinking**	• Identify how to access information on the internet on more than one type of device • Identify different methods of finding information – search engines, voice activation, information sites • Know how to use web pages to access information safely • Begin to understand that not all information online is true and that it can be questioned
	Self-image, mental Health and well being	• Understand what is meant by being online and offline • Know that we can see ourselves reflected online as well as seeing people who are not the same • Understand and celebrate that there are similarities and differences online as well as offline • Be able to describe how online posts may impact on how people feel about themselves and others
	Staying safe online	• Know about privacy settings and how to apply them • Know how to keep the information on my device safe • Describe more detailed examples of information that is personal to an individual and know when it may not be appropriate to post this online (e.g. Address, names, school etc) • Demonstrate strategies for keeping my information private • Know rules for home and school about keeping personal information safe • Consider why it is appropriate and safe to ask a trusted adult if unsure about sharing personal information online
	Online reputation	• Understand that the information I put online leaves a digital footprint • Understand that my digital footprint can be big or small, helpful or hurtful, depending on I manage it • Know that I need to be careful before I share anything about myself or others online • Know who I should ask if I am not sure if I should put something online • Understand the risks of putting or sharing information on the internet
	Online relationships and cyberbullying	• Explain some risks of communicating online with others I don't know well • Explain why I should be careful who I trust online and what information I can trust • Explain what it means to 'know someone' online and why this might be different from knowing someone in real life • Explain what is meant by 'trusting someone online' and why this is different from 'liking someone online' • Identify how to behave positivity online • Explain why it is important to be considerate, kind and respectful to people online • Describe ways that some people can be unkind online and how this can make others feel • Identify behaviours that may be seen as bullying in different online contexts • Know where/who to go to if mine or others' feelings were negatively affected by someone online

Billingshurst Primary School - Computing Curriculum

Year 3 – Information Technology			
National Curriculum Objective	**Strand**	**Skills/Knowledge**	**Resources/Apps/Links**
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.	**Word Processing/ Typing**	• I can use index fingers on keyboard home keys (f/j), use left fingers for a/ s/d/f/g, and use right fingers for h/j/k/l • I can edit the style and effect of my text and images to make my document more engaging and eye-catching. For example, borders and shadows • I can use cut, copy and paste to quickly duplicate and organise text.	BBC Dance Mat Typing Microsoft Word Google Docs Microsoft PowerPoint Book Creator
	Data Handling	• I can create my own sorting diagram and complete a data handling activity with it using images and text • I can start to input simple data into a spreadsheet	Microsoft Excel
	Animation	• I can create animations of faces to speak in role with more life-like realistic outcomes • I can use animation tools in presenting software to create simple animations • I can create stop-motion animation using my own writing as the text	PowerPoint Puppetpals ChatterPix Kids iFunFace Animate Toontastic
	Video Creation	• I can sequence clips of mixed media in a timeline and record a voiceover • I can trim and cut film clips and add titles and transitions • I can create my own movie trailer	Windows Movie Maker iMovie Videorama Explain Everything Doink Greenscreen
	Photography and Digital Art	• I can confidently take and manipulate photos • I can create a digital image using a range of tools, pens, brushes and effects	iPad Camera and Markup Notes Pic Collage
	Sound	• I can record my own composition or music and edit this as required • I can add sound effects to presentations or programming	Voice Memos Garageband Audacity Scratch

Billingshurst Primary School - Computing Curriculum

Year 3 – Computer Science			
National Curriculum Objective	**Strand**	**Skills/Knowledge**	**Resources/Apps/Links**
• 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	**Computational Thinking**	•I can create algorithms for my programming projects • I can decompose projects (such as an animation) into steps to create an algorithm • I can identify patterns in an algorithm	Scratch Code.org (Course C) Code Club Rugged Robot Tactile Coder iPad coding apps
	Coding and Programming	• I can design a program • I can create a program using a design • I can create a sequence of code • I can work with different inputs • I can evaluate my program	Scratch Code.org (Course C) Code Club Rugged Robot Tactile Coder iPad coding apps
	Computer Networks	• I understand that computers/printers in a school are connected together in a network • I understand why computers are networked • I understand the difference between the Internet and the World Wide Web (WWW)	Internet Google Chrome Safari Google Kiddle BBC Newsround

Year 3 – Digital Literacy (E4S)

