



The Grey Coat Hospital

Computing Curriculum Plan



Year 7

Half Term (HT)	Topic Area / Focus: E-safety, Computer system, Computer Network
HT1	Introduction to Computing and E-safety Key concept: How to recognise the danger and stay safe online.
HT2	Introduction to Computer system and network Key concept: Student will learn about the main components of computer system including hardware, software and how data is processed. They will also explore computer networks: how internet works, networking devices and how to avoid network danger and stay safe and secure online.
HT3	Data representation Key concept: Student will learn how computers represent data using binary and denary number system. They will also learn how to convert between binary and denary values and perform simple binary addition.
HT4	Computational thinking Key concept: Student will learn about algorithm, abstraction and decomposition.
HT5	Scratch Key concept: Student will use scratch to design and design interactive program which will develop their understanding of sequencing, selection, repetition and problem-solving skills.
HT6	Ethical, Legal and environmental issue related with E-waste and digital footprint Key concept: Investigate how digital activities and electronic waste affect individuals, society and the environment, while learning about relevant legal and ethical responsibilities.



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Year 8

Half Term (HT)	Topic Area / Focus: Computer Systems, Computer Networks and Introduction to Python
HT1	Introduction to cybercrime and computing laws Key concept: Students explore common forms of cybercrime and key computing laws, building awareness of digital safety, security and legal compliance.
HT2	Data Representation Key Concept: ASCII and difference between lossy and lossless compression; create an image using binary numbers
HT3	Computer networks Key concept: Explore different types of network and topologies, performance factor and networking hardware.
HT4	Introduction to Python Key concept: Students will use py-scripiter to create a basic python program using variables, data types and if, else and elif clause.
HT5	Making a website- HTML, CSS & Javascript Key concept: Students will create their own website using notepad++ app
HT6	Recap and Debate on technology Key concept: Students will use their debating skills to prepare for and participate in a class debate on technology.

Year 9

Half Term (HT)	Topic Area / Focus – Cybercrime, Data representation, Algorithm and programming techniques and Computer hardware/software
HT1	Cybercrime Key concept: Common cyber threats and develop strategies to protect personal information, devices and online account.



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HT2	Data Representation Key concept: Investigate how computers represent and store data using binary and digital formats; hexadecimals, ASCII (extended and Unicode)
HT3	Algorithm and programming techniques Key concept: Develop and apply algorithms and programming techniques to solve computational problems.
HT4 HT5	Creating programs Key concept: Apply algorithms and programming concepts, using Python and pseudocode to design, create, test, and refine programs that solve computational problems.
HT6	Computer hardware/software Key concept: Explore computer systems and hardware, developing an understanding of how components work together to process, store, and communicate information.