Intent:

At Loxwood, our children build the knowledge required to successfully navigate themselves through a constantly advancing digital era.
 Our children will:

- Become safe and responsible members of the digital community, including learning the appropriate use of social media, and understand and value appropriate internet use.
- Develop digital literacy including online safe, inspired and confident children.
- Have a broad, deep understanding of computing and how it links to children's lives.
- Apply the fundamental principles and concepts of computer science.

We understand the diverse needs of our school community and strive for all pupils to be given the same experience (cultural capital). At Loxwood, we ensure our children receive a variety of opportunities for consolidation, challenge and variety. They develop analytical problem-solving skills and learn to evaluate and apply information technology. It also enables them to become responsible, competent, confident and creative users of information technology.

In Computing, we incorporate our core values (**Resilience, Collaboration, Curiosity, Creativity and Kindness**) to ensure that our children develop as **life-long learners and responsible citizens**. Through Quality First Teaching and having high expectations, we ensure all children (including disadvantaged and SEND) are accessing the curriculum by constantly reviewing and adapting teaching.

Implementation:

We have a coherent and sequenced curriculum building progression of knowledge and skills every year. EYFS have their own topic cycle but work alongside Key Stage 1. The rest of the school work in pairs – Year 1 and Year 2, Year 3 and Year 4 and then Year 5 and Year 6 and follow a two-year topic cycle. These year groups plan together weekly. Through the sequence of lessons, we intend to inspire pupils to develop a love of the digital world, and see its place in their future. At Loxwood, we ensure our teachers are confident in delivering Quality First Teaching to all our pupils; including lesson plans and resources that enable children to build on prior knowledge at the same time as introducing new skills and challenges. Where appropriate, cross-curricular links are used to support other areas of learning including our three whole school themes Discover, Explore and Create.

In the Early Years, we prepare the children with the foundation of knowledge and skills when using multimedia and technology. In KS1, the focus is on developing algorithms, programming and how technology can be used safely and purposefully. In KS2, lessons still focus on algorithms, programming and coding but in a more complex way and for different purposes. In addition, children develop their knowledge of computing networks, internet services and the safe and purposeful use of the internet and technology. Data handling is featured more heavily in UKS2. Skills learnt through KS1 and LKS2 are used to support data presentation.

Impact:

At Loxwood, learning in Computing will be meaningful, provide awe and use real-life and first hand experiences wherever possible so that children can make meaningful connections. Teachers will have high expectations and quality evidence will be presented in a variety of forms. Children will use digital and technological vocabulary accurately, alongside a progression in their technical skills. They will be confident using a range of hardware and software and will produce high-quality purposeful products. Children will see the digital world as part of their world, extending beyond school, and understanding that they have choices to make. They will be confident and respectful citizens going on to lead happy and healthy digital lives.

Computing Whole School Topic Overview

	Cycle A (2022-2023)			Cycle B (2023-2024)		
	Autumn	Spring	Summer	Autumn	Spring	Summer
EYFS	This is Me! / Night and Day	Traditional tales / People who help us	Growing / Moving on, journeys and adventures	This is Me! / Night and Day	Traditional tales / People who help us	Growing / Moving on, journeys and adventures
Year 1 & 2	Online Safety Basic ICT Skills (Y1) Presentation skills (Y2) (Multimedia)	Beebots (Y1) (Coding and Programming) Turtle Logo and Scratch (Y2) (Coding and Programming)	Computer Art (Multimedia) David Hockney Technology in our lives.	Online Safety Basic ICT Skills (Y1) Presentation skills (Y2) (Multimedia)	Beebots (Y1) (Coding and Programming) Turtle Logo and Scratch (Y2) (Coding and Programming)	Computer Art (Multimedia) Hal Lasko Technology in our lives.
Year 3 & 4	Online Safety (Y3 & Y4 separate)	Coding Turtle Logo & Scratch (Y3) Scratch (Y4)	Using & Applying To use soft wear to design a cartoon story	Online safety (Y3 & Y4 separate) Online Searchers & Surfers (Y3) Communication & Collaboration (Y4)	Scratch Learning loops (Y3) Animation (Y4)	Drawing & Desktop Publishing (Y3) Coding Turtle Logo (Y4)
Year 5 & 6	Online Safety	Scratch Developing Games (Y5) Animated Stories (Y6)	Radio (Y5) Film Making (Y6)	Online Safety 3D Modelling: Sketch up	Scratch Developing Games (Y5) Animated Stories (Y6)	Using and Applying