National Curriculum Objective	Strand	Skills/Knowledge
• Co2/1.7 use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable e behaviour; identify a range of ways to report concerns about content and contact • 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	**Online content and critical thinking**	• Know what to do if someone wants information from me • Know who i am sharing information with • Know what others online tell me may be untrue and can begin to spot the signs of this • Be able to spot things that may be false online
	Self-image, mental Health and well being	• To know the importance of managing time online and identify the potential harms of overuse • To know what healthy online behaviours are (time spent online, too long etc) • To recognise that some people may pretend to be someone else online and why • Be able to identify feelings associated with this (feel sad, worried, uncomfortable or frightened)
	Staying safe online	• Be able to demonstrate what makes a strong password • Know how passwords should be managed • Know what passwords are and use them effectively in different contexts • Know how to keep information safe online
	Online reputation	• Have a good awareness of my own online profile – who can see what and how this can be manipulated • Describe what information i should not put online without asking a trusted adult first • Know what the recommended age limits are for different social media sites, apps and games (focus on games/apps) • Know what happens to my information online and how it could be used for harm
	Online relationships and cyberbullying	• Assess when you need to take action and explain what to do if you are concerned about an online relationship • Explain the difference between online bullying and good-natured teasing online • Form positive relationships online • Identify the range of online platforms available and what you can do on them • Describe strategies for safe and fun experiences in a range of online social environments • Describe how to behave online in ways that do not upset others • Identify the different roles people can play in cyberbullying • Identify cyberbullying in a range of contexts and work with others online to challenge those behaviours to prevent them recurring • Identify the impacts of cyberbullying and know where to go to get help • Give examples of effective strategies which might help myself or others • Identify and demonstrate actions to support others who are experiencing difficulties online

Year 4 – Information Technology

National Curriculum Objective	Strand	Skills/Knowledge	Resources/Apps/Links
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.	**Word Processing/ Typing**	• I can combine digital images from different sources, objects, and text to make a final piece in 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	Microsoft Word Google Docs Microsoft PowerPoint Book Creator
	Data Handling	• I can input data into a spreadsheet and export the data in a variety of ways: charts, bar charts, pie charts • I understand how data is collected. • I can create my own online multiple choice questionnaire	Microsoft Excel Kahoot
	Animation	• I can take multiple animations of a character I have physically created/drawn and edit them together for a longer video • I can use software to create a 2D/3D animated story	Puppetpals, ChatterPix Kids Animate Anything I Can Animate Puppetmaster
	Video Creation	• I can add music and sound effects to my films • I can add animated titles and transitions • I can add simple subtitles to a video clip	Windows Movie Maker iMovie Videorama Explain Everything Doink Greenscreen
	Photography and Digital Art	• I can take a digital photo and use camera settings • I can manipulate my pictures/shapes to create digital art	iPad Camera and Markup Notes Pic Collage
	Sound	• I can record an audiobook using my own writing as the text • Edit sound effects for a purpose	Voice Memos Garageband Audacity

Billingshurst Primary School - Computing Curriculum

Year 4 – Computer Science			
National Curriculum Objective	**Strand**	**Skills/Knowledge**	**Resources/Apps/Links**
• 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	**Computational Thinking**	• I can write more precise algorithms for use when programming • I can use simple selection and repetition in algorithms • I can use logical reasoning to detect and correct errors in programs	Scratch Code.org (Course D) Code Club Coding apps
	Coding and Programming	• I can use repetition in programs (FOREVER) • I can use simple selection in programs (IF, THEN) • I can work with different input/outputs (Keyboard/Mouse) • I can use logical reasoning to systematically detect and correct errors in programs	Scratch Code.org (Course D) Code Club Coding apps
	Computer Networks	• I understand that servers on the Internet are located across the planet • I understand how email is sent across the Internet • I understand how the Internet enables us to collaborate	Internet Google Chrome Safari Google Kiddle

Billingshurst Primary School - Computing Curriculum

Year 4 – Digital Literacy (E4S)		
National Curriculum Objective	**Strand**	**Skills/Knowledge**
• Co2/1.7 use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable e behaviour; identify a range of ways to report concerns about content and contact • 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	**Online content and critical thinking**	• Be able to explain key concepts in order to assess their validity and safety (truth, false, safe, unsafe, sceptical, trusting, question) • Consider and understand why information that appears often may not always be factual or true.
	Self-image, mental Health and well being	• Be able to use a range of strategies to manage time online • To know that people can look different online from how they are offline • Be able to identify ways in which people might make themselves appear different online than how they look offline • To know how to seek help when feelings are impacted by the way others appear online
	Staying safe online	• Know how to manage my online security and privacy • Be able to identify how to keep information private
	Online reputation	• Recognise that information can stay online and could be copied • Explain ways that some of the information about me online could have been created, copied or shared by others • Know what the recommended age limits are for different social media sites, apps and games (focus on social media) • Describe what is appropriate to say and do in different online settings/ platforms (e.g. Opinions, values, information, shares, 'likes', 'forwards') • Describe how to effectively challenge content that influences my reputation negatively
	Online relationships and cyberbullying	• Understand the different places and ways people can communicate online • Describe how online technology allows access to and communication with culturally diverse communities beyond our immediate social group • Give examples of how to adapt your behaviour to engage positively with those groups taking into account gender, cultural sensitivity, political and religious beliefs etc. • Define what cyberbullying is • Identify some online technologies where cyberbullying might take place • Use the internet with adult support to communicate with people i know • Understand the ways in which you can check that someone is who they say they are • Know how to spot potentially negative relationships online • Identify cyberbullying in a range of contexts and work with others online to challenge those behaviours Identify the impacts of cyberbullying and know where to go to get help • Give examples of effective strategies which might help myself or others • Identify and demonstrate actions to support others who are experiencing difficulties online

