The Belham Primary School

Computing Progression

Reception

Early Learning Goals:

Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. (expressive arts)

Be confident to try new activities and show independence, resilience and perseverance in the face of challenge. (PSED)

Explain the reasons for rules, know right from wrong and try to behave accordingly. (Managing self)

Develop their small motor skills so that they can use a range of tools competently, safely and confidently. (physical development)

National curriculum guidance

Understanding the World

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.

Expressive Arts and Design

The development of children's artistic and cultural awareness supports their imagination and creativity. It is important that children have regular opportunities to engage with the arts, enabling them to explore and play with a wide range of media and materials. The quality and variety of what children see, hear and participate in is crucial for developing their understanding, self-expression, vocabulary and ability to communicate through the arts. The frequency, repetition and depth of their experiences are fundamental to their progress in interpreting and appreciating what they hear, respond to and observe.

The Belham Primary School

Computing Progression

Through adult led and continuous provision

e-Safety	Programming	Handling Data	Multimedia	Technology in our Lives
• I can ask an adult when I want to use the Internet. • I can tell an adult when something worrying or unexpected happens while I am using the Internet. • I can be kind to my friends. • I can talk about the amount of time I spend using a computer / tablet / game device. • I am careful with technology devices.	• I can use simple software to make something happen. • I can make choices about the buttons and icons I press, touch or click on.	• I can tell you about different kinds of information such as pictures, video, text and sound.	• I can move objects on a screen. • I can create shapes and text on a screen. • I can use technology to show my learning.	• I can tell you about technology that is used at home and in school. • I can operate simple equipment. • I can use a safe part of the Internet to play and learn.

Vocabulary – internet, game tablet, device, button, click, press, video, sound, screen, technology, computer, phone.

KS1 NC
Key stage 1 Pupils should be taught to: • understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions • create and debug simple programs • use logical reasoning to predict the behaviour of simple programs • use technology purposefully to create, organise, store, manipulate and retrieve digital content • recognise common uses of information technology beyond school • use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.

Curriculum design

The approach

Coherence and flexibility

The Teach Computing Curriculum is structured in units. For these units to be coherent, the lessons within a unit must be taught in order. However, across a year group, the units themselves do not need to be taught in order, with the exception of 'Programming' units, where concepts and skills rely on prior learning and experiences.

Knowledge organisation

The Teach Computing Curriculum uses the National Centre for Computing Education's computing taxonomy to ensure comprehensive coverage of the subject. This has been developed through a thorough review of the KS1–4 computing programme of study, and the GCSE and A level computer science specifications across all awarding bodies. All learning outcomes can be described through a high-level taxonomy of ten strands, ordered alphabetically as follows:

- **Algorithms** — Be able to comprehend, design, create, and evaluate algorithms
- **Computer networks** — Understand how networks can be used to retrieve and share information, and how they come with associated risks
- **Computer systems** — Understand what a computer is, and how its constituent parts function together as a whole
- **Creating media** — Select and create a range of media including text, images, sounds, and video
- **Data and information** — Understand how data is stored, organised, and used to represent real-world artefacts and scenarios
- **Design and development** — Understand the activities involved in planning, creating, and evaluating computing artefacts
- **Effective use of tools** — Use software tools to support computing work
- **Impact of technology** — Understand how individuals, systems, and society as a whole interact with computer systems
- **Programming** — Create software to allow computers to solve problems
- **Safety and security** — Understand risks when using technology, and how to protect individuals and systems

The taxonomy provides categories and an organised view of content to encapsulate the discipline of computing. Whilst all strands are present at all phases, they are not always taught explicitly.

The Belham Primary School

Computing Progression

YEAR ONE

Online Safety
Teach Computing is linked to DfE Education for Connected World
https://assets.publishing.service.gov.uk/media/5efa05b4e90e075c5492d58c/UKCIS_Education_for_a_Connected_World_.pdf
In Year One children learn about –

- **Self -Image & Identity (4-7)**
- **Copyright & Ownership (4-7)**
- **Health & Wellbeing (4-7)**
- **Privacy & Security (4-7)**