Progression in Computing:

	EYFS	Year 1 &2	Year 3 &4	Year 5 & 6
Multimedia	Understanding the World (UW) - Understanding the world involves guiding children to make sense of their physical world and their community. The frequency and range of children's personal experiences increases their knowledge and sense of the world around them – from visiting parks, libraries and museums to meeting important members of society such as police officers, nurses and firefighters. In addition, listening to a broad selection of stories, non-fiction, rhymes and poems will foster their understanding of our culturally, socially, technologically and ecologically diverse world. As well as building important knowledge, this extends their familiarity with words that support understanding across domains. Enriching and widening children's vocabulary will support later reading comprehension Understanding the world: Technology: • Can create content such as a video recording, stories, and/or draw a picture on screen • Develops digital literacy skills by being able to access, understand and interact with a range of technologies • Can use the internet with adult supervision to find and retrieve information of interest to them Children will: • Use the interactive white board to play games and use software that supports other areas of learning. • Children will use Ipads to take photos and listen to stories. Ipad, tablet, interactive white board, pen, mouse, remote control, screen There is no Early Learning Goal for Computing	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. Children use technology purposefully to create, organise, store, manipulate and retrieve digital content. • add text strings, text boxes and show and hide objects and images, manipulating the features; • use various tools, such as brushes, pens, eraser, stamps and shapes, and set the size, colour and shape; • use applications and devices in order to communicate ideas, work, messages and demonstrate control; • 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.	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 select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information. • create different effects with different technological tools, demonstrating control; • use appropriate keyboard commands to amend text on a device; • use applications and devices in order to communicate ideas, work, and messages; • save, retrieve and evaluate work, making amendments; • 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.	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 • Use text, photo, sound and video editing tools to refine work. • Use the skills already developed to create content using unfamiliar technology. • Select, use and combine the appropriate technology tools to create effects that will have an impact on others. • Select an appropriate online or offline tool to create and share ideas. • Review and improve work and support others to improve their work. • Talk about audience, atmosphere and structure when planning a particular outcome. • Confidently identify the potential of unfamiliar technology to increase creativity. • Combine a range of media, recognising the contribution of each to achieve a particular outcome. • Explain the selection of a particular online tool for a specific purpose. • Be digitally discerning when evaluating the effectiveness of my work and the work of others. 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.
Handling Data	Understanding the World (UW) - Understanding the world involves guiding children to make sense of their physical world and their community. The frequency		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	Pupils should be taught to 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