Billingshurst Primary School - Computing Curriculum

Year 5 – Information Technology			
National Curriculum Objective	**Strand**	**Skills/Knowledge**	**Resources/Apps/Links**
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.	**Word Processing/ Typing**	• I can start to apply other useful effects to my documents such as hyperlinks • I can import sounds to accompany and enhance the text in my document • I can organise and reorganise text on screen to suit a purpose	Microsoft Word Google Docs Microsoft PowerPoint
	Data Handling	• I can create and publish my own online questionnaire and analyse the results • I can use simple formulae to solve calculations including =sum and other statistical functions	Microsoft Excel Survey Monkey Google Forms
	Animation	• I can add green screen effects to a stop motion animation • I can create flip book animation using digital drawings and export as a Gif or video	www.flipanim.com Puppetpals, ChatterPix Kids Animate Anything I Can Animate Puppetmaster
	Video Creation	• I can record video content and edit it using Movie Maker • I can evaluate video tools to best explain my understanding • I can create green screen clips and insert these into my video	Windows Movie Maker iMovie Videorama Explain Everything Doink Greenscreen
	Photography and Digital Art	• I can enhance digital photos and images using crop, brightness and resize tools • I can explain how to Photoshop images and how this is used in the media	iPad Camera and Markup Notes Pic Collage
	Sound	• Record a voice over and edit sound clips (volume, pitch, fade, effect) to create a podcast.	Voice Memos Garageband Audacity

Billingshurst Primary School - Computing Curriculum

Year 5 – Computer Science

National Curriculum Objective	Strand	Skills/Knowledge	Resources/Apps/Links
• 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	**Computational Thinking**	• I can solve problems by decomposing them into smaller parts to code • I can use logical reasoning to explain how a variety of algorithms work • I can evaluate the effectiveness of algorithms	Scratch Code.org (Course E) Code Club Coding apps
	Coding and Programming	• I can use a variety of selection commands when coding (IF, THEN) • I can use conditions in repetition commands (FOREVER) • I can work with variables (TIMER/SCORE) • I can create programs for a specific audience or purpose • I can evaluate my work and identify errors	Scratch Code.org (Course E) Code Club Coding apps
	Computer Networks	• I understand how we view web pages on the Internet • I use search technologies effectively and appropriately • I appreciate how pages are ranked in a search engine	Internet Google Chrome Safari Google Kiddle.co

Year 5 – Digital Literacy (E4S)

National Curriculum Objective	Strand	Skills/Knowledge
• Co2/1.7 use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable e behaviour; identify a range of ways to report concerns about content and contact • 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	**Online content and critical thinking**	• Know what to do if someone wants to meet me • Consider why false or inaccurate information may be posted online • Explain why information that is in the media and on a large number of sites may still be inaccurate or untrue • Understand some people may give me information to manipulate my actions and thinking online • Demonstrate actions that can be taken to keep self-safe from others presenting a false picture of themselves.
	Self-image, mental Health and well being	• Consider how my online behaviours impact on who I am and how this can be both positive and negative • To consider what type of influences can at times encourage us to spend too much time online • Be able to recognise how I am different and similar to others • Be able explain how what we post online or see can impact negatively on how people feel about our self and others • Understand how my online identity can be different to my 'real life' identity • Understand a range reasons why people may pretend to be someone else online and how they might go about this
	Staying safe online	• Know how to manage privacy settings and safety features • Demonstrate an understanding of how apps work and use information that we enter into them e.g. Contact, images, voice notes etc) • Consider how we keep information safe when using apps • Identify online content and ideas ownership
	Online reputation	• Describe how others can find out information about me by looking online • Know what the recommended age limits are for different social media sites, apps and games (focus on social media) • Know how to use reporting tools and features such as blocking other users • Explain strategies to manage and protect my digital footprint • Explain the importance of my online reputation (especially to my future career) and describe ways of managing this
	Online relationships and cyberbullying	• Understand the ways in which you can check that someone is who they say they are • Understand ways to use your online community for positive means • Give examples where positive contributions have effected change in an online community (e.g. Gamergate, gaming communities, social media) • Explain strategies for assessing the degree of trust you place in people or organisations online • Describe the laws that govern online behaviour and how they inform what is acceptable or legal (e.g. Sexting (and related terminology), trolling, harassment, stalking) • Describe actions i could take if i or someone else experiences or is targeted by illegal online behaviour • Recognise cyberbullying can be different to bullying in the physical world and describe some of those differences