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Technology around us	Digital Painting	Moving a robot	Grouping Data	Digital Writing	Programming animations
Vocabulary - mouse, trackpad, keyboard, screen, double-click, typing.	Vocabulary - paint program, tool, paintbrush, erase, fill, undo, shape tools, line tool, fill tool, undo tool, colour, brush style, brush size, pictures, painting, computers	Vocabulary- , forwards, backwards, turn, clear, go, commands, instructions, directions, left, right, route, plan, algorithm, program.	Vocabulary - object, label, group, search, image, property, colour, size, shape, value, data set, more, less, most, fewest, least, the same	Vocabulary - word processor, keyboard, keys, letters, type, numbers, space, backspace, text cursor, capital letters, toolbar, bold, italic, underline, mouse, select, font, undo, redo, format, compare, typing, writing.	Vocabulary ScratchJr, command, sprite, compare, programming, area, block, joining, start, run, program, background, delete, reset, algorithm, predict, effect, change, value, instructions, design.
Learners will develop their understanding of technology and how it can help them in their everyday lives. They will start to become familiar with the different` components of a computer by developing their keyboard and mouse	Learners will develop their understanding of a range of tools used for digital painting. They then use these tools to create their own digital paintings, while gaining	Learners will explore using individual commands, both with other learners and as part of a computer program. They will identify what each floor robot command does and use that	This unit introduces pupils to data and information. They will begin by using labels to put objects into groups, and labelling these groups. Pupils will demonstrate that they can count a small number of objects, before and after the objects are grouped.	Learners will familiarise themselves with typing on a keyboard and begin using tools to change the look of their writing, and then they will consider the differences between using a computer and	This unit introduces learners to on-screen programming through ScratchJr. Learners will explore the way a project looks by investigating sprites and backgrounds.

skills. Learners will also consider how to use technology responsibly.	inspiration from a range of artists' work. The unit concludes with learners considering their preferences when painting with and without the use of digital devices.	knowledge to start predicting the outcome of programs. Learners are also introduced to the early stages of program design through the introduction of algorithms.	They will then begin to demonstrate their ability to sort objects into different groups, based on the properties they choose. Finally, pupils will use their ability to sort objects into different groups to answer questions about data.	writing on paper to create text.	They will use programming blocks to use, modify, and create programs. Learners will also be introduced to the early stages of program design through the introduction of algorithms.

The Belham Primary School

Computing Progression

YEAR TWO					
Teach Computing is linked to DfE Education for Connected World https://assets.publishing.service.gov.uk/media/5efa05b4e90e075c5492d58c/UKCIS_Education_for_a_Connected_World_.pdf **In Year Two children learn about –** - **Self -Image & Identity (4-7)** - **Copyright & Ownership (4-7)** - **Health & Wellbeing (4-7)** - **Privacy & Security (4-7)**					
Autumn 1	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
Information Technology around us	**Digital Photography**	**Making Music**	**Pictograms**	**Robot Algorithms**	**Programming Quizzes**
Vocabulary - Information technology (IT), computer, barcode, scanner/scan	Vocabulary - device, camera, photograph, capture, image, digital, landscape, portrait, framing, subject, compose, light sources, flash, focus, background, editing, filter, format, framing, lighting,	Vocabulary - music, quiet, loud, feelings, emotions, pattern, rhythm, pulse, pitch, tempo, rhythm, notes, create, emotion, beat, instrument, open, edit.	Vocabulary - more than, less than, most, least, common, popular, organise, data, object, tally chart, votes, total, pictogram, enter, data, compare, objects, count, explain, attribute, group, same, different, conclusion, block diagram, sharing	Vocabulary - instruction, sequence, clear, unambiguous, algorithm, program, order, prediction, artwork, design, route, mat, debugging, decomposition	Vocabulary - program, run, start, outcome, predict, blocks, design, actions, sprite, project, modify, change, algorithm, build, match, compare, debug, features, evaluate, decomposition, code.
Learners will develop their understanding of what information technology (IT) is and will begin to identify examples. They will discuss where they have seen IT in school and beyond, in settings such as shops,	Learners will learn to recognise that different devices can be used to capture photographs and will gain experience capturing, editing, and improving photos. Finally, they will use this knowledge to	Learners will explore how music can make them think and feel. They will make patterns and use those patterns to make music with both percussion instruments and digital tools. They will also create different	Learners will begin to understand what data means and how this can be collected in the form of a tally chart. They will learn the term 'attribute' and use this to help them organise data. They will then progress onto	This unit develops learners' understanding of instructions in sequences and the use of logical reasoning to predict outcomes. Learners will use given commands in different orders to investigate	This unit initially recaps on learning from the Year 1 Scratch Junior unit 'Programming B - Programming animations'. Learners begin to understand that sequences of commands have an outcome and make

