

## Holland Park School | **Year 8: 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
Assessment	informed judgements based on learning. They will also learn key skills in presenting information culminating in the production of a
	nresentation to evidence learning. This will be assessed through summative assessment with question testing student's key
	knowledge
Additional kay	Nitowiedge.
Additional key	
terms	Cyberbullying
	Private information
	Public information
	Social media
Additional	https://www.bbc.co.uk/bitesize/guides/zrtrd2p/revision/1 pages (1,4)
Resources	



## Holland Park School | Year 8: Topic2: Algorithmic thinking: algorithms and searching

Overview	This unit introduces the concepts of pattern recognition and how it helps develop robust programs. It will equip students with the
	skills to identify patterns and be able to translate these into logical programs while enhancing their understanding of efficient
	algorithms. Students will also learn the concepts of searching and how computers search for items, alongside learning about linear &
	binary search as the 2 core searching algorithms. Students will develop the ability to perform a binary and linear search and identify
	the differences in each.
Assessment	Skill focus: thinking logically.
	Students will practice the use of searching algorithms and be learning to carry out both binary search and linear search 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 searching on custom data sets to evaluate their progress.
Additional key	Algorithms
terms	Linear search
	Binary search
	Patterns
Additional	https://www.bbc.co.uk/bitesize/guides/zxxbgk7/revision/1
Resources	https://www.bbc.co.uk/bitesize/guides/zjdkw6f/revision/2 (pages 2,3)



## Holland Park School | Year 8: Topic3: data representation: Images & Sound

Overview	This unit introduces the concepts of data representation for images and sound. It establishes knowledge of how computers view images as a collection of pixels, each represented by binary number. Students will learn how sound is sampled and converted from analogue to digital, learning about sample rate at bit depth as key measurements. Students will develop an understanding of how computers understand images and sound and how this relates to binary number.
Assessment	Students will learn how to carry out calculations to determine the size in bits for images and sounds with different bitrates &
	resolution. They will also develop an understanding of how to answer theory questions regarding these conversions. This unit will be
	assessed through summative assessment with question testing student's key knowledge.
Additional key	Sample
terms	Pixel
	Binary
	Denary
	Analogue
	Digital
Additional	https://www.bbc.co.uk/bitesize/guides/zpfdwmn/revision/1
Resources	



## Holland Park School | Year 8: Topic4: Intermediate 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 develop a deeper understand of the use of for loops to
	make repetitive programs and functions, building on knowledge of using for loops to manipulate numbers. They will develop an
	understanding of how computers repeat similar processes a known number of times and how this can be combined with 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/3
Resources	