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National Curriculum Objective	Strand	Skills/Knowledge	Resources/Apps/Links
Year 6 – Information Technology			
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.	**Word Processing/ Typing**	• I can confidently choose the best application to demonstrate my learning • I can format text to suit a purpose • I can publish my documents and discuss the audience and purpose of my content	Microsoft Word Google Docs
	Data Handling	• I can write spreadsheet formula to solve more challenging maths problems • I can create and publish my own online quiz with a range of media (images and video)	Microsoft Excel Quizizz Kahoot
	Animation	• I can plan, script and create an animation to explain a concept or tell a story • I can mix animations and videos recordings of myself to create video interviews • I can choose and create different types of animations to best explain my learning	www.flipanim.com Puppetpals, ChatterPix Kids Animate Anything I Can Animate Puppetmaster
	Video Creation	• I can create videos using a range of media - green screen, animations, film and image • I can add animated subtitles to my film to further enhance my creation	iMovie Movie Maker Videorama Explain Everything Doink Greenscreen
	Photography and Digital Art	• I can crop and edit a picture to remove items, add backgrounds, merge 2 photos • I can evaluate and discuss images explaining effects and filters that have been used to enhance the media	iPad Camera and Markup Notes Pic Collage
	Sound	• I can add a voice over and edit sound clips (volume, pitch, fade, effect) to use in a film or radio broadcast (podcast) • Compose and record a soundtrack that can be added to a film/drama project	Voice Memos Garageband Audacity

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National Curriculum Objective	Strand	Skills/Knowledge	Resources/Apps/Links
Year 6 – Computer Science			
• 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	**Computational Thinking**	• I can write precise algorithms for use when programming • I can decompose a design or code to focus on specific parts • I can recognise and make use of patterns in my design and code • I can critically evaluate my work and suggest improvements	Scratch Code Club Makey Makey Micro-bit Coding apps
	Coding and Programming	• I can use a range of sequence, selection and repetition commands to implement my design (IF, THEN, FOREVER) • I can identify the need for, and work with, variables (TIMER/SCORE) • I can identify and write generic code for use across multiple projects • I can critically evaluate my work and suggest improvements	Scratch Code Club Makey Makey Micro-bit Coding apps
	Computer Networks	• I understand what HTML is and recognize HTML tags • I know a range of HTML tags and can remix a web page • I can create a webpage using HTML	

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Year 6 – Digital Literacy (E4S)

National Curriculum Objective	Strand	Skills/Knowledge
• Co2/1.7 use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable e behaviour; identify a range of ways to report concerns about content and contact • 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	**Online content and critical thinking**	• Describe how some online information can be opinion but appear to be fact and consider why this may happen • Demonstrate ways to find out what is fact before acting upon it; making safe choices. • Know of the rules around using someone else's work or ideas
	Self-image, mental Health and well being	• Consider what is unique about me that is part of who i am and how this may be affected by what i put online • Explore how parts of identity can be seen as positive or negative and recognise ways to have a positive impact on others • Know that identity online can be presented in many ways including gender • Consider how the media can shape ideas about gender • Be able to challenge gender representation online and consider how this impacts on our offline identity • Know a range of organisations that would provide a safe space for me to talk about how i see myself compared to others • To know how to seek help when feelings are impacted by the way others appear online
	Staying safe online	• Be able to use online tools such as flagging, reporting and blocking to mitigate the risk • Consider how we keep information safe when using apps identify online content and ideas ownership
	Online reputation	• Explain how what i write online can affect my school, family or social group, or future opportunities • Know what the recommended age limits are for different social media sites, apps and games (focus on social media) • Understand how my digital footprint can impact on my future • Build an online presence using a range of technologies that provide a positive representation of who i am
	Online relationships and cyberbullying	• Give examples of how to make positive contributions to online debates and discussions • Explain how and why people who you communicate with online may try to influence others negatively e.g. Grooming; radicalisation; coercion • Describe the initial signs of potentially problematic situations e.g. Grooming, cyberbullying • Identify and demonstrate actions to support others who are experiencing difficulties online • Describe a range of different types of cyberbullying behaviours and assess when these are occurring (e.g. Homophobic, racist, gender, exclusion)