

COMPUTING AT ALBAN CITY SCHOOL

At Alban City School we want our pupils to be masters of technology. Our children are technology natives and technology will play a pivotal part throughout their lives. Therefore, we want to model and educate our pupils on how to use technology positively, responsibly and safely. Our pupils will access our progressive, broad and modern curriculum that includes computer science, information technology and online safety. They will be given opportunities to build and apply their knowledge through themed project based learning as well as embedded opportunities across the wider curriculum. We recognise that technology can allow pupils to share their learning in creative ways and therefore technology is used across the curriculum for different purposes. We also understand the accessibility opportunities technology can provide for our pupils and technology is utilised to both support and extend learners.

	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Significant People	Alan Emtage	Dapo Adeola	Carrie Anne Philbin Ada Lovelace	Jerry Lawson Jeremiah Onalapo	Sophie Wilson Gladys West	Louis Braille Katherine Johnson	Hedy Lamarr Alan Turing
Key Dates	National Coding Week (September) Ada Lovelace Day (October) Hour of Code (December) Safer Internet Day (February)						

Strands		Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
ICT	Multimedia	Re-tell a known story using a device. Listen back to recording.	Create a simple animation.		Use a storyboard to plan and create an animation.		Create an animation using video editing software.	
		Explore a 360' image.		Take photographs and record sound for a purpose.		Use the zoom tool and photograph from different dynamic viewpoints.		Explore different angles, viewpoints and enhance media using photo editing software to use in a wider project.
		Explore creating an illustration. Explore taking and retrieving photos for a purpose.	Create an e-book. Record sounds. Record using a keyboard.	Create a YouTube style video. Record and edit a video for a purpose.	Create and explore AR. Link images and video taken.	Design and create an app. (Non-linear, interactive presentation)	Create a video using a green screen. Record and combine video with images and background.	Create own website. Combine and use other technology and apps to present for an audience.
	Data		Enter data into a prepared table. Use information to make a pictogram.	Enter data into a prepared table. Make a bar graph.	Enter data into own table. Make a line graph.	Create simple formula (add/ subtract/ multiply/ divide/ total) in a spreadsheet.	Create conditional formula in a spreadsheet.	

Digital Literacy

Strands		Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	
Digital Literacy	Technology	Use devices to search for information.	Name external parts of a computer/ names of devices.	Know how technology has changed over time.	Know how the world wide web and internet work.	Know the difference between physical, wireless and mobile networks.	Know the functions of the main internal parts of computers.	Know where technology is used around us.	
	Self Image and Identity	Be Internet Alert:							
		Give examples of what to say if someone asks me to do something that makes me feel sad/ embarrassed/ upset.	Give examples of when and how to speak to an adult I trust.	Explain how other people's identify online can be different to their identity in real life.	Explain how to represent myself in different ways online.	Explain how my online identity can be different to the identity I present in 'real life'.	Explain how identity online can be copied, modified or altered.	Describe ways in which media can shape ideas about gender.	
	Online Relationships	Be Internet Kind:							
		Give examples of how to be kind.	Explain why it is important to be considerate and kind to people online.	Give examples of how to use technology to communicate with others I don't know well.	Explain what it means to 'know someone' online and why this might be different from someone in real life.	Give examples of how to be respectful to other online.	Make positive contributions and be part of online communities.	Demonstrate ways of reporting problems online for both myself and my friends.	
	Online Reputation	Be Internet Sharp:							
		Know who to tell when something upsetting or unexpected happens.	Describe what information I should not put online without asking a trusted adult first.	Explain how information put online about me can last for a long time.	Recognise I need to be careful before I share anything about myself or others online.	Explain ways information about me online could have been created, copied or shared by others.	Describe ways that information about people online can be used by others to make judgements about an individual.	Describe some simple ways that help build a positive online reputation.	
	Online Bullying	Be Internet Brave:							
		Describe how they feel when someone is unkind.	Describe ways that some people can be unkind online.	Give examples of bullying behaviour and how it could look online.	Describe rules about how to behave online and how to follow them.	Explain why we need to think carefully about content we post.	Describe how to get help for someone that is being bullied online.	Describe how to capture content. Identify a range of ways to report concerns.	

		Managing Online Information	Be Internet Secure:					Evaluate digital content and explain how to make choices from search results.	Explain how search engines work and how results are ranked.
			Identify devices that can search for information.	Use the internet to find things out.	Explain the difference between things that are imaginary/ true.	Explain what autocomplete is and how to choose the best suggestion.	Describe methods used to encourage people to buy things online (including in-app purchases).		
		Copyright and Ownership	Write my name on my work and know it belongs to me.	Name own work created using technology	Recognise that content on the internet may belong to other people.	Explain why copying someone else's work from the internet without permission can cause problems.	Give examples of content on the internet that can and cannot be re-used.	Demonstrate how to search tools to find content that can be re-used by others.	Demonstrate how to make simple references from the Internet.

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Computer Science	Programming	Follow and create simple sequences of symbols and pictures.	Follow, create and record simple sequences of symbols.	Create multiple sequences of symbols.	Create sequences of simple block code.	Create multiple sequences of block code running at the same time.	Create multiple block code sequences with timing elements.	Create procedures to hide complex code in sequence algorithm.
			Follow simple repetition.	Create simple repetition.	Create simple repeat loops. <repeat_x_times>	Create non-terminating continuous loops. <repeat_forever>	Create loops within loops. <repeat_forever> >>[repeat_x_times] >>>[repeat_x_times]	Create terminating loops when a condition is met. <repeat_until>
					Create a simple variable. <if_then>	Create multiple variables. <if_then>	Create variables that change inside a loop. <if_then_else>	Create variables that interact with each other. <if_then_else> <if_then>
	Algorithms	Sequence pictures linked to real life experiences.	Read and follow symbol sequence algorithms.	Create simple algorithms using symbols.	Read and follow written sequence algorithms.	Write own simple written sequence algorithms.	Decode and write own binary code.	

Debugging

Use trial and error to explore.	Recognise that there is a problem and say what it is.	Identify where in the code or algorithm the problem occurs.	Identify and fix simple sequence errors.	Identify and fix code containing repetition and variables.	Identify and fix code containing more complex loops of repetition and variables.	Systematically break up code to find and fix errors.
Talk about experiences (consequences and whether the device worked as thought).	Identify if an algorithm does what you want it to do.	Predict behaviour of simple algorithm.	Break a simple everyday algorithm into parts.	Observe a working program and decompose its elements.	Observe a working program, decompose and edit its elements to make a new version.	Create own program by decomposing a working program.