hospitals, and libraries. Learners will then investigate how IT improves our world, and they will learn about the importance of using IT responsibly.	recognise that images they see may not be real.	rhythms and tunes, using the movement of animals for inspiration. Finally, learners will share their creations and compare creating music digitally and non-digitally.	presenting data in the form of pictograms and finally block diagrams. Learners will use the data presented to answer questions.	how the order affects the outcome. They will also learn about design in programming. They will develop artwork and test it for use in a program. They will design algorithms and then test those algorithms as programs and debug them.	predictions based on their learning. They use and modify designs to create their own quiz questions in ScratchJr and realise these designs in ScratchJr using blocks of code. Finally, learners evaluate their work and make improvements to their programming projects.

The Belham Primary School

Computing Progression

KS2 NC

Key stage 2 Pupils should be taught to:

- design, write and debug programs that accomplish specific goals, including controlling or simulating 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
- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
- 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
- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- 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
- use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

The Belham Primary School

Computing Progression

YEAR THREE

Teach Computing is linked to DfE Education for Connected World
https://assets.publishing.service.gov.uk/media/5efa05b4e90e075c5492d58c/UKCIS_Education_for_a_Connected_World_.pdf
In Year Three children learn about –

- **Copyright & Ownership (7-11)**
- **Managing Online Information (7-11)**

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Systems and Connecting Computers	Stop-frame animation	Publishing	Branching Databases	Sequencing Sounds	Events and actions in programs
Vocabulary - digital device, input, process, output, program, digital, non-digital, connection, network, switch, server, wireless access point, cables, sockets	Vocabulary - animation, flip book, stopframe, frame, sequence, image, photograph, setting, character, events, onion skinning, consistency, evaluation, delete, media, import, transition.	Vocabulary - text, images, advantages, disadvantages, communicate, font, style, landscape, portrait, orientation, placeholder, template, layout, content, desktop publishing, copy, paste, purpose, benefits	Vocabulary attribute, value, questions, table, objects, branching, database, objects, equal, even, separate, structure, compare, order, organise, selecting, information, decision tree.	Vocabulary - Scratch, programming, blocks, commands, code, sprite, costume, stage, backdrop, motion, turn, point in direction, go to, glide, sequence, event, task, design, run the code, order, note, chord, algorithm, bug, debug, code.	Vocabulary - motion, event, sprite, algorithm, logic, move, resize, extension block, pen up, set up, pen, design, action, debugging, errors, setup, code, test, debug, actions.
Learners will develop their understanding of digital devices, with an initial focus on inputs, processes, and outputs. They will also compare digital	Learners will use a range of techniques to create a stop-frame animation using tablets. Next, they will apply those skills to create a story-based animation. This unit will conclude with learners	During this unit, learners will become familiar with the terms 'text' and 'images' and understand that they can be	Learners will develop their understanding of what a branching database is and how to create one. They will use yes/no questions	This unit explores the concept of sequencing in programming through Scratch. It begins with an introduction to the programming environment, which will be new to most learners.	This unit explores the links between events and actions, whilst consolidating prior learning relating to sequencing. Learners will begin by moving a sprite in four directions

and non-digital devices. Next, learners will be introduced to computer networks, including devices that make up a network's infrastructure, such as wireless access points and switches. Finally, learners will discover the benefits of connecting devices in a network.	adding other types of media to their animation, such as music and text.	used to communicate messages. They will use desktop publishing software and consider careful choices of font size, colour and type to edit and improve premade documents. Learners will be introduced to the terms 'templates', 'orientation', and 'placeholders' and begin to understand how these can support them in making their own template for a magazine front cover. They will start to add text and	to gain an understanding of what attributes are and how to use them to sort groups of objects. Learners will create physical and on-screen branching databases. To conclude the unit, they will create an identification tool using a branching database, which they will test by using it. They will also consider real-world applications for branching databases.	They will be introduced to a selection of motion, sound, and event blocks which they will use to create their own programs, featuring sequences. The final project is to make a representation of a piano.	(up, down, left and right). They will then explore movement within the context of a maze, using design to choose an appropriately sized sprite. This unit also introduces programming extensions, through the use of pen blocks. Learners are given the opportunity to draw lines with sprites and change the size and colour of lines. The unit concludes with learners designing and coding their own maze tracing program.

		images to create their own pieces of work using software. Learners will look at a range of page layouts thinking carefully about the purpose of these and evaluate how and why desktop publishing is used in the real world.			

