Computing Skills 2023 - 2024

EYFS

Hardware

- Learning how to operate a camera to take photographs of meaningful creations or moments.
- Learning how to explore and tinker with hardware to develop familiarity and introduce relevant vocabulary.
- Recognising and identifying familiar letters and numbers on a keyboard.
- Developing basic mouse skills such as moving and clicking.

Computational Thinking

- Using logical reasoning to understand simple instructions and predict the outcome.

Programming

- Following instructions as part of practical activities and games.
- Learning to give simple instructions.
- Experimenting with programming a Bee-bot/Blue- bot and learning how to give simple commands.
- Learning to debug instructions, with the help of an adult, when things go wrong.

Using Software

- Using a simple online paint tool to create digital art

Using Data

- Representing data through sorting and categorising objects in unplugged scenarios.
- Representing data through physical pictograms.
- Exploring branch databases through physical games

Digital Literacy

- Recognising that a range of technology is used for different purposes.
- Learning to log in and log out.

Computing Skills 2023 - 2024

YEAR 1

Computer Systems and Networks (How to log on & search safely)

- 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)

Programming (Scratch Jr)

- I understand what algorithms are
- I can write simple algorithms
- I understand the sequence of algorithms is important
- I can debug simple algorithms
- I understand that algorithms are implemented as programs on digital devices
- I can create a simple program e.g. sequence of instructions for a Bee Bot
- I can use sequence in programs I can locate and fix bugs in my program

Creative Media (Painting – Paint.net)

- 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

Creative Media (Photography - Snapseed)

- I can use a paint/drawing app to create a digital image
- I can edit a photo with simple tools
- I can begin to cut out an image to layer on another image.

Data and Information (Pictograms using J2E)

- 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.
- I can record myself explaining what I have done and what it shows me.

Bramley Vale Primary School

Computing Skills 2023 - 2024

Creative Media (Writing using J2E)

- 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.
- I can add labels to an image
- I can order images to create a simple storyboard.
- I can create a simple spider diagram.
- I can sequence a series of pictures to explain my understanding of a topic.

Computing Skills 2023 - 2024

YEAR 2

Computer Systems and Networks (What is a computer?)

Creative Media (Writing)

- 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.

Programming: Scratch JR

- 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 implement simple algorithms on digital devices (Bee Bots, Apps: Daisy the Dino)
- I can debug algorithms
- I understand programs execute by following precise and unambiguous instructions
- I can create programs on a variety of digital devices
- I can debug programs of increasing complexity
- I can use logical reasoning to predict the outcome of simple programs

Creative Media (Painting – Using Paint)

- 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

Creative Media (Photography – Using Snapseed)

- I can add voice labels to an image.
- I can add a voice recording to a storyboard.
- I can add speech bubbles to an image to show what a character thinks.
- I can import images to a project from the web and camera roll

Computing Skills 2023 - 2024

Data and Information (Pictograms using J2E)

- 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

Computing Skills 2023 - 2024

YEAR 3

Data and Information (Sequencing Sounds – Audacity)

- use software to record, create and edit sounds
- change recorded sounds, volume, duration and pauses
- collect audio from a variety of resources including own recordings and internet clips
- use a digital device to record sounds and present audio
- trim, arrange and edit audio levels to improve quality

Programming: Stop-Frame animation (I-Movies & Da Vinci Resolve)

- I can add filters and stickers to enhance an animation of a character.
- I can create an animation to tell a story with more than one scene.
- I can add my own pictures to my story animation.
- I can create multiple animations of an image and edit these together.
- I can create a simple stop motion animation.
- I can explain how an animation/flip book works
- I can create animations of faces to speak in role with more life-like realistic outcomes.
- I can improve stop motion animation clips with techniques like onion skinning.
- I can use animation tools in presenting software to create simple animations.

Computer Systems & Networking

- I understand that computers 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)

Programming: Scratch Code-It

- I can create algorithms for use when programming
- I can decompose tasks (such as animations) into separate steps to create an algorithm
- I understand abstraction is focusing on important information
- I can identify patterns in an algorithm I can use repetition in algorithms
- I can design and create programs
- I can write programs that accomplish specific goals
- I can use repetition in programs I can work with various forms of input

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Computer Systems & Networking (Digital literacy – MS Publisher)

- 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.
- I can create an interactive comic with sounds, formatted text and video.
- I can annotate an image with videos
- I can create a simple web page.
- I can create a simple digital timeline/mindmap

Data and Information (Powerpoint)

- I can create a new presentation.
- I can change the background to the slides.
- I can adapt the slides to suit the presentation I am doing.
- I can add pictures into my presentation.
- I can add hyperlinks into my work (before within the presentation and to outside links)
- I can timings to my presentation.

