

Our Lady Queen of Peace

Catholic High School

Curriculum Overview

Year 7 Computing

Careers

Local Market Information

BAE Systems
Microsoft
Apple

Skills

Communication
Teamwork
Problem Solving
Time Management
Creativity
Resilience
Computational thinking
Critical Thinking

Jobs

Software Engineer
Games Designer
Data Analyst
Graphical Designer
Engineer
Digital Marketer
Network Technician
Cyber Security Analyst

Knowledge & Understanding

Subject Specific Literacy Development

Cultural Capital / Enrichment Opportunities

Topics (Bigger Picture)

Knowledge (Key Concepts)

Recall & Retrieval Practice Focus

Key Vocabulary

Half Term 1 Cybersecurity and Digital Footprint

Cybersecurity threats

What cyber security is
Common Cyber Threats
Malware
Importance of
protecting devices and
data

Key word definitions

This topics keywords,
Last topic key words._

Misconceptions

Students will be questioned on common
misconceptions identified in previous lessons
and work produced. Quiz style questions and
mini whiteboard activities.

Freya Models

Students to complete Freya models activity
linked to keyword taught in previous lessons
or previous topics.

Password, Encryption,
Authentication, Privacy,
Data Breach, Backup,
Firewall, Security
Update, Personal Data,
Account, Digital
Footprint, Reputation,
Identity, Social Media,
Consent, Digital Citizen,
Responsible Use,
Permanent, Online
Presence,
Consequences

Mega Days

Extra-Curricular
Activities

Personal
Development Day
visitors.

Protecting Data

Authentication
Data breaches
Protecting personal data
Careers

Digital Footprint

Digital footprint
Online reputation
Social Media
Responsibility
Positive online
behaviour

	Knowledge & Understanding			Subject Specific Literacy Development	Cultural Capital / Enrichment Opportunities
	Topics (Bigger Picture)	Knowledge (Key Concepts)	Recall & Retrieval Practice Focus	Key Vocabulary	
Half Term 2 Web Development	Introduction of web pages	Purpose of a website HTML structure Web browser Navigation	<u>Key word definitions</u> This topics keywords, Last topic key words._ <u>Misconceptions</u> Students will be questioned on common misconceptions identified in previous lessons and work produced. Quiz style questions and mini whiteboard activities. <u>Freya Models</u> Students to complete Freya models activity linked to keyword taught in previous lessons or previous topics.	Website, Web Page, Browser, HTML, Tag, Element, Attribute, Content, Hyperlink, Navigation, Heading, Paragraph, Image, Link, Code, Opening Tag, Closing Tag, Structure, Layout, Syntax	
	Creating a web page	Adding text and images Hyperlinks Basic coding Webpage structure			
	Styling in CSS	Website appearance Fonts and colours Design Consistency User Experience			
Half Term 3 Data Representation	Binary Numbers	Why computers use binary Binary and denary conversion Bits and Bytes	<u>Key word definitions</u> This topics keywords, Last topic key words._ <u>Misconceptions</u> Students will be questioned on common misconceptions identified in previous lessons and work produced. Quiz style questions and mini whiteboard activities. <u>Freya Models</u> Students to complete Freya models activity linked to keyword taught in previous lessons or previous topics.	Binary, Denary, Bit, Byte, Digit, Conversion, Number System, Data, Value, Representation, Pixel, Resolution, Colour Depth, Sample Rate, Bit Depth, Audio, Image, Quality, File Size, Compression	
	Images and Sounds	Pixels and resolution Colour Depth Sound sampling File Sizes			
	Data Storage	Character sets Ascii and Unicode Data capacity Storage capacity			
Half Term 3 Computational thinking and flowcharts	Computational thinking	Decomposition Pattern Recognition Abstraction Algorithms	<u>Key word definitions</u> This topics keywords, Last topic key words._ <u>Misconceptions</u>	Computational Thinking, Decomposition, Pattern Recognition, Abstraction, Algorithm, Solution, Problem, Process, Logical	
	Algorithms and Flowcharts	Standard flowcharts Sequence			

