Computing Long term plan 2023-2024

2023- 2024	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Puffins (Y1/2)	**Tech Around Us** 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.	**Digital Painting** Children will be exploring how to create digital art and taking inspiration from other artists.	**Moving A Robot** Children will be looking at giving commands to floor robots at debugging issues.	**Grouping Data** Children will be counting and sorting objects into groups and input these into charts. They will be able to answer questioning using this information.	**Digital Writing** 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.	**Programming Animation** Using scratch learners will explore the way a project looks by investigating sprites and backgrounds. They will use programming blocks to use, modify, and create programs.
Kingfishers (Y2/3)	**IT Around Us** With an initial focus on IT in the home, learners explore how IT benefits society in places such as shops, libraries, and hospitals. Whilst discussing the responsible use of technology, and how to make smart choices when using it.	**Digital Photo** 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 recognise that images they see may not be real.	**Robot Algorithms** 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 design algorithms and then test those algorithms as programs and debug them.	**Pictograms** Learners will begin to understand what data means and how this can be collected in the form of a tally chart. They will then progress onto presenting data in the form of pictograms and finally block diagrams.	**Digital Music** Children will make patterns and use those patterns to make music with both percussion instruments and digital tools.	**Programming Quizzes** Learners begin to understand that sequences of commands have an outcome and make predictions based on their learning.

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Sparrowhawks (Y3/4)	The Internet Learners will apply their knowledge and understanding of networks, to appreciate the internet as a network of networks which need to be kept secure.	Audio Production 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.	Repetition And Shape Pupils will create programs by planning, modifying, and testing commands to create shapes and patterns. They will use Logo, a text-based programming language.	Data Logging 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.	Photo Editing 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.	Repetition And Games 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.
Housemartins (Y5/6)	Communication And Collaboration 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.	Video Production This unit gives learners the opportunity to learn how to create short videos in groups.	Variables And Games 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.	Flat File Database 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.	3d Modelling 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.	Quiz They will be representing their understanding of algorithms and then constructing programs using the Scratch. They use then use this knowledge to design a quiz.