**Computing Progression of Skills at Marwood Primary School**

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| Reception | Autumn A | Spring A | Summer A | Autumn B | Spring B | Summer B  |

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**Computing Progression of Skills at Marwood Primary School**

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| KS1 | Autumn A | Spring A | Summer A | Autumn B | Spring B | Summer B  |
|  | **Y1 – Computer Skills** **Y2 – Using the internet**  | **Y1 – Online Safety** **Y2 – Online Safety**  | **Y1 – Programming Toys** **Y2 – Programming Turtle Logo/Scratch Jr**  | **Y1 - Using & Applying** **Y2- Using & Applying**  | **Y1 – Word Processing** **Y2 – Presentation Skills**  | **Y1 - Painting** **Y2 – Computer Art** |

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|  | **MULTIMEDIA****TEXT AND IMAGES** Children begin to understand the particular purposes technology can be used for and that by adding text and images you can communicate with technology. Children develop their skills in typing, selecting tools and organising information.a.add text strings, text boxes and show and hide objects and images, manipulating the features;b.use various tools, such as brushes, pens, eraser, stamps and shapes, and set the size, colour and shape;c.use applications and devices in order to communicate ideas, work, messages and demonstrate control;d.save, retrieve and organise work;Use key vocabulary to demonstrate knowledge and understanding in this strand: paint, colour, brush, tools, settings, undo, redo, text, image, size, poster, launch, application, software, window, minimise, restore, size, move, screen, close, click, drag, log on, log off, keyboards, keys, mouse, click, button, double click, drag, present. | **ONLINE SAFETY**Children begin to consider their activity on the internet and learn about ways to keep themselves safe and why it is important to do so. They also compare appropriate and inappropriate activity on the internet and decide what to do next.a.identify what things count as personal information;b.identify what is appropriate and inappropriate behaviour on the internet;c.agree and follow sensible online safety rules, e.g. taking pictures, sharing information, storing passwords;d.seek help from an adult when they see something that is unexpected or worrying;e.demonstrate how to safely open and close applications and log on and log off from websites;f. use key vocabulary to demonstrate knowledge and understanding in this strand: safe, meet, accept, reliable, tell, online, trusted, adult, information, safety, personal, key, question, tell, safe, share, stranger, danger, internet. | **CODING AND PROGRAMMING** Children begin to understand their influence on technology by developing their programming skills to determine output. They begin to understand that an algorithm is a series of steps for solving problems and a code is a series of steps that machines can execute. They begin to explore debugging, predicting when codes may not work and changing them.1. give commands one at a time to control direction and movement, including straight, forwards, backwards, turn;
2. control the nature of events: repeat, loops, single events and add and delete features;
3. give a set of instructions to follow and predict what will happen;
4. improve/change their sequence of commands by debugging;

use key vocabulary to demonstrate knowledge and understanding in this strand: algorithm, instruction, order, debug, program, turn, left, right, clockwise, anticlockwise, blocks, sequence, project, repeat, repeat forever, invisible, grow, shrink. | **TECHNOLOGY IN OUR LIVES** Children begin to make links to how they use technology outside of the classroom. They begin to think about the benefits of using technology in their lives, making links to learning about online safety.1. recognise ways that technology is used in the home and community, e.g. taking photos, blogs, shopping;
2. use links to websites to find information;
3. recognise age-appropriate websites;
4. use safe search filters;