	Knowledge & Understanding			Subject Specific Literacy Development	Cultural Capital / Enrichment Opportunities
	Topics (Bigger Picture)	Knowledge (Key Concepts)	Recall & Retrieval Practice Focus	Key Vocabulary	
		Decision	Students will be questioned on common misconceptions identified in previous lessons and work produced. Quiz style questions and mini whiteboard activities. <u>Freya Models</u> Students to complete Freya models activity linked to keyword taught in previous lessons or previous topics.	Thinking, Sequence, Algorithm, Flowchart, Symbol, Sequence, Decision, Process, Input, Output, Start, End, Logic, Decision, Condition, Input, Process, Output, Test, Debug, Solution, Evaluate	
	Problem Solving with Flowcharts	Inputs Processes Outputs Testing Solutions			
Half Term 5 Cryptography and codes	History of codes and Cipher	Why codes are used History of secret communication Caesar Cipher Codes and Ciphers	<u>Key word definitions</u> This topics keywords, Last topic key words._ <u>Misconceptions</u> Students will be questioned on common misconceptions identified in previous lessons and work produced. Quiz style questions and mini whiteboard activities. <u>Freya Models</u> Students to complete Freya models activity linked to keyword taught in previous lessons or previous topics.	Cryptography, Code, Cipher, Encryption, Decryption, Plaintext, Ciphertext, Caesar Cipher, Communication, Security, cybersecurity, Data Protection, Authentication, Password, Secure Connection, Digital Certificate, Privacy, Security, Network, Vulnerability	
	Encryption and decryption	Encryption codes Encoding messages Decoding information Pattern Recognition			
	Modern Cryptography and Cyber Security	Secure online communication Password Security Banking and encryption Data Protection.			
Half Term 6 Media Creation	Principles of Animation	Animation techniques Storyboarding Frames and Timelines Audience and Purpose	<u>Key word definitions</u> This topics keywords, Last topic key words._ <u>Misconceptions</u> Students will be questioned on common misconceptions identified in previous lessons and work produced. Quiz style questions and mini whiteboard activities. <u>Freya Models</u>	Animation, Frame, Timeline, Motion, Transition, Storyboard, Sequence, Design, Multimedia, Audience, Asset, Layer, Frame Rate, Movement, Effects, Timing, Text, Audio, Sequence, Export	
	Creating a animation	Creating movement Using layers Adding effects Exporting work			
	Promotion and advertisement	Reviewing their product Advertising strategies Promotion business			

	Knowledge & Understanding			Subject Specific Literacy Development	Cultural Capital / Enrichment Opportunities
	Topics (Bigger Picture)	Knowledge (Key Concepts)	Recall & Retrieval Practice Focus	Key Vocabulary	
			Students to complete Freya models activity linked to keyword taught in previous lessons or previous topics.		

Key Assessments			
When	What will be assessed?	Why is this being assessed?	How will results be stored & students receive feedback?
Half Term 1	Key Piece – Cybersecurity Awareness Campaign: Demonstrate understanding of cyber threats, data protection and responsible online behaviour.	To understand starting points in Year 7 students. To identify misconceptions or gaps in knowledge that need to be retaught and where 1:1 support is needed.	Students will self-assess their work by going through the checklist given at the start of the activity and giving themselves a score.
Half Term 2	Key Piece – Personal Portfolio Web Page: Demonstrate webpage design using HTML and CSS.	To develop a good understanding of what students already know from KS2. To identify misconceptions or gaps in knowledge that need to be retaught and where 1:1 support is needed.	Students will self-assess their work going through the answers as a class.
Half Term 3	Key Piece – Data Representation Assessment: Demonstrate understanding of how computers represent numbers, images, sound and text.	To identify misconceptions or gaps in knowledge that need to be retaught and where 1:1 support is needed. To get a clear understanding of knowledge students have come with from KS2.	Students will self-assess their own assessments going through the questions as a class. Key Piece will be marked by the teacher and feedback will be given through Teams.
Half Term 4	Key Piece – Python Quiz Program: Demonstrate programming skills using variables, selection and iteration.	To identify misconceptions or gaps in knowledge that need to be retaught and where 1:1 support is needed. To develop students writing skills and ensuring they are able describe and explain an answer in full.	Students will self-assess their own assessments going through the questions as a class. Key Piece will be marked by the teacher and feedback will be given through Teams.
Half Term 5	Key Piece – Cryptography Challenge Portfolio: Demonstrate understanding of codes, ciphers, encryption and decryption by creating encrypted messages, decoding information and explaining the role of cryptography in cybersecurity.	To identify misconceptions or gaps in knowledge that need to be retaught and where 1:1 support is needed. Develop students' confidence when presenting and Oracy skills when giving feedback to their peers.	Students will receive verbal feedback from both the teacher and their peers.
Half Term 6	Key Piece – Animated Digital Story: Demonstrate multimedia creation, animation techniques and evaluation skills.	To identify misconceptions or gaps in knowledge that need to be retaught and where 1:1 support is needed. To develop students writing skills and ensuring they are able describe and explain an answer in full.	Students will self-assess their own assessments going through the questions as a class.

			Key Piece will be marked by the teacher and feedback will be given through Teams.
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