SUBJECT: COMPUTING

WHOLE SCHOOL OVERVIEW

.

AREAS TAUGHT ACROSS THE SCHOOL (Highlight links across year groups)

Knowledge

Computer Science Programming   **Digital Literacy Creating & Data**   **Information and Communication Technology Communicating & Researching**

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Reception						
Year 1	**Treasure hunters** - Using programmable toys	**TV chefs** - Filming the steps of a recipe	**Painters** - Illustrating an eBook	**Publishers** – Creating a mulit-media ebook	**Rhythmic**- Creating sound patterns in ScratchJr	**Dectectives** – use data to solve clues
Year 2	**Astronauts** - Programming on screen	**Games testers** - Exploring how computer games work	**Photographers** - Taking better photos	**Researchers** - Researching a topic	**Detectives** - Collecting clues	**Zoologists** - Collecting data about bugs
Year 3	**Programmers** - Programming an animation	**Bug fixers** - Finding and correcting bugs in programs	**Presenters** - Videoing performance	**Network engineers** - Exploring computer networks.	**Communicators** - Communicating safely on the internet	**Opinion pollsters** - Collecting and analysing data
Year 4	**Software developers** - Developing a simple educational game	**Toy designers** - Prototyping an interactive toy	**Musicians** - Producing digital music	**HTML editors** - Editing and writing HTML	**Co-authors** - Producing a wiki	**Meteorologists** - Presenting the weather
Year 5	**Game developers** – understanding algorithm	**Cryptographers** – to see how secret codes are used in some places on the web.	**Artist** – Computer generated art work (Tessellation)	**Web developers** – How search engines and websites work	**Bloggers** – To see how blog post are stored as HTML.	**Architects** – Understand how Computer Assisted Design (CADs) help create 3D structures.
Year 6	**Toy Makers** – coding and physical computing	**Computational Thinkers** – Mastering algorithms for searching and sorting	**Publishers** – Creating a year book or magazine	**Connected** – Developing skills for social media	**Advertisers** – Creating a short television advert	**AI developers**- learning about artificial intelligence

Skills

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Reception						
Year 1	Develop and record sequences of instructions as an algorithm	Break down a process into simple, clear steps, as in an algorithm. Use different features of a video camera	Select and use appropriate painting tools to create and change images on the computer	Plan a small multimedia ebook which imports images and record audio commentary	Use sound recording equipment to record sounds	Understand how data can be structured and organised
Year 2	Convert simple algorithms to programs	Use logical reasoning to make predictions of what a program will do and test these predictions	Take digital photographs and edit and enhance their photographs	Develop research skills through searching for information on the internet	Develop skills in opening, composing and sending emails	Use simple charting software to produce pictograms and other basic charts
Year 3	Write a program in Scratch to create the animation	Develop a number of strategies for finding errors in programs	Gain skills in shooting live video, such as framing shots, holding the camera steady, and reviewing	Develop a basic understanding of how domain names are converted to IP addresses	Gain skills in using email	Gain skills in using charts to analyse data
Year 4	Develop an educational computer game using selection and repetition	Design and make an on-screen prototype of a computer-controlled toy	Create and develop a musical composition, refining their ideas through reflection and discussion	Use HTML tags for elementary mark up. Use hyperlinks to connect ideas and sources. Code a simple web page with content	Become familiar with Wikipedia, including potential problems associated with its use	Use computer-based data logging to automate the recording of some weather data
Year 5	Coding using Scratch	Different coding systems such as Morse, Semaphore and Caesar.	Using cloning tools to create tiled patterns.	Adding content to a personalised website through the use of Google Sites.	Creating blog posts and adding media to them also.	Use of SketchUp to create own 3D structure.
Year 6	Design and develop a BBC microbit.	Understanding important algorithms using programs such as Scratch.	Use desktop publishing tools to source, write, edit and combine images and text from a range of	Use the schools blogging platform to explore issues related to social media.	Create a storyboard, shoot original footage and source other media in a final version of a movie.	Use a variety of websites to learn about different aspects of artificial intelligence.

			sources.			