use key vocabulary to demonstrate knowledge and understanding in this strand: filter, Google, search engine, image, keyboard, email, internet, subject, address, communicate, sender, safe, secure. | **MULTIMEDIA****TEXT AND IMAGES** Children begin to understand the particular purposes technology can be used for and that by adding text and images you can communicate with technology. Children develop their skills in typing, selecting tools and organising information.a.add text strings, text boxes and show and hide objects and images, manipulating the features;b.use various tools, such as brushes, pens, eraser, stamps and shapes, and set the size, colour and shape;c.use applications and devices in order to communicate ideas, work, messages and demonstrate control;d.save, retrieve and organise work;Use key vocabulary to demonstrate knowledge and understanding in this strand: paint, colour, brush, tools, settings, undo, redo, text, image, size, poster, launch, application, software, window, minimise, restore, size, move, screen, close, click, drag, log on, log off, keyboards, keys, mouse, click, button, double click, drag, present. | **MULTIMEDIA****TEXT AND IMAGES** Children begin to understand the particular purposes technology can be used for and that by adding text and images you can communicate with technology. Children develop their skills in typing, selecting tools and organising information.a.add text strings, text boxes and show and hide objects and images, manipulating the features;b.use various tools, such as brushes, pens, eraser, stamps and shapes, and set the size, colour and shape;c.use applications and devices in order to communicate ideas, work, messages and demonstrate control;d.save, retrieve and organise work;Use key vocabulary to demonstrate knowledge and understanding in this strand: paint, colour, brush, tools, settings, undo, redo, text, image, size, poster, launch, application, software, window, minimise, restore, size, move, screen, close, click, drag, log on, log off, keyboards, keys, mouse, click, button, double click, drag, present. |
|  | **TECHNOLOGY IN OUR LIVES**Children begin to make links to how they use technology outside of the classroom. They begin to think about the benefits of using technology in their lives, making links to learning about online safety.1. recognise ways that technology is used in the home and community, e.g. taking photos, blogs, shopping;
2. use links to websites to find information;
3. recognise age-appropriate websites;
4. use safe search filters;

use key vocabulary to demonstrate knowledge and understanding in this strand: filter, Google, search engine, image, keyboard, email, internet, subject, address, communicate, sender, safe, secure. |  |  |  | **MULTIMEDIA SOUND AND MOTION** Children begin to develop their creativity using technology through recording sound. Children will also begin to develop their editing skills and control of the tools.1. use software to record sounds;
2. change sounds recorded;
3. save, retrieve and organise work;

use key vocabulary to demonstrate knowledge and understanding in this strand: commands, add sound. |  |

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| LKS2 | Autumn A | Spring A | Summer A | Autumn B | Spring B | Summer B  |
|  | **Drawing and Desktop publishing**  **Internet research and communication**  | **Online safety** **Presentation skills**  **Turtle logo and Scratch**  | **Word Processing Using and applying skills**  **Multimedia iMovie – Creating a news report**  | **Word Processing**  **Scratch: Questions and Quizzes**  | **Programming Turtle Logo** **Online safety**  | **Using and applying skills** **Animation: I can animate on ipads to create moving figures.**  |
|  | **MULTIMEDIA TEXT AND IMAGES** Children develop their skills of formatting using keyboard commands, organising their work to demonstrate effect. In LKS2, they will have the opportunity to express themselves more through digital technology, art, PowerPoint and posters. Children should continue to demonstrate control when operating tools as in KS1.1. create different effects with different technological tools, demonstrating control;
2. use appropriate keyboard commands to amend text on a device;
3. use applications and devices in order to communicate ideas, work, and messages;
4. save, retrieve and evaluate work, making amendments;
5. insert a picture/text/graph/hyperlink from the internet or a personal file;

use key vocabulary to demonstrate knowledge and understanding in this strand: draw, object, shape, line, line colour, fill colour, group, ungroup, font, size, text box, format, image, wrap text, plan, link, image, object, link, hyperlink, minimise, restore, size, move, screen, split, create, organise, file, folder, close, exit, search, print, password, screenshot, snipping tool, shift, undo, redo, menu, dictionary, highlight, cursor, toolbar, spellcheck. | **MULTIMEDIA TEXT AND IMAGES** Children develop their skills of formatting using keyboard commands, organising their work to demonstrate effect. In LKS2, they will have the opportunity to express themselves more through digital technology, art, PowerPoint and posters. Children should continue to demonstrate control when operating tools as in KS1.1. create different effects with different technological tools, demonstrating control;
2. use appropriate keyboard commands to amend text on a device;
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4. save, retrieve and evaluate work, making amendments;
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use key vocabulary to demonstrate knowledge and understanding in this strand: draw, object, shape, line, line colour, fill colour, group, ungroup, font, size, text box, format, image, wrap text, plan, link, image, object, link, hyperlink, minimise, restore, size, move, screen, split, create, organise, file, folder, close, exit, search, print, password, screenshot, snipping tool, shift, undo, redo, menu, dictionary, highlight, cursor, toolbar, spellcheck. | **MULTIMEDIA TEXT AND IMAGES** Children develop their skills of formatting using keyboard commands, organising their work to demonstrate effect. In LKS2, they will have the opportunity to express themselves more through digital technology, art, PowerPoint and posters. Children should continue to demonstrate control when operating tools as in KS1.1. create different effects with different technological tools, demonstrating control;
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|  | **TECHNOLOGY IN OUR LIVES** Children refer to online safety rules when discussing technology in their lives. They are able to navigate between websites and use safe search terms on trusted search engines. They become more confident in using email for communication, including attaching and saving files from emails.1. explain ways to communicate with others online;
2. describe the world wide web as the part of the internet that contains websites;
3. add websites to a favourites list;
4. use search tools to find and use an appropriate website and content;
5. use strategies to improve results when searching online;

