Horton Grange Primary School

Computing Long Term Plan

Year Group	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Nursery	**Children to focus on following simple instructions and beginning to understand and follow 2 step instructions.**					
Reception	**Computational Thinking** – Children to follow multiple step instructions to complete a task. Children to solve problems and be able to discuss the necessary steps that need to be taken.					
Year 1	**1.1 - Technology around us** Recognising technology in school and using it responsibility.	**1.2 - Digital painting** Choosing appropriate tools in a program to create art, and making comparisons with working non-digitally	**1.3 - Moving a robot** Writing short algorithms and programs for floor robots, and predicting program outcomes.	**1.4 - Grouping data** Exploring object labels, then using them to sort and group objects by properties.	**1.5 - Digital writing** Using a computer to create and format text, before comparing to writing non-digitally	**1.6 - Programming animations** Designing and programming the movement of a character on screen to tell stories
Year 2	**2.1 - Information technology around us** Identifying IT and how its responsible use improves our world in school and beyond.	**2.2 - Digital photography** Capturing and changing digital photographs for different purposes.	**2.3 - Robot algorithms** Creating and debugging programs, and using logical reasoning to make predictions.	**2.4 - Pictograms** Collecting data in tally charts and using attributes to organise and present data on a computer.	**2.5 - Digital music** Using a computer as a tool to explore rhythms and melodies, before creating a musical composition.	**2.6 - Programming quizzes** Designing algorithms and programs that use events to trigger sequences of code to make an interactive quiz.
Year 3	**3.1 - Connecting computers**	**3.2 - Stop-frame animation**	**3.3 - Sequencing sounds** Creating sequences	**3.4 - Branching databases** Building and	**3.5 - Desktop publishing** Creating documents	**3.6 - Events and actions in programs** Writing algorithms

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	Identifying that digital devices have inputs, processes, and outputs, and how devices can be connected to make networks.	Capturing and editing digital still images to produce a stop-frame animation that tells a story.	in a block-based programming language to make music.	using branching databases to group objects using yes/no questions.	by modifying text, images, and page layouts for a specified purpose.	and programs that use a range of events to trigger sequences of actions.
Year 4	**4.1 – The internet** Recognising the internet as a network of networks including the WWW, and why we should evaluate online content.	**4.2 – Audio production** Capturing and editing audio to produce a podcast, ensuring that copyright is considered.	**4.3 – Repetition in shapes** Using a text-based programming language to explore count-controlled loops when drawing shapes.	**4.4 – Data logging** Recognising how and why data is collected over time, before using data loggers to carry out an investigation.	**4.5 – Photo editing** Manipulating digital images, and reflecting on the impact of changes and whether the required purpose is fulfilled.	**4.6 – Repetition in games** Using a block-based programming language to explore count-controlled and infinite loops when creating a game
Year 5	**5.1 – Systems and searching** Recognising IT systems in the world and how some can enable searching on the internet	**5.2 – Video production** Planning, capturing, and editing video to produce a short film	**5.3 – Selection in physical computing** Exploring conditions and selection using a programmable microcontroller	**5.4 – Flat-file databases** Using a database to order data and create charts to answer questions.	**5.5 – Introduction to vector graphics** Creating images in a drawing program by using layers and groups of objects	**5.6 – Selection in quizzes** Exploring selection in programming to design and code an interactive quiz.
Year 6	**6.1 – Communication and collaboration** Exploring how data is transferred by working collaboratively online.	**6.2 – Webpage creation** Designing and creating webpages, giving consideration to copyright, aesthetics, and navigation.	**6.3 – Variables in games** Exploring variables when designing and coding a game.	**6.4 – Introduction to spreadsheets** Answering questions by using spreadsheets to organise and calculate data.	**6.5 – 3D modelling** Planning, developing, and evaluating 3D computer models of physical objects.	**6.6 – Sensing movement** Designing and coding a project that captures inputs from a physical device.