

## Computing Rolling Programme

[Primary computing glossary](#)

### Year A

|                                                                                                                                           | Autumn                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Spring                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Summer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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| Cygnets R                                                                                                                                 | <p>Logging on<br/>Using a mouse pad<br/>Writing my name using a key-board<br/>Drawing a self-portrait using drawing software<br/>Use I-pads to take photographs and videos</p> <p>Computational thinking – algorithms and decomposition: Making pumpkin soup (Barefoot computing unit)</p>                                                                                                                                                                      | <p>Winter Warmers (Barefoot computing unit)</p> <p>Aspects covered:<br/>Algorithms<br/>Decomposition<br/>Creating<br/>Collaborating<br/>Tinkering<br/>Persevering</p> <p>Technology around us</p>                                                                                                                                                                                                                                                                                                     | <p>REC<br/>Boats Ahoy! (Barefoot computing unit)<br/>Aspects of computing covered:<br/>Algorithms and decomposition<br/>Logical thinking<br/>Tinkering<br/>Pattern</p> <p>Drawing tools – pattern and symmetry</p>                                                                                                                                                                                                                                                                                                                       |
| Kingfisher<br><a href="https://www.dlcorwall.org/computing-curriculum/year-2/">https://www.dlcorwall.org/computing-curriculum/year-2/</a> | <p><a href="#">Getting ready for computing</a><br/>Getting the laptops out safely<br/>Online safety<br/>Log on using class password<br/>Log off and shut down<br/>Open up paint/word</p> <p><b>Vocab: Information technology (IT), computer, barcode, scanner/scan</b></p> <p><a href="#">Creating Media – digital photography:</a><br/>Learners will learn to recognise that different devices can be used to capture photographs and will gain experience</p> | <p><a href="#">Programming A – Robot algorithms</a><br/>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 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.</p> | <p><a href="#">Creating Media – Digital Music</a><br/>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 rhythms and tunes, using the movement of animals for inspiration. Finally, learners will share their creations and compare creating music digitally and non-digitally.<br/><b>Vocab: music, quiet, loud, feelings, emotions, pattern, rhythm, pulse, pitch,</b></p> |

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|                                                                                                                                                | <p>capturing, editing, and improving photos. Finally, they will use this knowledge to recognise that images they see may not be real.</p> <p><b>Vocab:</b> device, camera, photograph, capture, image, digital, landscape, portrait, framing, subject, compose, light sources, flash, focus, background, editing, filter, format, framing, lighting,</p> | <p><b>Vocab:</b> instruction, sequence, clear, unambiguous, algorithm, program, order, prediction, artwork, design, route, mat, debugging, decomposition</p> <p><a href="#">Data and information - pictograms</a></p> <p>This unit introduces the learners to the term 'data'. 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 presenting data in the form of pictograms and finally block diagrams. Learners will use the data presented to answer questions.</p> <p><b>Vocab:</b> 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</p> | <p><b>tempo, rhythm, notes, create, emotion, beat, instrument, open, edit.</b></p> <p><a href="#">Programming B – Programming quizzes</a></p> <p>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 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.</p> <p><b>Vocab:</b> sequence, command, program, run, start, outcome, predict, blocks, design, actions, sprite, project, modify, change, algorithm, build, match, compare, debug, features, evaluate, decomposition, code.</p> |
| <p>Kite</p> <p><a href="https://www.dlcorwall.org/computing-curriculum/year-3/">https://www.dlcorwall.org/computing-curriculum/year-3/</a></p> | <p><b>Basic Computer skills:</b></p> <p>Logging on using own password, opening word document and saving it, Text- font size, colour</p> <p>Using dictate tool on Word</p>                                                                                                                                                                                | <p><a href="#">Programming A – Sequencing sounds</a></p> <p>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. They will be introduced to a selection of motion, sound, and event blocks which they will</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <p><a href="#">Creating Media – desktop publishing</a></p> <p>During this unit, learners will become familiar with the terms 'text' and 'images' and understand that they can be used to communicate messages. They will use desktop publishing software and consider careful choices of font size, colour and type to edit and improve</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

