



Coberley C of E Primary School

Computing Curriculum Milestones

Every Child, Every Chance, Every Day



	Understanding Technology	Programming	Digital Literacy	Online Safety
Class 1	Pupils recognise and can give examples of common uses of information technology they encounter in their daily routine. Pupils recognise common uses of information technology beyond school, including those which they don't frequently encounter in their daily routine. Pupils understand that computers are not intelligent but can appear to be when following algorithms. They can share examples of this.	Pupils create, debug and implement instructions (simple algorithms) as programs on digital devices. Pupils understand that digital devices follow precise and unambiguous instructions. They understand that digital devices can simulate real situations. Pupils understand that algorithms are implemented as programs on digital devices.	With adult guidance, pupils use a range of technology to enhance and present their learning. Within both specific computing lessons and cross curricular contexts, pupils are able • enquire with purpose, accessing digital content such as text, images and video • use a tablet device, find and use simple APPS	Pupils are becoming increasingly aware of content, contact and conduct benefits and risks, how to manage them safely and where to go for help and support when they have concerns or feel unsafe, worried or upset. They increasingly use a range of digital devices to communicate safely and respectfully online, making links to positive behaviour in the physical world.

	Understanding Technology	Programming	Digital Literacy	Online Safety
Class 2	Pupils understand that computers (in various forms) generally accept inputs and produce outputs and can give examples of this. Pupils recognise - and can describe - some of the services offered by the Internet, especially those used for communication and collaboration. Pupils develop a basic understanding of how computers can be linked to form a local network such as those found in schools.	Pupils use the principles of logical reasoning to plan and predict the behaviour of simple programs. They solve problems on and off screen They can decompose programs to test them and understand how making even small changes to an algorithm can have a significant impact on the outcome. They begin using simple repetition (e.g. 'repeat x times' and 'repeat forever') and understand how this can be used to improve efficiency in their programs.	With increasing levels of autonomy, pupils are becoming confident and creative users of technology. Within both specific computing lessons and cross curricular contexts, pupils are able to: • follow and expand on agreed lines of enquiry, using key words and phrases to effectively access digital content such as text, still images, video and audio Use Google Classroom to access tasks and post comments and work • identify, collect and manipulate different types of data (e.g. numerical, research facts etc.) which they present as information, showing a greater awareness of purpose and audience • present and communicate their learning to others in a variety of ways using text, still images, video and audio • They combine digital tools to achieve specific goals and think carefully about the impact on their audience	Pupils are able to identify a range of content, contact and conduct benefits and risks, describe how to manage them safely and respectfully and know where to go for help and support when they have concerns. They can explain what is meant by 'identity', how this might be represented differently in different situations and why others might mis-represent their identity. They develop their understanding of 'trust' and the importance of being careful about what is online and of giving and gaining consent. shared Pupils can describe positive and negative effects of online activity / behaviours and begin to understand how to make safer and healthier decisions, including considering the appropriateness of games and online content for different ages. Pupils can describe positive ways for someone to interact with others online and understand how this will positively impact on how others perceive them.

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Class 3	Pupils know that there is a difference between the Internet and the World Wide Web and understand that the web is just one of the services offered by the Internet (as well as, e.g. email and VoIP services such as Skype). They appreciate how search results are ranked, including an understanding of the use of different algorithms to prioritise results. Pupils understand that the highest-ranking search results may not always be the most relevant. They appraise search results based on their relevance and trustworthiness, and can explain what is meant by 'fake news' Pupils understand and can explain how computer networks work, including the Internet. They begin to understand how data travels across networks in packets and how these can be broken up and reconstructed. They understand that some online content may be commercially sponsored such as adverts in search results or content presented by social media influencers.	Pupils create, deconstruct and refine programs to accomplish specific goals and increasingly use their programming capability to control or simulate a range of different outputs in physical systems. They create programs with loops which terminate when conditions are met or continue whilst conditions are present (e.g. 'repeat until' and 'repeat whilst'). Pupils understand and use simple selection (e.g. if/then and if/then/else) to create interactive programs based on conditions being met / not met. They begin to use simple operators within their programs. Pupils create programs which store, change and report variables (e.g. scores in a game or time) and can include multiple variables in a single program. Pupils can explain why they have structured algorithms as they have and describe the effect this has on a program.	Pupils are confident, capable and creative users of technology. Within both specific computing lessons and cross curricular contexts, pupils are able to: • create and effectively follow lines of enquiry to support their learning, and are discerning in evaluating digital content they encounter • use Google Classroom to access tasks , work collaboratively and hand in work • identify, collect and analyse different types of data (e.g. numerical, words) on spreadsheets they manipulate and re-present as information for a variety of audiences and purposes including using simple formulae • select and make effective use of digital tools to create digital images both under instruction and of their own choosing, including manipulating, resizing and duplicating • decide on the most appropriate way to present their learning - thinking about aesthetics, functionality and impact on the user, and responding appropriately.	Pupils identify and manage the benefits and risks of a range of online activities in terms of content, contact and conduct to ensure they are safe, respectful and responsible online. They know how to report concerns, seek support for themselves and others and persist until they get the help they need. Pupils make responsible choices about their own online identity and consider the potential impact of this on their digital footprint. They understand that online identities can be copied or modified and some of the possible implications of this. They can describe times when they might responsibly share personal information (including payment details), the importance of seeking permission and the need for strong passwords. They can describe ways technology may impact their own and others' physical and mental wellbeing (positively and negatively), understand their responsibilities in regard to this and can suggest a range of positive strategies to limit the negative impact of technology and online behaviours.