use key vocabulary to demonstrate knowledge and understanding in this strand: filter, Google, search engine, image, keyboard, email, subject, address, communicate, sender, safe, secure, internet, world wide web, social media. | **CODING AND PROGRAMMING** Children build on their programming skills by solving problems and programming commands to achieve a specific outcome. They begin to write programs, explain algorithms and identify errors in their work.a.use logical thinking to solve an open-ended problem by breaking it up into smaller parts;b.write a program, putting commands into a sequence to achieve a specific outcome;c.give a set of instructions to follow and predict what will happen;d.keep testing a program and recognise when it needs to be debugged;e.use variables to create an effect, e.g. repetition, if, when, loop;f.use key vocabulary to demonstrate knowledge and understanding in this strand: decompose, decomposing, logical sequence, flowchart, sprite, block, command, algorithm, answer, correct, errors, program, algorithm, instructions, commands, forward (fd), left (lt), right (rt), move, turn, clear screen (cs), variable. | **MULTIMEDIA SOUND AND MOTION** Children develop their editing skills further by cropping, organising and arranging film clips. They are able to share work and offer feedback and ideas for improvement with animation and film, giving their opinion on which software to use. In LKS2, children also look at the history of animation and reflect upon the changes over time.1. use software to record, create and edit sounds and capture still images;
2. change recorded sounds, volume, duration and pauses;
3. use software to capture video for a purpose;
4. crop and arrange clips to create a short film;
5. plan an animation and move items within each animation for playback;

use key vocabulary to demonstrate knowledge and understanding in this strand: audio, sound, video, movie, embed, link, file format, animate, animation, still image, thaumatrope, zoetrope, zoopraxiscope, stereoscope, flip book, frame, onion skinning, loop, frame rate, record, stop, play, stop motion, stop frame. | **CODING AND PROGRAMMING** Children build on their programming skills by solving problems and programming commands to achieve a specific outcome. They begin to write programs, explain algorithms and identify errors in their work.a.use logical thinking to solve an open-ended problem by breaking it up into smaller parts;b.write a program, putting commands into a sequence to achieve a specific outcome;c.give a set of instructions to follow and predict what will happen;d.keep testing a program and recognise when it needs to be debugged;e.use variables to create an effect, e.g. repetition, if, when, loop;f.use key vocabulary to demonstrate knowledge and understanding in this strand: decompose, decomposing, logical sequence, flowchart, sprite, block, command, algorithm, answer, correct, errors, program, algorithm, instructions, commands, forward (fd), left (lt), right (rt), move, turn, clear screen (cs), variable. | **TECHNOLOGY IN OUR LIVES** Children refer to online safety rules when discussing technology in their lives. They are able to navigate between websites and use safe search terms on trusted search engines. They become more confident in using email for communication, including attaching and saving files from emails.1. explain ways to communicate with others online;
2. describe the world wide web as the part of the internet that contains websites;
3. add websites to a favourites list;
4. use search tools to find and use an appropriate website and content;
5. use strategies to improve results when searching online;