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|  | <p><a href="#">Computing systems and networks – connecting computers</a> Short unit 3/4 lessons</p> <p>Challenge your learners to develop their understanding of digital devices, with an initial focus on inputs, processes, and outputs.</p> <p><b>Vocab: digital device, input, process, output, program, digital, non-digital, connection, network, switch, server, wireless access point, cables, sockets</b></p> <p><a href="#">Creating media – stop frame animation</a></p> <p>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 adding other types of media to their animation, such as music and text.</p> <p><b>Vocab: animation, flip book, stopframe, frame, sequence, image, photograph, setting, character, events, onion skinning, consistency, evaluation, delete, media, import, transition</b></p> | <p>use to create their own programs, featuring sequences. The final project is to make a representation of a piano. The unit is paced to focus on all aspects of sequences, and make sure that knowledge is built in a structured manner. Learners also apply stages of program design through this unit.</p> <p><b>Vocab: 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</b></p> <p><a href="#">Data and information – branching databases</a></p> <p>Learners will develop their understanding of what a branching database is and how to create one. They will use yes/no questions 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.</p> <p><b>Vocab: attribute, value, questions, table, objects, branching, database, objects, equal, even, separate,</b></p> | <p>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 images to create their own pieces of work using desktop publishing 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.</p> <p><b>Vocab: text, images, advantages, disadvantages, communicate, font, style, landscape, portrait, orientation, placeholder, template, layout, content, desktop publishing, copy, paste, purpose, benefits.</b></p> <p><a href="#">Programming B – Events and actions in programs</a></p> <p>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 (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</p> |
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|                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>structure, compare, order, organise, selecting, information, decision tree.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <p>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.</p> <p><b>Vocab: motion, event, sprite, algorithm, logic, move, resize, extension block, pen up, set up, pen, design, action, debugging, errors, setup, code, test, debug, actions.</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <p>Harrier</p> <p><a href="https://www.dlcorwall.org/computing-curriculum/year-5/">https://www.dlcorwall.org/computing-curriculum/year-5/</a></p> | <p><b>Basic Computing</b> – how to use the Worship laptop, finding and adding folders, opening and saving documents, note taking</p> <p><a href="#">Computing Systems and Networks – Systems and Searching</a></p> <p>I can explain that a search engine uses web crawlers to create an index I can explain that a search engine follows rules to rank results</p> <p><b>Vocab: 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.</b></p> <p><a href="#">Programming using microbits</a></p> <p><a href="#">Programming – Physical computing with Crumbles</a></p> | <p><a href="#">Creating media – video production</a></p> <p>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 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.</p> <p><b>Vocab: video, audio, camera, talking head, panning, close up, video camera,</b></p> | <p><a href="#">Creating Media – Introduction to vector graphics</a></p> <p>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 software are available.</p> <p><b>Vocab: 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</b></p> |

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|  | <p>In this unit, learners will use physical computing to explore the concept of selection in programming through the use of the Crumble programming environment. Learners will be introduced to a microcontroller (Crumble controller) and learn how to connect and program components (including output devices- LEDs and motors) through the application of their existing programming knowledge. 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).</p> <p><b>Vocab:</b> 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</p> | <p><b>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.</b></p> <p><a href="#">Data and information – Flat-file databases</a></p> <p>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.</p> <p><b>Vocab:</b> database, data, information, record, field, sort, order, group, search, value, criteria, graph, chart, axis, compare, filter, presentation</p> | <p><a href="#">Programming B – Selection in quizzes</a></p> <p>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.</p> <p><b>Vocab:</b> Selection, condition, true, false, count-controlled loop, outcomes, conditional statement, algorithm, program, debug, question, answer, task, design, input, implement, test, run, setup, operator</p> |
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## Year B

