Computing at St Martin's C of E Primary School

By the end of YEAR 1 children should know:

Computer Networks
- that technology is something that helps us
- how to locate examples of technology in the classroom
- the main parts of a computer
- how to use a mouse/trackpad to click and drag and open a program
- how to use a mouse to create a picture
- how to type their name on the keyboard

Creating Media - Video Creation
- how to select and record a voiceover
- how to highlight and zoom into images as I record.

Data Handling
- how to sort images or text into two or more categories on a digital device
- how to collect data on a topic
- how to create a tally chart and pictogram
- how to record myself explaining what I have done and what it shows me.

Computational Thinking
- what algorithms are
- how to write simple algorithms
- that the sequence of algorithms is important
- how to debug simple algorithms

Coding/Programming
- how to create a simple programme on a digital device
- how to use sequences in programmes
- how to locate and fix bugs in my programme

Key Vocabulary

Animation/Video creation
search, select, rearrange, title, text, record, pause, undo, zoom, pan, highlight

Computer Science
App, programme, code algorithm, sequence, order, bug, fix, precise, Digital, programme, code

Data Handling
sort, background, data, emoji, image, edit, shape, table, resize, drag, save

Word Processing
Space bar, delete, return key, enter, mouse, trackpad, arrow keys, cursor, select

Key Skills – Word Processing

How to type words quickly and correctly on a digital device

What the spacebar and delete button do?

How to move to a new line

Digital Literacy

Education For a Connected World

Computing at St Martin's C of E Primary School

By the end of YEAR 2 children should know:

Computer Networks
- How to identify examples of computers and describe uses
- a computer is a part of IT
- what school IT is used for
- examples of information technology
- common types of technology
- how IT devices work together and why we use IT
- I can list different uses of information technology
- the need to use IT in different ways

Creating Media - Photography
- How to edit a photo with simple tools
- How to begin to cut out an image and layer it onto another image
- how to cut images with accuracy

Animation/Video Creation
Data Handling
- how to sort digital objects into a range of charts using software
- how to orally record themselves explaining what the data shows

Computational Thinking
- How to use logical reasoning to predict the outcome of algorithms
- How to debug algorithms
- That decomposition is breaking objects/processes down

Coding/Programming
- how programmes will follow precise instructions
- How to create programmes using different digital devices
- How to debug programmes with increasing complexity
- How to use logical reasoning to predict outcomes of simple programmes

Key Vocabulary

Photography
Upload image, edit, filter, cut-out, add, remove, resize, export

Computer Science
Bee Bot, app, programme, code, algorithm, sequence, decompositions, debug, precise, logical reasoning, prediction,

Data Handling
Background, upload, lock, text, labels, format, font, emoji, record, audio, caps lock, cut, copy, paste, image

Word Processing
Cut, copy, paste Caps Lock, image, save, editing, highlight

Digital Literacy

Education For a Connected World

Key Skills – Word Processing
-how to leave just one space between words
- how to select words and letters
-how to copy and paste images and text
-how to type a capital letter
-how to add images to my written text

Computing at St Martin's C of E Primary School

By the end of YEAR 3 children should know:

Computer Networks
- that the computers in a school are connected together in a network
- Understand why computers are networked Video Creation
- I know how to sequence clips of mixed media in a timeline and record a voiceover

Creating Media – Animations/presentations
- how to create a simple stop motion animation.
- how to explain how an animation/flip book works
- 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.
- how to create an interactive comic with sounds, formatted text and video.

Data Handling
- how to create my own sorting diagram and complete a data handling activity with it using images and text.
- how to create a feelings chart exploring a story or character's feelings.

Computational Thinking
- how to create algorithms for my programming projects
- how to decompose projects (such as an animation) into steps to create an algorithm
- understand abstraction is focusing on important information
- how to identify patterns in an algorithm

Coding/Programming
- how to design and then create a program
- how to create a sequence of code
- how to evaluate their program
- the objects in a Scratch project (sprites, backdrops)
- that objects in Scratch have attributes (linked to)
- that commands in Scratch are represented as blocks
- that each sprite is controlled by the commands I choose
- How to explore a new programming environment
- How to identify that commands have an outcome
- How to explain that a program has a start
- How to recognise that a sequence of commands can have an order
- How to change the appearance of my project
- How to create a project from a task description

Digital Literacy

Education For a Connected World

Key Vocabulary

Animation/Video creation
Record, camera, layers, import, image, erase, resize, trim, layout, template, format, media, audio recording
Computer Science
Network, server, client, LAN (Local Area Network), switch
Data Handling
Graph, axis, upload, record, label, pen tool
Word Processing
Touch type, edit, format, font, shadows, duplicate, undo, redo

Key Skills – Word Processing
- How to use index fingers on keyboard home keys, use left index for a/s/d/f/g and right index for h/j/k/l
- How to edit the style and effect of my text
- How to use cut, copy, and paste to quickly duplicate and organise text

Computing at St Martin's C of E Primary School

By the end of YEAR 4 children should know:

Computer Networks
- The internet is a worldwide network
- How webpages are viewed across the internet
- The difference between the internet and the world wide web

Creating Media – Presentation/ Video Creation
- How to confidently use green screen to add an animated background
- How to import images to a project from the web and camera roll
- How to sequence clips of mixed media in a timeline and record a voiceover
- How to evaluate and improve the best video tools to best explain my understanding