The Belham Primary School

Computing Progression

YEAR FOUR

Teach Computing is linked to DfE Education for Connected World
https://assets.publishing.service.gov.uk/media/5efa05b4e90e075c5492d58c/UKCIS_Education_for_a_Connected_World_.pdf
In Year Four children learn about –

- **Copyright & Ownership (7-11)**
- **Self-Image & Identity (7-11)**

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
The internet - Computing Systems and Networks	Creating media - Audio production	Photo Editing	Repetition in shapes	Data logging	Repetition in Games
Vocabulary - internet, network, router, security, switch, server, wireless access point (WAP), website, web page, web address, routing, web browser, World Wide Web, content, links, files, use, download, sharing, ownership, permission, information, accurate, honest, content, adverts	Vocabulary - audio, microphone, speaker, headphones, input device, output device, sound, podcast, edit, trim, align, layer, import, record, playback, selection, load, save, export, MP3, evaluate, feedback.	Vocabulary - image, edit, digital, crop, rotate, undo, save, adjustments, effects, colours, hue, saturation, sepia, vignette, image, retouch, clone, select, combine, made up, real, composite, cut, copy, paste, alter, background, foreground, zoom, undo, font.	Vocabulary - Logo (programming environment), program, turtle, commands, code snippet, algorithm, design, debug, pattern, repeat, repetition, count-controlled loop, value, trace, decompose, procedure..	Vocabulary - data, table, layout, input device, sensor, logger, logging, data point, interval, analyse, dataset, import, export, logged, collection, review, conclusion.	Vocabulary - Scratch, programming, sprite, blocks, code, loop, repeat, value, infinite loop, count-controlled loop, costume, repetition, forever, animate, event block, duplicate, modify, design, algorithm, debug, refine, evaluate.
Learners will apply their knowledge and understanding of networks, to appreciate the internet as a network of networks which need to be kept secure.	Learners will identify the input device (microphone) and output devices (speaker or headphones) required to work with sound digitally.	Learners will develop their understanding of how digital images can be changed and edited, and how they can then be resaved and reused. They will consider the impact	Learners look at repetition and loops within programming. Pupils will create programs by planning, modifying, and testing commands to create	Pupils will consider how and why data is collected over time. Pupils will consider the senses that humans use to experience the environment and how computers can	This unit explores the concept of repetition in programming using the Scratch environment. It begins with a Scratch activity similar to that

They will learn that the World Wide Web is part of the internet, and will be given opportunities to explore the World Wide Web for themselves in order to learn about who owns content and what they can access, add, and create. Finally, they will evaluate online content to decide how honest, accurate, or reliable it is, and understand the consequences of false information	Learners will discuss the ownership of digital audio and the copyright implications of duplicating the work of others. In order to record audio themselves, learners will use Audacity to produce a podcast, which will include editing their work, adding multiple tracks, and opening and saving the audio files. Finally, learners will evaluate their work and give feedback to their peers.	that editing images can have, and evaluate the effectiveness of their choices.	shapes and patterns. They will use Logo, a text-based programming language.	use special input devices called sensors to monitor the environment. Pupils will collect data as well as access data captured over long periods of time. They will look at data points, data sets, and logging intervals. Pupils will spend time using a computer to review and analyse data. Towards the end of the unit, pupils will pose questions and then use data loggers to automatically collect the data needed to answer those questions.	carried out in Logo in Programming unit A, where learners can discover similarities between two environments. Learners look at the difference between count-controlled and infinite loops, and use their knowledge to modify existing animations and games using repetition. Their final project is to design and create a game which uses repetition, applying stages of programming design throughout.