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| Cygnets R                                                                                                                                             | <p>Logging on<br/>Using a mouse pad<br/>Writing my name using a key-board<br/>Drawing a self-portrait using drawing software<br/>Use I-pads to take photographs and videos</p> <p>Computational thinking – algorithms and decomposition: Making pumpkin soup (Barefoot computing unit)</p>                                                                                                                                                                                                                                                                                                                                                                                              | <p>Winter Warmers (Barefoot computing unit)</p> <p>Aspects covered:<br/>Algorithms<br/>Decomposition<br/>Creating<br/>Collaborating<br/>Tinkering<br/>Persevering</p> <p>Technology around us</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <p>REC<br/>Boats Ahoy! (Barefoot computing unit)<br/>Aspects of computing covered:<br/>Algorithms and decomposition<br/>Logical thinking<br/>Tinkering<br/>Pattern</p> <p>Drawing tools – pattern and symmetry</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <p>Cygnets Y1<br/><a href="https://www.dlccornwall.org/computing-curriculum/year-1/">https://www.dlccornwall.org/computing-curriculum/year-1/</a></p> | <p><a href="#">Computing systems and networks – technology around us</a><br/>Develop your learners’ understanding of technology and how it can help them. They will become more familiar with the different components of a computer by developing their keyboard and mouse skills, and also start to consider how to use technology responsibly.<br/><b>Vocab: technology, computer, mouse, trackpad, keyboard, screen, double-click, typing.</b></p> <p><a href="#">Creating media – digital painting</a><br/>Explore the world of digital art and its exciting range of creative tools with your learners. Empower them to create their own paintings, while getting inspiration</p> | <p><a href="#">Programming A – Moving a robot</a><br/>This unit introduces learners to early programming concepts. 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 knowledge to start predicting the outcome of programs. The unit is paced to ensure time is spent on all aspects of programming and builds knowledge in a structured manner. Learners are also introduced to the early stages of program design through the introduction of algorithms.<br/><b>Vocab: Bee-Bot, forwards, backwards, turn, clear, go, commands, instructions,</b></p> | <p><a href="#">Creating media – digital writing</a><br/>Promote your learners’ understanding of the various aspects of using a computer to create and change text. 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 writing on paper to create text.<br/><b>Vocab: 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.</b></p> <p><a href="#">Programming animations</a></p> |

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|                                                                                                                                                             | <p>from a range of other artists. Conclude by asking them to consider their preferences when painting with, and without, the use of digital devices.</p> <p><b>Vocab: paint program, tool, paintbrush, erase, fill, undo, shape tools, line tool, fill tool, undo tool, colour, brush style, brush size, pictures, painting, computers</b></p>                                                                                                                                                     | <p><b>directions, left, right, route, plan, algorithm, program.</b></p> <p><u><a href="#">Data and information – grouping data</a></u></p> <p>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. 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.</p> <p><b>Vocab: object, label, group, search, image, property, colour, size, shape, value, data set, more, less, most, fewest, least, the same</b></p> | <p>This unit introduces learners to on-screen programming through ScratchJr. Learners will explore the way a project looks by investigating sprites and backgrounds. 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.</p> <p><b>Vocab: ScratchJr, command, sprite, compare, programming, area, block, joining, start, run, program, background, delete, reset, algorithm, predict, effect, change, value, instructions, design.</b></p> |
| <p>Kingfisher</p> <p><u><a href="https://www.dlcorwall.org/computing-curriculum/year-1/">https://www.dlcorwall.org/computing-curriculum/year-1/</a></u></p> | <p><u><a href="#">Computing systems and networks – connecting computers</a></u></p> <p>Challenge your learners to develop their understanding of digital devices, with an initial focus on inputs, processes, and outputs. Start by comparing digital and non-digital devices, before introducing them to computer networks that include network infrastructure devices like routers and switches.</p> <p><b>Vocab: digital device, input, process, output, program, digital, non-digital,</b></p> | <p><u><a href="#">Programming A – Sequencing sounds</a></u></p> <p>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. 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. The unit is paced to focus on all aspects of</p>                                                                                                                                                                                                                                                                                                 | <p><u><a href="#">Creating Media – desktop publishing</a></u></p> <p>During this unit, learners will become familiar with the terms ‘text’ and ‘images’ and understand that they can be 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</p>                                                                         |

