

Topic 1: E-safety

Overview	This unit introduces the key principles of E-safety. It covers the dangers of being online and using social media and the differences between private and public information. Students will learn how to safely use technology and how to stay safe online, including knowing what to do if they feel unsafe online. Here, students broaden their understanding of cyberbullying and the differences between inappropriate and appropriate content and will be able to identify the points of contact in different scenarios. This unit will prepare students to navigate the complex digital world in a safe way.
Assessment	Students will learn how to answer scenario based questions in this unit. They will learn how to evaluate a scenario and to make informed judgements based on learning. They will also learn key skills in presenting information culminating in the production of a presentation to evidence learning. This will be assessed through summative assessment with question testing student's key knowledge.
key terms	Data Cyberbullying Private information Public information Social media
Additional Resources	https://www.bbc.co.uk/bitesize/guides/zrtrd2p/revision/1 pages (1,4)

Topic2: Algorithmic thinking: Sorting algorithms

Overview	This unit introduces students to the concepts of using sorting to sort through large sets of data in the most efficient way possible. Students will cover the basics of sorting and learn how to perform a bubble sort and an insertion sort, with practical examples of usage of each in the digital world. Students will learn the benefits of using a computer to sort data and how this helps us with everyday uses of applications. They will develop a keen understanding of how computers think and process information and why we use each type of sorting algorithms. They will further develop an understanding of how to gauge algorithm efficiency and the advantages of this skill
Assessment	Skill focus: thinking logically.
	Students will practice the use of sorting algorithms and be learning to carry out both bubble sort and insertion sorts on varying data
	sets. They will learn to show working when applying an algorithm and will showcase this in class. This will be assessed through an end
	of unit assessment, with students carrying out sorting on custom data sets to evaluate their progress.
Additional key	Algorithms
terms	Sorting
	Bubble sort
	Merge sort
Additional	https://www.bbc.co.uk/bitesize/guides/z2m3b9q/revision/2
Resources	



Topic3: System architecture including hardware vs software

Overview	This unit introduces the fundamentals of how computers process information. Students will cover the differences between software and hardware as key components, delying into the differences between input and outputs. They will develop an understanding of
	computers as machines that take input, process data and produce outputs. Students will be taught how computers process data
	using the fetch-decode-execute cycle and be able to identify and describe the key steps of this process.
Assessment	Skill focus: Describe questions
	Students will practice questions that require knowledge of hardware and software, alongside practising key questions about the fetch
	decode execute cycle. This will be assessed through an end of unit assessment, with students evaluating answers for key describe
	questions using consolidated knowledge.
Additional key	Fetch
terms	Decode
	Execute
	Process
	Software
	Hardware
Additional	https://www.bbc.co.uk/bitesize/guides/zws8d2p/revision/3
Resources	https://www.bbc.co.uk/bitesize/guides/zcxgr82/revision/1



Topic4: Advanced Application development

Overview	This unit introduces the fundamentals of computer programming and the use of planning & programming to create a product to a set of requirements. Students will revisit the use of selection and iteration and combine these with a focus on condition based loops. They will develop an understanding of how computers repeat similar processes an unknown number of times and how this can be combined with for loops & selection to create an application that follows client needs.
Assessment	Skill focus: programming skills
	Students will practice questions that require knowledge of programming and be assessed through practical programming done in
	class in relation to a project. Students' knowledge of programming will be assessed through an end of unit assessment.
Additional key	Sequence
terms	Selection
	Iteration
	While loops
Additional	https://www.bbc.co.uk/bitesize/guides/z3khpv4/revision/5
Resources	