The Belham Primary School

Computing Progression

YEAR FIVE					
Teach Computing is linked to DfE Education for Connected World https://assets.publishing.service.gov.uk/media/5efa05b4e90e075c5492d58c/UKCIS_Education_for_a_Connected_World_.pdf **In Year Three children learn about –** - **Managing Online Information (7-11)** - **Copyright & Ownership (7-11)** - **Self-Image & Identity (7-11)** - **Online Relationships (7-11)** - **Online Reputation (7-11)**					
Autumn 1	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
Sharing information Systems and Searching, Networks	Flat-file databases	Selection in physical computing	Video production	Vector Drawing	Making quizzes
Vocabulary - system, connection, digital, input, process, storage, output, search, search engine, refine, index, bot, ordering, links, algorithm, search engine optimisation (SEO), web crawler, content creator, selection, ranking	Vocabulary - database, data, information, record, field, sort, order, group, search, value, criteria, graph, chart, axis, compare, filter, presentation.	Vocabulary - microcontroller, USB, components, connection, infinite loop, output component, motor, repetition, count-controlled loop, Crumble controller, switch, LED, Sparkle, crocodile clips, connect, battery box, program, condition, Input, output, selection, action, debug, circuit, power, cell, buzzer	Vocabulary - video, audio, camera, talking head, panning, close up, video camera, microphone, lens, mid-range, long shot, moving subject, side by side, angle (high, low, normal), static, zoom, pan, tilt, storyboard, filming, review, import, split, trim, clip, edit, reshoot, delete, reorder, export, evaluate, share.	Vocabulary - vector, drawing tools, object, toolbar, vector drawing, move, resize, colour, rotate, duplicate/copy, zoom, select, align, modify, layers, order, copy, paste, group, ungroup, reuse, reflection	Vocabulary - Selection, condition, true, false, count-controlled loop, outcomes, conditional statement, algorithm, program, debug, question, answer, task, design, input, implement, test, run, setup, operator

The Belham Primary School

Computing Progression

Learners develop their understanding of computer systems and how information is transferred between systems and devices. Learners consider small-scale systems as well as large-scale systems. They explain the input, output, and process aspects of a variety of different real-world systems. Learners discover how information is found on the World Wide Web, through learning how search engines work (including how they select and rank results) and what influences searching, and through	This unit looks at how a flat-file database can be used to organise data in records. Pupils use tools within a database to order and answer questions about data. They create graphs and charts from their data to help solve problems. They use a real-life database to answer a question, and present their work to others.	In this unit, learners will use physical computing to explore the concept of selection in programming environment. Learners are introduced to conditions as a means of controlling the flow of actions and make use of their knowledge of repetition and conditions when introduced to the concept of selection (through the if, then structure). #Software review - use Scratch S1 /24	This unit gives learners the opportunity to learn how to create short videos in groups. As they progress through this unit, they will be exposed to topic-based language and develop the skills of capturing, editing, and manipulating video. Active learning is encouraged through guided questions and by working in small groups to investigate the use of devices and software. Learners are guided with step-by-step support to take their idea from conception to completion. At the	In this unit, learners start to create vector drawings. They learn how to use different drawing tools to help them create images. Learners recognise that images in vector drawings are created using shapes and lines, and each individual element in the drawing is called an object. Learners layer their objects and begin grouping and duplicating them to support the creation of more complex pieces of work. This unit is planned using the Google Drawings app, other alternative pieces of	In this unit, pupils develop their knowledge of selection by revisiting how conditions can be used in programs and then learning how the If... Then... Else structure can be used to select different outcomes depending on whether a condition is true or false. They represent this understanding in algorithms and then by constructing programs using the Scratch programming environment. They use their knowledge of writing programs and using selection to control outcomes to design a quiz in response to a given task and implement it as a program.

comparing different search engines.			teacher's discretion, the use of green screen can be incorporated into this unit. At the conclusion of the unit, learners have the opportunity to reflect on and assess their progress in creating a video.	software are available.	

