Computing Long Term Plan 2022-2023
Year 5

Year Group: 5 Date: Teacher:	Digital Literacy	Computer Science	Information Technology	Online Safety
	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 create, **deconstruct** and refine **programs** to accomplish specific goals. They create programs with **loops** which terminate when **conditions** are met or continue whilst **conditions** are present (e.g. *'repeat until' and 'repeat whist*). 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 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 • identify, collect and analyse different types of **data** (e.g. numerical, words, images, video etc.) which they manipulate and re-present as **information** for a variety of audiences and purposes. • select and make effective use of **digital tools** to create **digital artefacts** both under instruction and of their own choosing; • 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.
Autumn A:	**5.1 – Systems and searching** Understand computer networks, including the internet; how they can provide multiple services, such as the World Wide Web, and the opportunities they offer for communication and collaboration. Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content .			**Managing Information Online** Be aware that a person's online activity, history or profile (their 'digital personality') will affect the type of information returned to them in a search or on a social media feed, and how this may be intended to influence their beliefs, actions and choices.
Autumn B:			**5.2 – Vector drawing** 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.	
Spring A:			**5.3 - Video production** Use technology safely, respectfully, and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact	**Internet safety** Use technology safely, respectfully, and responsibly; recognise acceptable/unacceptable behaviour
Spring B:			**5.4 – Data and information – Flat-file databases** Design and create a range of programs, systems, and content that accomplish given goals, including collecting, analysing, evaluating, and presenting data and information	
Summer A:		**5.5 – Programming A – Selection in physical computing** 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		

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		Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs **Science – Electricity** Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches, and buzzers **Design and Technology** Design→Make→Evaluate Apply their understanding of computing to program, monitor, and control their products		
Summer B:		**5.6 – Programming B – Selection in quizzes** 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		