	and range of children's personal experiences increases their knowledge and sense of the world around them – from visiting parks, libraries and museums to meeting important members of society such as police officers, nurses and firefighters. In addition, listening to a broad selection of stories, non-fiction, rhymes and poems will foster their understanding of our culturally, socially, technologically and ecologically diverse world. As well as building important knowledge, this extends their familiarity with words that support understanding across domains. Enriching and widening children's vocabulary will support later reading comprehension Understanding the World: Technology • Can create content such as a video recording, stories, and/or draw a picture on screen Children will: • Develop their understanding of different computing software and how to use them paint, colour, brush, tools, keyboards, keys, mouse, click, button, double click. There is no Early Learning Goal for Computing		that accomplish given goals, including collecting, analysing, evaluating and presenting data and information. • talk about the different ways data can be organised; • sort and organize information to use in other ways; • search a ready-made database to answer questions; Use key vocabulary to demonstrate knowledge and understanding in this strand: Google Docs, insert, table.	content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information • construct data on the most appropriate application; • know how to interpret data, including spotting inaccurate data and comparing data; • use keyboard shortcuts and functions to input data on spreadsheets and create formulas for spreadsheets; • add data to an existing database; Google Docs, insert, table, spreadsheet, cell, row, column, formula/formulas, calculate, format, edit, insert, ascending, descending.
Technology in Our Lives	Understanding the World (UW) - Understanding the world involves guiding children to make sense of their physical world and their community. The frequency and range of children's personal experiences increases their knowledge and sense of the world around them – from visiting parks, libraries and museums to meeting important members of society such as police officers, nurses and firefighters. In addition, listening to a broad selection of stories, non-fiction, rhymes and poems will foster their understanding of our culturally, socially, technologically and ecologically diverse world. As well as building important knowledge, this extends their familiarity with words that support understanding across domains. Enriching and widening	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. Children recognise common uses of technology beyond school. They use technology safely and respectfully, keeping personal information private; they identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies. • recognise ways that technology is used in the home and community, e.g. taking photos, blogs, shopping; • use links to websites to find information; • recognise age-appropriate websites; • use safe search filters;	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. • explain ways to communicate with others online; • describe the world wide web as the part of the internet that contains websites; • add websites to a favourites list; • use search tools to find and use an appropriate website and content; • use strategies to improve results when searching online;	Pupils should be taught to understand computer networks; how they can provide multiple services, such as the world wide web; and opportunities they offer for communication & collaboration. Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content • Describe different parts of the internet. • Use different online communication tools for different purposes. • Use a search engine to find appropriate information and check its reliability. • Recognise and evaluate different types of information I find on the World Wide Web. • Describe the different parts of a webpage. • Find out who the information on a webpage belongs to.

	children's vocabulary will support later reading comprehension Understanding the World: Technology • Completes a simple program on electronic devices • Uses ICT hardware to interact with age appropriate computer software • Develops digital literacy skills by being able to access, understand and interact with a range of Technologies Children will: • Use the interactive white board to play games and use software that supports other areas of learning. • Children will use Ipads to take photos and listen to stories paint, colour, brush, tools, keyboards, keys, mouse, click, button, double click. There is no Early Learning Goal for Computing	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.	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.	Use different internet services for different purposes. • Describe how information is transported on the internet. • Select an appropriate tool to communicate and collaborate online. • Talk about the way search results are selected and ranked. • Check the reliability of a website. • Talk about copyright and acknowledge the sources of information found online. 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.
Coding and Programming	Understanding the World (UW) - Understanding the world involves guiding children to make sense of their physical world and their community. The frequency and range of children's personal experiences increases their knowledge and sense of the world around them – from visiting parks, libraries and museums to meeting important members of society such as police officers, nurses and firefighters. In addition, listening to a broad selection of stories, non-fiction, rhymes and poems will foster their understanding of our culturally, socially, technologically and ecologically diverse world. As well as building important knowledge, this extends their familiarity with words that support understanding across domains. Enriching and widening children's vocabulary will support later reading comprehension Children will: • give commands one at a time to control direction and movement, including straight, forwards, backwards, turn;	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. Children understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions. They create, debug and use logical reasoning to predict the behaviour of simple programs. • give commands one at a time to control direction and movement, including straight, forwards, backwards, turn; • control the nature of events: repeat, loops, single events and add and delete features; • give a set of instructions to follow and predict what will happen; • improve/change their sequence of commands by debugging; Use key vocabulary to demonstrate knowledge and understanding in this strand: algorithm, instruction,	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. • use logical thinking to solve an open-ended problem by breaking it up into smaller parts; • write a program, putting commands into a sequence to achieve a specific outcome; • give a set of instructions to follow and predict what will happen; • keep testing a program and recognise when it needs to be debugged; • use variables to create an effect, e.g. repetition, if, when, loop; Use key vocabulary to demonstrate knowledge and understanding in this strand: decompose,	Design, write and debug programs that accomplish specific goals, including controlling or stimulating physical systems; solve problems by decomposing them into smaller parts; Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. • Deconstruct a problem into smaller steps, recognising similarities to solutions used before. • Explain and program each of the steps in my algorithm. • Evaluate the effectiveness and efficiency of my algorithm while I continually test the programming of that algorithm. • Recognise when they need to use a variable to achieve a required output. • Use a variable and operators to stop a program. • Use different inputs (including sensors) to control a device or onscreen action and predict what will happen. • Use logical reasoning to detect and correct errors in algorithms and programs. flowchart, algorithm, control, output, symbol, start, stop, delay, process, decision, loop, backdrop, script, block, repeat, commentary,