The Belham Primary School

Computing Progression

YEAR SIX

Teach Computing is linked to DfE Education for Connected World
https://assets.publishing.service.gov.uk/media/5efa05b4e90e075c5492d58c/UKCIS_Education_for_a_Connected_World_.pdf
In Year Three children learn about –

- **Managing Online Information (7-11)**
- **Privacy & Security (7-11)**
- **Self-Image & Identity (7-11)**
- **Online Relationships (7-11)**
- **Online Reputation (7-11)**

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Internet communication	Webpage creation	Variables in games	Introduction to spreadsheets	3D modelling	Sensing movement (Programming B)
Vocabulary - communication, protocol, data, address, Internet Protocol (IP), Domain Name Server (DNS), packet, header, data payload, chat, explore, slide deck, reuse, remix, collaboration, internet, public, private, oneway, two-way, one-to-one, one-to-many.	Vocabulary - website, web page, browser, media, Hypertext Markup Language (HTML), logo, layout, header, media, purpose, copyright, fair use, home page, preview, evaluate, device, Google Sites, breadcrumb trail, navigation, hyperlink, subpage, evaluate, implication, external link, embed	Vocabulary - variable, change, name, value, set, design, event, algorithm, code, task, artwork, program, project, code, test, debug, improve, evaluate, share, assign, declare	Vocabulary - data, collecting, table, structure, spreadsheet, cell, cell reference, data item, format, formula, calculation, spreadsheet, input, output, operation, range, duplicate, sigma, propose, question, data set, organised, chart, evaluate, results, sum, comparison, software, tools.	Vocabulary - TinkerCAD, 2D, 3D, shapes, select, move, perspective, view, handles, resize, lift, lower, recolour, rotate, duplicate, group, cylinder, cube, cuboid, sphere, cone, prism, pyramid, placeholder, hollow, choose, combine, construct, evaluate, modify	Vocabulary - Micro:bit, MakeCode, input, process, output, flashing, USB, trace, selection, condition, if then else, variable, random, sensing, accelerometer, value, compass, direction, navigation, design, task, algorithm, step counter, plan, create, code, test, debug.
In this unit learners explore how data is transferred over the internet. Learners initially focus on addressing, before they move on to the makeup and structure of data packets. Learners then	This unit introduces learners to the creation of websites for a chosen purpose. Learners identify what makes a good web page and use this information to design and evaluate their own	This unit explores the concept of variables in programming through games in Scratch. First, learners find out what variables	This unit introduces the learners to spreadsheets. They will be supported in organising data into columns and rows to create their own data set. Learners will be taught the	Learners will develop their knowledge and understanding of using a computer to produce 3D models. Learners will initially familiarise themselves with working in a 3D	This unit is the final KS2 programming unit and brings together elements of all the four programming constructs: sequence from Year 3, repetition from Year 4, selection from Year 5, and

look at how the internet facilitates online communication and collaboration; they complete shared projects online and evaluate different methods of communication. Finally, they learn how to communicate responsibly by considering what should and should not be shared on the internet. Note: Some of the content in this unit was previously included in the Year 5 – 'Computer systems and networks' unit, so some learners may have already completed similar activities. Where this is the case, the context for the activity has been changed	website using Google Sites. Throughout the process learners pay specific attention to copyright and fair use of media, the aesthetics of the site, and navigation paths.	are and relate them to real-world examples of values that can be set and changed. Then they use variables to create a simulation of a scoreboard. In Lessons 2, 3, and 5, which follow the Use-Modify-Create model, learners experiment with variables in an existing project, then modify them, before they create their own project. In Lesson 4, learners focus on design. Finally, in Lesson 6, learners apply their knowledge of variables and	importance of formatting data to support calculations, while also being introduced to formulas and will begin to understand how they can be used to produce calculated data. Learners will be taught how to apply formulas that include a range of cells, and apply formulas to multiple cells by duplicating them. Learners will use spreadsheets to plan an event and answer questions. Finally, learners will create charts, and evaluate their results in comparison to questions asked.	space, moving, resizing, and duplicating objects. They will then create hollow objects using placeholders and combine multiple objects to create a model of a desk tidy. Finally, learners will examine the benefits of grouping and ungrouping 3D objects, then go on to plan, develop, and evaluate their own 3D model of a building.	variables (introduced in Year 6 – 'Programming A'). It offers pupils the opportunity to use all of these constructs in a different, but still familiar environment, while also utilising a physical device – the micro:bit. The unit begins with a simple program for pupils to build in and test within the new programming environment, before transferring it to their micro:bit. Pupils then take on three new projects in Lessons 2, 3, and 4, with each lesson adding more depth.

		design to improve their games in Scratch.			