use key vocabulary to demonstrate knowledge and understanding in this strand: filter, Google, search engine, image, keyboard, email, subject, address, communicate, sender, safe, secure, internet, world wide web, social media. | **MULTIMEDIA SOUND AND MOTION** Children develop their editing skills further by cropping, organising and arranging film clips. They are able to share work and offer feedback and ideas for improvement with animation and film, giving their opinion on which software to use. In LKS2, children also look at the history of animation and reflect upon the changes over time.1. use software to record, create and edit sounds and capture still images;
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use key vocabulary to demonstrate knowledge and understanding in this strand: audio, sound, video, movie, embed, link, file format, animate, animation, still image, thaumatrope, zoetrope, zoopraxiscope, stereoscope, flip book, frame, onion skinning, loop, frame rate, record, stop, play, stop motion, stop frame. |
| ONLINE SAFETY | Via assemblies and ongoing through continuous provision and embedding in computing  |
| Children become more aware of their digital footprint by reflecting on their experience on the internet. They are able to understand more about age-appropriate websites and adverts and how adverts are used by companies. Children are also introduced to the concept of plagiarism and citation.1. reflect on their own digital footprint and behaviour online;
2. identify what is appropriate and inappropriate behaviour on the internet, recognising the term cyberbullying;
3. agree and follow sensible online safety rules, e.g. taking pictures, sharing information, storing passwords;
4. seek help from an adult when they see something that is unexpected or worrying;
5. demonstrate understanding of age-appropriate websites and adverts;

use key vocabulary to demonstrate knowledge and understanding in this strand: safe, meet, accept, reliable, tell, online, trusted, adult, information, safety, personal, internet, world wide web, communicate, message, social media, email, password, cyberbullying/bullying, plagiarism, profiles, account, private, public. |

**Computing Progression of Skills at Marwood Primary School**

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| UKS2 | Autumn A | Spring A | Summer A | Autumn B | Spring B | Summer B  |
|  | **MODELLING:** **3D SKETCH-UP****SPREADSHEETS – Enterprise accounts** | **PROGRAMMING:** **Microbit** | **TECHNOLOGY IN OUR LIVES: Fake news****PUBLISHER/ SLIDES****Research & present info** | **RADIO STATIONS** | **FILM MAKING: Animation** | **KODU****USING & APPLYING – Launching a game: advertising / websites** |
|  | **MULTIMEDIA TEXT AND IMAGES** Children begin to look at new software, creating 3D models and learning how to orbit, zoom and develop their editing skills further. They become more confident in inserting links, images and formatting text to create effect.1. use the skills already developed to create content using unfamiliar technology;
2. select, use and combine the appropriate technology tools to create effect;
3. review and improve their own work and support others to improve their work;
4. save, retrieve and evaluate their work, making amendments;
5. insert a picture/text/graph/hyperlink from the internet or personal file;

Use key vocabulary to demonstrate knowledge and understanding in this strand: window, layout, text, font, colour, format, heading, hyperlink, 2D shape, 3D shape, orbit, pan, zoom, eraser, dimension, measurement, guide. | **CODING AND PROGRAMMING** Children design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; they solve problems by decomposing them into smaller parts. They use sequence, selection, and repetition in programs and work with variables and various forms of input and output. They use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.Children can:1. use external triggers and infinite loops to demonstrate control;
2. follow a sequence of instructions, e.g. in a flowchart and modify a flowchart using symbols;
3. use conditional statements and edit variables;
4. decompose a problem into smaller parts to design an algorithm for a specific outcome and use this to write a program;
5. keep testing a program and recognise when it needs to be debugged;

use key vocabulary to demonstrate knowledge and understanding in this strand: flowchart, algorithm, control, output, symbol, start, stop, delay, process, decision, loop, backdrop, script, block, repeat, commentary, sequence, consequence, debug, program, Kodu, world, object, tool palette, program environment, smooth, flatten, raise. | **TECHNOLOGY IN OUR LIVES** Children 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. They use search technologies effectively, appreciate how results are selected and ranked, and are discerning in evaluating digital content.Children can:1. search for information using appropriate websites and advanced search functions within Google;
2. use strategies to check the reliability of information (cross-check with another source such as books);
3. talk about the way search results are selected and ranked;
4. check the reliability of a website, including the photos on site;
5. tell you about copyright and acknowledge the sources of information;

