Lydgate Junior School
Curriculum Progression for Computing

Core Themes

Computer Science	Online Safety	Digital Literacy

Curriculum Overview

	Year 3	Year 4	Year 5	Year 6
Autumn 1	Combining text & images Digital maps	Online safety Espresso Coding (level 4, move to 5 and 6)	Research project: understanding how a search engine works and conducting research Spreadsheets	Y6 Individual logins Online safety Scratch Maze Game
Autumn 2	Using art software Espresso Coding: Basics	Roman Chariots Document: Developing Word Processing Skills Computer Networks: saving work and understanding links between computers on a network	Google Forms (collaboration project): designing, conducting and analysing results from a survey	Mobile phone use Infographic: WWII History of Wi-Fi
Spring 1	Espresso coding: Sequence and Animation *Online safety whole school day*	Programming Language: Who created it? Scratch: Rainforest Animal *Online safety whole school day*	Scratch Project (Vikings) *Online safety whole school day*	RHE: analysing digital media Social media unplugged – bias & echo chambers Geography – North America, Countries *Online safety whole school day*
Spring 2	Espresso Coding: Conditional Events	Animation	Google Docs (collaboration project) quiz using hyperlinks	Human and physical geography of North America Mountains – spreadsheets and analysis of data
Summer 1	Stop Motion Animation (iPads)	Design Project (choice of greetings card, sign, invitation or leaflet)	Podcasts	Revision RHE – does the internet make us happy? Social media anxiety
Summer 2	Music Composition – Groovy Music	Groovy Music - Groovy Jungle and Groovy City Introduction to Flowol Twinkl unit lesson 1	Flowol	Microbit

Key Computing Vocabulary				
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Sequencing - in programming, statements are executed one after another. Sequence is the order in which the statements are executed.

Repetition - repetition in a program means that lines of code will be run multiple times.

Selection - selection is a programming construct where a section of code is run only if a condition is met. In programming, there are occasions when a decision needs to be made. Selection is the process of making a decision. The result of the decision determines which path the program will take next.

Variable - it is something that can be changed. In computer programming we use variables to store information that might change and can be used later in our program. For example, in a game a variable could be the current score of the player; we would add 1 to the variable whenever the player gained a point.

Progression of knowledge and skills

	Year 3	Year 4	Year 5	Year 6
use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content	How to use a search engine, What do to if you see something you do not like.	Discuss reliable sources	Best way to search to get appropriate content – using key words How search engines work including their use of algorithms, ranking of results, ignored words, influenced by advertising etc	RHE unit analysing digital media Analysing a newspapers webpage Comparing tabloid and broadsheet How social media can be manipulated and invented. Unplugged – bias in what they read Looking at different motivations (echo chambers)
understand computer networks including the internet; how they can provide multiple services, such as the world wide web	Discuss school computers in school are all linked	School network – saving work (available on all computers). Understanding that the internet is a network of computers which connect around the world (twinkl)	How the internet works.	Difference between LAN and WAN Job of a router How emails are sent and received the role of the IP address.
Provide opportunities for communication and collaboration	Collaborate by sharing and discussing Espresso games.	Collaborate using Air Drop to share and select images.	Collaborate using Google Docs to produce a document.	Collaborate and communicate using individual logins on Scratch.
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	Poster inserting images and text in Word. Poster inserting images and text using PicCollage on iPads. Stop motion animation Music composition (Groovy music)	Microsoft Word skills unit Publisher skills unit Music composition (Groovy music) Animation – iPads (evaluate)	Excel – creating graph (analyse) Creating a podcast Slideshow (Google Docs) with hyperlinks (evaluate) iPads used throughout curriculum	Spreadsheets – calculate and sort data (analyse) Infographics – Activ Inspire (analyse) American road trip – choice of how to present (evaluate) iPads used throughout curriculum

Coding/programming 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	Design and create programs Write programs that accomplish specific goals Use repetition in programs Understand start events and click events Begin to debug programs Introduction to selection (conditional events)	Use simple selection in programs Work with various forms of output (Espresso/Scratch) Use logical reasoning to systematically detect and correct errors in programs Work with various forms of output	Create programs by decomposing them into smaller parts Use selection in programs Use conditions in repetition commands Use variables Create programs that control or simulate physical systems (Scratch/Flowol) Evaluate my work and identify errors	Use a range of sequence, selection and repetition commands combined with variables as required to implement a design Critically evaluate my own work and the work of others and suggest improvements Create programs that control physical systems (Micro:bits) Work with various forms of output (Scratch/Micro:bits)