Data Handling
- How to create and publish my own online questionnaire and analyse the results

Computational Thinking
- How to use abstraction to focus on what's important in their design
- How to write more precise algorithms for use when programming
- How to use simple selection and repetition in algorithms
- How to use logical reasoning to detect and correct errors

Coding/Programming
- How to use repetition in programmes
- How to use simple selection
- How to work with a variety of inputs and outputs
- How to use logical reasoning to systematically detect and correct errors in programmes
- how to identify that accuracy in programming is important
- how to create a program in a text-based language
- how to explain what 'repeat' means
- how to modify a count-controlled loop to produce a given outcome
- how to decompose a task into small steps
- how to create a program that uses count-controlled loops to produce a given outcome

Digital Literacy

Education For a Connected World

Key Vocabulary

Animation/Video creation
Import, resize, font, effects, adjust, layout, opacity, transparent, align, style, spacing slide video trim volume, icon, search, record, order, soundtrack, layout, split screen.

Computer Science
Internet, router, data, webpage, submarine cable, logical reasoning algorithmic thinking selection, repeat, input, output, loop, forever loop, count controlled loop, selection, condition

Data Handling
Online, questionnaire, formatting, multiple, choice, checkbox, share

Word Processing
Crop, source, spell check, thesaurus CTRL, documents,

Key Skills – Word Processing
- How to combine digital images from different sources
- Use text shortcuts such as cut, copy and paste to delete and organise text.
- How to use font sizes appropriately for audience and purpose.
- Use spell check, and thesaurus

Computing at St Martin's C of E Primary School

By the end of YEAR 5 children should know:

Computer Networks
- How web spiders index the web for search engines
- How pages are ranked in a search engine

Creating Media - Video Creation/
- How to use cutaway and split screen tools
- How to evaluate and improve the best video tools to explain my understanding
- How to further improve green screen clips using crop and resize and explore more creative ways to use the tool (wearing green clothes and the masking tool)
- How to take multiple animations of a character they have created and edit them together for a longer video
- How to record animations of different characters and edit them together to create an interview

Data Handling
- How to use simple formulae to solve different calculations (=SUM)
- How to edit and format different cells in a spreadsheet

Computational Thinking
- How to use logical reasoning to explain how a variety of algorithms work
- How to evaluate the effectiveness of algorithms
- How to solve problems by decomposing them into smaller parts
- How to use selection in algorithms

Coding/Programming
- How to create programmes by decomposing them into smaller parts
- How to use a variety of selection commands in programmes
- How to use conditions in repeated commands
- How to work with variables
- How to create programmes that control or simulate physical systems
- How to evaluate my work and identify errors

Digital Literacy

Education For a Connected World

Key Vocabulary

Animation/Video creation
Cutaway, split screen, chroma key, crop, resize, masking, timeline, trim, import, export, trim, clips, media library, subtitles,

Computer Science
Search engine, spiders, index, ranked, ranking algorithm, keyword, data, prediction, condition, conditional loop, control, variables, condition,

Data Handling
Spreadsheet, cell, row, column, formula, sum, data, value, calculation

Word Processing
Import, export, hyperlinks, animate, italics, bold, bullets

Key Skills – Word Processing
- How to apply other useful effects to my documents such as hyperlinks
- How to import sounds to accompany and enhance the text in my document
- How to organise and reorganise text on screen to suit purpose

Computing at St Martin's C of E Primary School

By the end of YEAR 6 children should know:

Computer Networks
- What HTML is and recognise HTML tags
- A range of HTML tags and remix a webpage
- How to create a webpage using HTML

Creating Media – Websites/Animation
- how to review an existing website and consider its structure
- how to plan the features of a web page
- how to consider the ownership and use of images (copyright)
- how to recognise the need to preview pages
- how to outline the need for a navigation path
- how to recognise the implications of linking to content owned by other people
- how to plan, script and create 3D animations to explain a concept or tell a story
- how to choose and create different types of animations to best explain my learning

Data Handling
- How to create a data set in a spreadsheet
- How to build a data set in a spreadsheet
- How to explain that formulas can be used to produce calculated data
- How to apply formulas to data
- How to create a spreadsheet to plan an event
- How to choose suitable ways to present data

Computational Thinking
- How to decompose a design or code to focus on specific parts
- How to use abstraction to hide complexity in my design or code
- How to recognise and make use of patterns in my design and code
- How to critically evaluate my work and suggest improvements

Coding/Programming
- How to use a range of sequences, selection and repetition to implement my design
- How to identify the need for, and work with, variables
- How to create procedures to hide complexity in programmes
- How to critically evaluate my work and suggest improvements.

Digital Literacy

Education For a Connected World

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Key Vocabulary

Animation/Video creation
Staging, aspect ratio, computer generated imagery (CGI) angles, overlay, cut scene
Computer Science
HTML (Hyper Text Markup Language), opening tag, closing tag, code, generalisation, pattern, modify, remix, critical, procedure, abstraction, conditional loop, logic, operator, implement
Data Handling
Spreadsheet, cell, row, column, formula, sum, data, value, calculation
Word Processing
Alignment, tabs, toolbar, layout, shift key,

Key Skills – Word Processing
- How to confidently choose the best application to demonstrate my learning
- How to format text to suit purpose
- How to publish my documents and discuss the audience and purpose of my content