

Meadow Park: Sequence Of Learning Overview 2023-2024



Subject- KS1 & 2 Computing

Autumn A	Autumn B	Spring A	Spring B	Summer A	Summer B
<u>KS1 - Computing</u>					
Computing systems and networks – IT around us (cross curricula)	Creating media – Digital photography (cross curricula)	Programming A – Robot algorithms (cross curricula)	Data and information – Pictograms (cross curricula)	Creating media - Digital music (cross curricula)	Programming B - Programming quizzes (cross curricula)
Consider how is information technology is being used for good in our lives Explore how IT benefits a home environment and society in places such as shops, libraries, and hospitals.	Recognise that different devices can be used to capture photographs. Gain experience capturing, editing, and improving photos.	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.	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.	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..	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.
Discussing the responsible use of technology, and how to make smart choices when using it.	Learn to understand and recognise that images they see may not be real.	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.	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.	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	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.
<u>Year 3 - Computing</u>					
E-Safety 1. Computing systems and networks – Connecting computers	2. Creating media - Stop-frame animation	3. Programming A - Sequencing sounds	4. Data and information – Branching databases	5. Creating media – Desktop publishing	6. Programming B - Events and actions in programs
Develop an understanding of digital devices, with an initial focus on inputs, processes, and outputs.	Use a range of techniques to create a stop-frame animation using tablets.	Explore the concept of sequencing in programming through Scratch.	Develop an understanding of what a branching database is and how to create one. Use yes/no questions to gain an understanding of what attributes are and how to use them to sort groups of objects.	Explain the difference between text and images Recognise that text and images can communicate messages clearly. Identify the advantages and disadvantages of using text and images.	Explore the links between events and actions. Moving a sprite in four directions (up, down, left, and right). Explore movement within the context of a maze, using design to choose an appropriately sized sprite.
Compare digital 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.	Create a story-based animation with other types of media to animation, such as music and text.	Explore a selection of motion, sound, and event blocks that they will use to create programs, featuring sequences.	Create physical and on-screen branching databases.	Change font style, size, and colours for a given purpose. Edit text. Explain that text can be changed to communicate more clearly.	Draw lines with sprites and change the size and colour of lines.
<u>Year 4 - Computing</u>					
E-Safety and Key Skills	2. Creating media – Audio	3. Programming A – Repetition	4. Data and information –	5. Creating media – Photo	6. Programming B

1. Computing systems and networks – The Internet*	production*	in shapes*	Data logging*	editing*	Repetition in games*
Apply knowledge and understanding of networks, to appreciate the internet as a network of networks which need to be kept secure.	Identify the input device (microphone) and output devices (speaker or headphones) required to work with sound digitally. Editing work, adding multiple tracks, and opening and saving the audio files.	Create programs by planning, modifying, and testing commands to create shapes and patterns.	Consider how and why data is collected over time. Consider the senses that humans use to experience the environment and how computers can use special input devices called sensors to monitor the environment.	Develop an understanding of how digital images can be changed and edited, and how they can then be resaved and reused.	Explore the concept of repetition in programming using the Scratch environment. Discover similarities between two environments.
Explore the World Wide Web for themselves in order to learn about who owns content and what they can access, add, and create.	Discuss the ownership of digital audio and the copyright implications of duplicating the work of others.	Use Logo, a text-based programming language.	Look at data points, data sets, and logging intervals. Using a computer to review and analyse data.	Consider the impact that editing images can have, and evaluate the effectiveness of their choices.	Look at the difference between count-controlled and infinite loops, and use their knowledge to modify existing animations and games using repetition.

Year 5 - Computing

E-Safety and Key Skills 1. Computing systems and networks - Systems and searching	2. Creating media - Video production	3. Programming A – Selection in physical computing	4. Data and information – Flat-file databases	5. Creating media – Introduction to vector graphics	6. Programming B – Selection in quizzes
Develop understanding of computer systems and how information is transferred between systems and devices. Consider small-scale systems as well as large-scale systems.	Create short videos by working in pairs or groups.	use physical computing to explore the concept of selection in programming through the use of the Crumble programming environment	Use tools within a database to order and answer questions about data. Create graphs and charts from data to help solve problems.	Start to create vector drawings. Use different drawing tools to help them create images. Recognise that images in vector drawings are created using shapes and lines, and each individual element in the drawing is called an object	Develop knowledge of 'selection' by revisiting how 'conditions' can be used in programming, 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'.
Discover how information is found on the World Wide Web, through learning how search engines work.	Exposed to topic-based language and develop the skills of capturing, editing, and manipulating video.	Learn how to connect and program it to control components (including output devices — LEDs and motors). Introduced to conditions as a means of controlling the flow of actions in a program	Use a real-life database to answer a question, and present work to others.	Layer objects and begin grouping and duplicating them to support the creation of more complex pieces of work	Represent this understanding in algorithms, and then by constructing programs in the Scratch programming environment.

Year 6 - Computing

E-Safety and Key Skills 1. Computing systems and networks - Communication and collaboration	2. Creating media – Web page creation	3. Programming A – Variables in games	4. Data and information - Introduction to Spreadsheets	5. Creating media – 3D Modelling	6. Programming B - Sensing movement
Explore how data is transferred over the internet. Look at how the internet facilitates online communication and collaboration.	Creating websites for a chosen purpose. Learners identify what makes a good web page and use this information to design and evaluate websites using	Find out what variables are and relate them to real-world examples of values that can be set and changed. Use variables to create a simulation of a scoreboard.	Organising data into columns and rows to create a data set. Understand the importance of formatting data to support calculations.	Create a 3D space, moving, resizing, and duplicating objects. Create hollow objects using placeholders and combine multiple objects to create a	Build a program for a micro bit and test it within the programming environment.

	Google Sites.			model of a desk tidy.	
Learn how to communicate responsibly by considering what should and should not be shared on the internet.	Recognise copyright and fair use of media, the aesthetics of the site, and navigation paths.	Use-Modify-Create model, learners experiment with variables in an existing project, and then modify them, before they create a project.	Introduced to formulas and will begin to understand how they can be used to produce calculated data.	Examine the benefits of grouping and ungrouping 3D objects, then go on to plan, develop, and evaluate a 3D model of a building	Transferring the program to a micro: bit. Try out three different new projects with each adding more depth.