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YEAR 4

Creative Media (Snapseed / IMovie)

- I can take multiple animations of a character I have created and edit them together for a longer video.
- I can use software to create a 3D animated story.
- I can use line draw tool to create animations.
- I can record animations of different characters and edit them together to create an interview.
- 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

Programming: Further programming with Scratch

- I can use abstraction to focus on what's important in my design
- I can write increasingly more precise algorithms for use when programming.
- I can use simple selection in algorithms
- I can use logical reasoning to detect and correct errors in programs
- I can use simple selection in programs
- I can work with various forms of output
- I can use logical reasoning to systematically detect and correct errors in programs
- I can work with various forms of output

Data and Information (Excel – Data Logging)

- 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.
- I can create a feelings chart exploring a story or character's feelings.
- I can create my own online multiple-choice questionnaire.
- 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

Computational thinking

- 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

Computing Skills 2023 - 2024

Creative Media (Word)

- 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.
- I can combine digital images from different sources, objects, and text to make a final piece of a 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
- I can create an interactive quiz eBook introducing hyperlinks.
- I can create an eBook with text, images and sound.
- I can create a presentation demonstrating my understanding with a range of media.
- I can create a digital timeline / mind map and include different media - sound and video

Computing Skills 2023 - 2024

YEAR 5

Online safety (I-vengers & PHSE lessons throughout the year – in AS E-safety folder / Barefoot Computing)

- reflect on their own digital footprint and behaviour online
- identify what is appropriate and inappropriate behaviour on the internet, recognise the term cyberbullying
- agree and follow sensible online safety rules, e.g. taking pictures, sharing information, storing passwords
- seek help from an adult when they see something that is unexpected or worrying
- demonstrate understanding of age-appropriate websites and adverts
- protect their password and other personal information
- be a good online citizen and friend
- judge what sort of privacy settings might be relevant to reducing different risks
- seek help from an adult when they see something that is unexpected or worrying
- discuss scenarios involving online risk

Programming - Control Technology (Crumble)

- I can solve problems by decomposing them into smaller parts
- I can use selection in algorithms
- I can recognise the need for conditions in repetition within algorithms
- I can use logical reasoning to explain how a variety of algorithms work
- I can use logical reasoning to detect and correct errors in algorithms
- I can evaluate my work and identify errors
- I can create programs by decomposing them into smaller parts
- I can use selection in programs
- I can use conditions in repetition commands
- I can work with variables
- I can create programs that control or simulate physical systems
- I can evaluate my work and identify errors

Creating Media (Sound / Audio Editing - Garage Band & Audacity)

- I can collaborate with peers using online tools, e.g. blogs, Google Drive, Office 365
- I can create and export an interactive presentation including a variety of media, animations, transitions and other effects.
- I can create an interactive guide to a image by embedding digital content and publishing it online.
- I can create a webpage and embed video.

Computer systems and networks (E-mail)

- I know what email is
- I can add an address into the address bar
- I can attach photos / documents to my email
- I understand the safety implications of sending emails.
- I can understand what to do if an email does not send properly (or is bounced back)
- I understand how messages can make a long XXXXXX

Computing Skills 2023 - 2024

Webpage Design (HTML)

- I can use a range of sequence, selection and repletion commands combined with variables as required to implement my design
- I can create procedures to hide complexity in programs
- I can identify and write generic code for use across multiple projects
- I can critically evaluate my work and suggest improvements
- I can identify and use basic HTML tags (See Computer Networks objectives)
- 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
- I can create a web site which includes a variety of media.
- I can design an app prototype that links multimedia pages together with hyperlinks.
- I can choose applications to communicate to a specific audience.
- I can evaluate my own content and consider ways to improvements.

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YEAR 6

Computer systems and networks

- I understand how we view web pages on the Internet
- I use search technologies effectively
- I understand that web spiders index the web for search engines
- I appreciate how pages are ranked in a search engine

Computer systems and networks

- I can describe how computers work and communicate with each other
- I can discuss how the network works within my school
- I can problem solve basic computing issues (sound / display / keyboard / mouse)
- I can adapt the way I work to take account of my objective and the tools available

Big data 1 (Data Bases – Microsoft Forms)

- 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
- I can edit and format difference cells in a spreadsheet.

Big data 2

- I can discuss the Internet of Things and how this is a positive thing
- I can discuss the use of big data in the modern world (AI / GPS / SIM / RFID)
- I can discuss how to keep my data safe
- I can discuss how my school is set up to use big data

Control Technology - Robots

- I can recognise, and make use, of patterns across programming projects
- I can write precise algorithms for use when programming
- I can identify variables needed and their use in selection and repetition
- I can decompose code into sections for effective debugging
- I can critically evaluate my work and suggest improvements

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Creating Media (Sway)

- 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
- I can confidently choose the best application to demonstrate my learning.
- I can format text to suit a purpose.
- I can publish my documents online regularly and discuss the audience and purpose of my content.
- 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)
- I can mix animations and videos recordings of myself to create video interviews.
- I can plan, script and create a 3D animation to explain a concept or tell a story.
- I can choose and create different types of animations to best explain my learning.