	• give a set of instructions to follow and predict what will happen; Understanding the World: Technology • Can create content such as a video recording, stories, and/or draw a picture on screen paint, colour, brush, tools, keyboards, keys, mouse, click, button, double click. There is no Early Learning Goal for Computing	order, debug, program, turn, left, right, clockwise, anticlockwise, blocks, sequence, project, repeat, repeat forever, invisible, grow, shrink.	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.	sequence, consequence, debug, program, Kodu, world, object, tool palette, program environment, smooth, flatten, raise.
Online Safety	Understanding the World (UW) - Understanding the world involves guiding children to make sense of their physical world and their community. The frequency and range of children's personal experiences increases their knowledge and sense of the world around them – from visiting parks, libraries and museums to meeting important members of society such as police officers, nurses and firefighters. In addition, listening to a broad selection of stories, non-fiction, rhymes and poems will foster their understanding of our culturally, socially, technologically and ecologically diverse world. As well as building important knowledge, this extends their familiarity with words that support understanding across domains. Enriching and widening children's vocabulary will support later reading comprehension Understanding the World: Technology • Can use the internet with adult supervision to find and retrieve information of interest to them Personal, Social and Emotional; development: Sense of self • Is proactive in seeking adult support and able to articulate their wants and needs Children will: • Use educational internet sites that are age appropriate and safe to use. • Children will understand that they need to seek help if they see something unexpected or worrying	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. Children can use technology safely and respectfully, keeping personal information private; they identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies. • identify what things count as personal information; • identify what is appropriate and inappropriate behaviour on the internet; • 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 how to safely open and close applications and log on and log off from websites; 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.	Use technology safely, respectfully and responsibly. They recognise acceptable/unacceptable behaviour and identify a range of ways to report concerns about content and contact. • reflect on their own digital footprint and behaviour online; • identify what is appropriate and inappropriate behaviour on the internet, recognising 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; 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.	Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour, identify a range of ways to report concerns about content and contact and be discerning in evaluating digital content. • Protecting passwords and other personal information. • The consequences of sharing too much information about themselves online. • Supporting friends to protect themselves and make good choices online, including reporting concerns to an adult. • The consequences of spending too much time online or on a game . • The consequences to themselves and others of not communicating kindly and respectfully. • The lasting effect of online abuse and bullying on the victims – not being a bystander • Protecting computers or devices from harm on the internet. 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

	• Children will know what appropriate and inappropriate behaviour on the internet is. paint, colour, brush, tools, keyboards, keys, mouse, click, button, double click. Personal, Social and Emotional ELG: -Building Relationships Children at the expected level of development will: -Work and play cooperatively and take turns with others; - Form positive attachments to adults and friendships with peers; - Show sensitivity to their own and to others' needs There is no Early Learning Goal for Computing			
Key	EYFS Framework Early Learning Goal Non Statutory Birth to 5 matters document Vocabulary	National Curriculum Objectives Children can: Vocabulary		