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|  | <p><b>connection, network, switch, server, wireless access point, cables, sockets</b></p> <p><a href="#">Creating media – stop frame animation</a></p> <p>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 adding other types of media to their animation, such as music and text.</p> <p><b>Vocab: animation, flip book, stopframe, frame, sequence, image, photograph, setting, character, events, onion skinning, consistency, evaluation, delete, media, import, transition</b></p> | <p>sequences, and make sure that knowledge is built in a structured manner. Learners also apply stages of program design through this unit.</p> <p><b>Vocab: 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</b></p> <p><a href="#">Data and information – branching databases</a></p> <p>Learners will develop their understanding of what a branching database is and how to create one. They will use yes/no questions 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.</p> <p><b>Vocab: attribute, value, questions, table, objects, branching, database, objects, equal, even, separate, structure, compare, order, organise, selecting, information, decision tree.</b></p> | <p>support them in making their own template for a magazine front cover. They will start to add text and images to create their own pieces of work using desktop publishing 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.</p> <p><b>Vocab: text, images, advantages, disadvantages, communicate, font, style, landscape, portrait, orientation, placeholder, template, layout, content, desktop publishing, copy, paste, purpose, benefits.</b></p> <p><a href="#">Programming B – Events and actions in programs</a></p> <p>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 (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</p> |
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| <p>Kite</p> <p><a href="https://www.dlcorwall.org/computing-curriculum/year-4/">https://www.dlcorwall.org/computing-curriculum/year-4/</a></p> | <p><b>Computing Systems and Networks – the internet</b></p> <p>Learners will apply their knowledge and understanding of networks, to appreciate the internet as a network of networks which need to be kept secure. 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.</p> <p><b>Vocab:</b> 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</p> <p><b>Creating media – Audio production</b></p> <p>Learners will identify the input device (microphone) and output devices (speaker or headphones) required to</p> | <p><b>Programming – Repetition in shapes</b></p> <p>This unit looks at repetition and loops within programming. Pupils will create programs by planning, modifying, and testing commands to create shapes and patterns. They will use Logo, a text-based programming language.</p> <p><b>Vocab:</b> Logo (programming environment), program, turtle, commands, code snippet, algorithm, design, debug, pattern, repeat, repetition, count-controlled loop, value, trace, decompose, procedure</p> <p><b>Data and information – Data logging microbits</b></p> <p>In this unit, 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 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</p> | <p><b>Creating media – Photo editing</b></p> <p>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 that editing images can have, and evaluate the effectiveness of their choices.</p> <p><b>Vocab:</b> 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.</p> <p><b>Programming – Repetition in games</b></p> <p>This unit explores the concept of repetition in programming using the Scratch environment. It begins with a Scratch activity similar to that carried out in Logo in Programming unit A, where learners can discover similarities between two environments. Learners look at the difference between count-</p> |

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|                                                                                                                                                     | <p>work with sound digitally. 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.</p> <p><b>Vocab:</b> audio, microphone, speaker, headphones, input device, output device, sound, podcast, edit, trim, align, layer, import, record, playback, selection, load, save, export, MP3, evaluate, feedback.</p>                                                                                                   | <p>points, data sets, and logging intervals. Pupils will spend time using a computer to review and analyse data.</p> <p><b>Vocab:</b> data, table, layout, input device, sensor, logger, logging, data point, interval, analyse, dataset, import, export, logged, collection, review, conclusion.</p>                                                                                                                                                                                                                                                                                                                                                                              | <p>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.</p> <p><b>Vocab:</b> 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</p>                                                                                                                                                                                                                                   |
| <p>Harrier</p> <p><a href="https://www.dlcornwall.org/computing-curriculum/year-6/">https://www.dlcornwall.org/computing-curriculum/year-6/</a></p> | <p><b>Basic Skills:</b></p> <p><b>Using word, saving, opening and resaving, font tools, layouts, adding tables and filling tables, pictures into word, text box, headers and footers</b></p> <p><b>Computing systems and networks – communication and collaboration</b></p> <p>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 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</p> | <p><b>Programming A – Variables in games</b></p> <p>This unit explores the concept of variables in programming through games in Scratch. First, learners find out what variables 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 design to improve their games in Scratch.</p> | <p><b>Creating media – 3D Modeling</b></p> <p>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 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.</p> <p>Vocab: TinkerCAD, 2D, 3D, shapes, select, move, perspective, view, handles, resize, lift, lower, recolour, rotate, duplicate, group, cylinder, cube, cuboid,</p> |

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|  | <p>to communicate responsibly by considering what should and should not be shared on the internet.</p> <p><b>Vocab:</b> 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</p> | <p><b>Vocab:</b> variable, change, name, value, set, design, event, algorithm, code, task, artwork, program, project, code, test, debug, improve, evaluate, share, assign, declare</p> <p><b>Data and information – Introduction to spreadsheets</b></p> <p>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 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.</p> <p>Vocab: 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,</p> | <p>sphere, cone, prism, pyramid, placeholder, hollow, choose, combine, construct, evaluate, modify.</p> <p><b>Programming B – sensing movement – micro:bit</b></p> <p>To create a program to run on a controllable device</p> <p>To explain that selection can control the flow of a program</p> <p>To update a variable with a user input</p> <p>To use a conditional statement to compare a variable to a value</p> <p>To design a project that uses inputs and outputs on a controllable device</p> <p>To develop a program to use inputs and outputs on a controllable device</p> <p>Vocab: 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.</p> |
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