use key vocabulary to demonstrate knowledge and understanding in this strand: world wide web, search, search engine, advanced search, results, Google, browser, terms of use, bias, authority, citation, plagiarism, source, website, secure, https, site, domain, website, browser, address bar. | **MULTIMEDIA SOUND AND MOTION** Children begin to look more into multimedia broadcasting, learning new skills including recording jingles, podcasts and narration. They become more confident in post-production with editing, trimming and refining their work based on plans they have made.1. collect audio from a variety of resources including own recordings and internet clips;
2. use a digital device to record sounds and present audio;
3. trim, arrange and edit audio levels to improve quality;
4. publish their animation and use a movie editing package to edit/refine and add titles;

use key vocabulary to demonstrate knowledge and understanding in this strand: audio, record, edit, play stop, skip, waveform, input, output, record, edit, play podcast, digital content, downloadable, backing track, voiceover, mute, gain, production, post-production, documentary, project, evaluation, screening, ceremony, upload. | **MULTIMEDIA SOUND AND MOTION** Children begin to look more into multimedia broadcasting, learning new skills including recording jingles, podcasts and narration. They become more confident in post-production with editing, trimming and refining their work based on plans they have made.1. collect audio from a variety of resources including own recordings and internet clips;
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2. follow a sequence of instructions, e.g. in a flowchart and modify a flowchart using symbols;
3. use conditional statements and edit variables;
4. decompose a problem into smaller parts to design an algorithm for a specific outcome and use this to write a program;
5. keep testing a program and recognise when it needs to be debugged;

use key vocabulary to demonstrate knowledge and understanding in this strand: flowchart, algorithm, control, output, symbol, start, stop, delay, process, decision, loop, backdrop, script, block, repeat, commentary, sequence, consequence, debug, program, Kodu, world, object, tool palette, program environment, smooth, flatten, raise. |
|  | **HANDLING DATA** in UKS2 focuses on selecting the correct method to display data and using software such as spreadsheets. Children also learn how to check the accuracy of data and compare data for a specific purpose.1. construct data on the most appropriate application;
2. know how to interpret data, including spotting inaccurate data and comparing data;
3. use keyboard shortcuts and functions to input data on spreadsheets and create formulas for spreadsheets;
4. add data to an existing database;

use key vocabulary to demonstrate knowledge and understanding in this strand: Google Docs, insert, table, spreadsheet, cell, row, column, formula/formulas, calculate, format, edit, insert, ascending, descending. |  |  | **HANDLING DATA** in UKS2 focuses on selecting the correct method to display data and using software such as spreadsheets. Children also learn how to check the accuracy of data and compare data for a specific purpose.1. construct data on the most appropriate application;
2. know how to interpret data, including spotting inaccurate data and comparing data;
3. use keyboard shortcuts and functions to input data on spreadsheets and create formulas for spreadsheets;
4. add data to an existing database;

use key vocabulary to demonstrate knowledge and understanding in this strand: Google Docs, insert, table, spreadsheet, cell, row, column, formula/formulas, calculate, format, edit, insert, ascending, descending. |   |  |
| ONLINE SAFETY | Via assemblies and ongoing through continuous provision as an embedded theme in computingChildren use technology safely, respectfully and responsibly. They recognise acceptable/unacceptable behaviour and identify a range of ways to report concerns about content and contact.Children can:1. protect their password and other personal information;
2. be a good online citizen and friend;
3. judge what sort of privacy settings might be relevant to reducing different risks;
4. seek help from an adult when they see something that is unexpected or worrying;
5. discuss scenarios involving online risk;

use key vocabulary to demonstrate knowledge and understanding in this strand: spam, link, privacy, virus, scam, phishing, inbox, junk, sender, subject, secure, safe, account, online, private, social media, adverts, cyberbullying, reporting, anonymous, victim, fraud/fraudulent, policy, private/personal. |