Alban Wood Computing Curriculum Overview 2016-2017

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1 and Year 2	**Starting Research** *Children develop understanding of researching using both digital and non-digital sources, understanding they need to check what they discover. They use charts, graphs and mind maps to present the results of their research.*		**Visual Information** *Children investigate how we derive information from the world around us, including both digital and non-digital sources. They use data logging devices to explore environmental conditions and organise objects using branching databases. They compare the ways in which people and computer programs might sort such objects.*		**Discovering Programming** *Children use a range of approaches to develop their understanding of algorithms and programming, including unplugged approaches and simple onscreen and physical devices.*	
Year 3 and Year 4	**Bringing Images to Life** *Children develop understanding of the ways that digital images can be edited and transformed. They develop understanding of animation, using digital tools to create their own animation. They use programming software to produce programmed animations, using sequence, repeat and selection.*		**Developing Communication** *Children use online communication tools such as email, blogs and discussion forums to support collaborative learning, safely and respectfully. They use simple sound editing software to record and manipulate sound clips.*		**Keeping Informed** *Children understand the difference between data and information. They use sensing and data logging tools to gather data to support their science investigations. They structure data in branching and flat-file databases and understand how to derive information from these sources.*	
Year 5 and Year 6	**Staying Connected** *The children use blogs for collaborative projects in school, uploading different types of digital content, while checking copyright and crediting sources. They work as a class to build a wiki around a class topic, taking editorial responsibility for their work. They know the school's eSafety rules and encourage other children to keep safe online.*		**Information Models** *Children use spreadsheet software to structure numeric information, making calculations using formulae and functions. They import data collected using dataloggers and analyse it using functions within the software. They carry out what-if modelling, using this for prediction and present results using graphs.*		**Morphing Images** *Children use storyboards to create live film and animations for specific audiences. They demonstrate their understanding of copyright and ownership, crediting the sources of materials they use.*	

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Year 1 and Year 2	**Let's Create** *Children begin to explore digital texts, creating their own digital content (still image, word and sound) using a range of devices and software. They develop understanding of some of the devices they use and apply some unplugged programming approaches to support their understanding.*		**Getting Creative** *Children develop their understanding of digital texts, creating their own digital content (still, moving and animated image and word) using a range of devices and software with increased precision. They demonstrate understanding of some of the devices they use. They use unplugged approaches to support their understanding of algorithms.*		**Talking and Sharing** *Children explore various ways of conveying messages using both digital and non-digital systems. They use emails and respond to blogs. They explore very simple onscreen simulations and link these to their understanding of algorithms.*	
Year 3 and Year 4	**Accuracy Counts** *Children investigate the concept of computer networks including the internet and the services offered on it. They use and compare search engines on the World Wide Web, selecting and evaluating with increasing discernment and respecting copyright when creating their own content. They use spreadsheet software to create graphs and to explore number patterns.*		**Programming and Games** *Children explore simulations, explaining how these are structured and some of the programming needed. They decompose tasks and create and debug algorithms to solve them, understanding how algorithms support the programming process. They write programs to achieve specific objectives, understanding and using sequence, selection and repetition. They test, debug and refine their programs.*		**Authoring** *Children use a variety of different software to create digital content, understanding some of the differences between them. They select and use software to create non-linear content for specific audiences and objectives.*	
Year 5 and Year 6	**Data Matters** *Children investigate the concept of "big data" sharing its application in the world for such areas as meteorology, mapping, traffic flow, etc. They review how data and information are stored and searched on computer networks. They use search operators and linked queries to obtain research results efficiently. They investigate their digital footprints and discuss ways of using online tools responsibly, securely and safely. They design, create and search flat-file databases, producing reports from the data and considering accuracy and efficiency.*		**Robotics and Systems** *Children investigate automated systems in the wider world and consider the programming instructions which could control them. They create and debug algorithms and then use different programming languages to write the related programs. They program physical devices, controlling inputs and outputs. They use sequence, selection, repetition and variables in their programs.*		**Sound Works** *Children create soundscapes, incorporating different content. They target their work to meet the need s of specific audience and they gather feedback from that audience.*	